

BETTER Breast Health FOR LIFE!



2nd Edition

TIRZA DERFLINGER, MBA
Preventive Health Educator & Author
ThermogramCenter.com

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About the Authors

Better Breast Health – *for Life!*™

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Below are the breast health specialists associated with the 1st edition. Their collective purpose was to educate women on the risk factors that contribute to the development of breast cancer. Because of their diverse specialties and backgrounds, each made a valued and unique contribution.

Tirza Derflinger, Founder, CTT
Deborah Breakell, NP
Carrie Louise Daenell, ND
Carol Dalton, NP
John R.M. Day, MD
Lisa High, MS, RD
Kelly McAleese, MD

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After 20 years of service to tens of thousands of clients from around the world, Tirza Derflinger CTT, MBA-MOT has witnessed the impacts of Risk Assessing Thermal Imaging and empowering self-care preventive education on the lives of a multitude of men and women.

To further the profound effect of prevention, Ms. Derflinger provides the PDF publication freely to the public, hoping to inspire: individuals to take proactive steps to reduce the risk factors associated with cancer development; and health professionals to follow her lead on combining advanced thermography with compelling action-oriented preventive education.

Knowledge is power. We have more power over the destiny of our health than most individuals realize. Please spread the message: Be the Cure. Support Prevention.

Formerly a Medical Laboratory Specialist for the U.S. Army, Ms. Derflinger has served as President of The Thermogram Center, Inc. since 2002. She is the founder of the Breast Health Education Group, lead author of Better Breast Health – *for Life!*™, and imaging technician, health educator and blog writer for The Thermogram Center, Inc.

For more information, visit [The Thermogram Center, Inc.](http://TheThermogramCenter.com)

Complimentary Articles, EPUB & Paperbacks



Cover by Suzy Cohen, RPH

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Our mission at The Thermogram Center is, in part, to empower clients with preventive education. Many underlying causes of cancer are manageable. We hope to be a part of your efforts to secure a healthier tomorrow. Learn the mitigation techniques to help you and your loved ones, pets included, to reduce the risk of cancer. Be the Cure. Support Prevention.

by Tirza Derflinger

President, Author, Health Educator, CTT, MBA

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Better Breast Health - *for Life!*™

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Please Read These First:

Preface: Cover, Copyright, About the Authors

Complimentary Articles, EPUB, Paperbacks

Introduction 10

Part 1. Breast Cancer Development & Detection 15

Breast Cancer Development 16

Standard of Care Detection 19

Part 2. Prevention - Learn the Risks 24

Chapter 1. Environmental Factors

Why You Need to Know the Environmental Risk Factors for Cancer 31

Deadly Effects of Toxic Chemicals on Human Health 34

Five Ways to Reduce Harmful Chemicals in Your Food and Water 39

Are Harmful Chemicals Hiding in Your Personal Products 46

Antiperspirants and Deodorants 50

Beware of Harmful Ingredients in Cleaning Products 55

Why the Quality and Quantity of Your Water is Vital to Your Health 59

Avoid the Dangers of Using Plastic Food and Water Containers 63

How to Protect Yourself from Electromagnetic Radiation (EMF) 67

Chapter 2. Hormonal Factors

Why You Need to Know the Link Between Estrogen and Cancer 72

Why Early Puberty May Increase the Risk of Breast Cancer 74

Pregnancy and Breast Cancer Risk 77

Nursing and Breast Cancer Risk	80
The Birth Control Pill and Breast Cancer Risk	83
Hormone Replacement Therapy and Cancer Risk	87
Managing Estrogen in Your Body	93
Soy and Estrogenic Activity	99

Chapter 3. Dietary Factors

Why You Need to Know Dietary Factors for Cancer	103
Eat Organically to Reduce the Risk of Cancer	106
Alkalizing Diets Slow the Progression of Cancer	109
Ketogenic Diets Starve Cancers to Death	112
Food Toxins and Antinutrients	116
Mineralize or Die!	120
Supplement to Thrive!	125
How do You Source Your Vitamins?	128
No-Fat Diets May Cause Cancer	133
Carbohydrates: Glycemic Index vs Glycemic Load	140
Cooking Can Decrease Toxins & Increase Nutrients	143
How to Wash Produce to Reduce Microbes	147

Chapter 4. Immunity Factors

Why You Need to Know Your Microbes Give You Immunity	157
These Harm Beneficial Gut Bacteria	161
Digestive Enzymes, Indigestion & Inflammation	164
Nuts, Grains, Seeds, Beans and Legumes	170
How Do You Support Beneficial Gut Bacteria?	173
Probiotics are Essential for Life	177
Gut Bacteria Thrive with Prebiotics	182
Cultivate Probiotics with Sporebiotics	186

Chapter 5. Lifestyle Factors

Why You Need to Know Lifestyles Cause Cancer	190
Genetic vs Epigenetic DNA Mutations	192
Hereditary Risk, Age, Ethnicity and Fat Distribution	197
Smoking and Alcohol Consumption	201
How Reducing Stress Affected One Woman's Breasts	205
How Emotional Traumas Trigger Cancer	209
For a Good Night's Sleep	212
The Prescription Paradox	218
Stimulate Lymph Circulation with Exercise	221
Part 1 What is the Lymphatic System	225
Part 2 How to Reduce Inflammation	229
Part 3 How to Improve Lymph Flow	232
Two Ways Our Bras Affect Breast Health - Overview	235
Two Ways Our Bras Affect Breast Health - Details	239
Breast Implant Illness	245

Chapter 6. Teeth / Dental Factors

Why You Need to Know that Dental Care Affects Your Health	250
How Teeth & Dental Care Affect our Health - Part 1 of 2	253
How Teeth & Dental Care Affect our Health - Part 2 of 2	260
How to Use Essential Oils in a Neti Pot	267

Part 3. Manage Your Risk	272
---------------------------------------	------------

Part 4. Measure, Monitor and Adjust	277
--	------------

Part 5. Celebrate Success	292
--	------------

Part 6. Summary and Testimonials	296
---	------------

Part 7. Complimentary Articles, EPUB, Paperbacks	
---	--



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Introduction

Introduction



Photo by Suzy Cohen, RPH

Do you know just how much control you have over your (breast) health?

This question is the subject of *Better Breast Health – for Life!*™

The title itself conveys two messages. The first suggests that better (breast) health supports life. The second suggests that better (breast) health is a journey... one that lasts a lifetime, for both women and men.

**It is my genuine intention that as you experience this material
you feel energized and empowered to take charge of more of
the risk factors for which you have some control.**

Be the Cure. Seek Prevention.

While it may not be practical or possible to manage all of the risk factors in your life, reducing just one influential factor may have positive and long-lasting effects.

**My goal is to enable you to manage risk factors for which you
have some control to make up for those for which you have no
control.**

On the other hand, it is important to acknowledge that in spite of our best efforts, some breast cancers will occur. In these instances, early detection is crucial.

Here are the seven parts of the 2nd edition of Better Breast Health – *for Life!*™

Part One: Breast Cancer Development & Detection

Part One explores breast cancer: how it develops and standard methods for detection.

Part Two: Prevention – Learn the Risks

Let's face it: no one wants to detect cancer if they can prevent it. But standard of care is designed to detect, not prevent. **Part Two** explains the risk factors that contribute most to the disease and what you can do to reduce them, with a "Risk Factors Worksheet" to identify and prioritize the risk factors present in your life. **The risk factors span six chapters: Environmental, Hormonal, Immunity, Dietary, Lifestyle and Dental.**

An Ounce of Prevention is Worth a Pound of Cure

Part Three: Manage Your Risk

Part Three includes The "Actions Checklist" which enables you to record and track the action steps you are committing to take to reduce their impact on your life.

Part Four: Measure, Monitor & Adjust

Part Four reveals a 100% safe and highly sensitive method to assess the collective effect of all risk factors on your current (breast and) body health, so that you can visually monitor the results of your preventive efforts in a real-time tangible way to decide whether to stay the course or make adjustments.

The more we know...

When our efforts aren't working, we either need to do more or do differently, for "doing the same thing over and over and expecting a different outcome" is insanity. – Albert Einstein

Part Five: Celebrate Success

After completing this material **you will have a greater sense of control over the destiny of your health.** You will have learned the risk factors in your life and feel empowered with knowledge and action steps to take to support prevention with greater vitality and longevity.

Part Five celebrates the success of a few individuals who have gone before you on their journey to Better Breast Health - *for Life!*™



Part Six: Summary & Testimonials

Part Six summarizes our approach to a healthier tomorrow with testimonials on how impactful the model is in supporting prevention.

Part Seven: Complimentary, EPUB & Paperbacks

Part Seven explains the differences between the PDF, EPUB and Paperback versions of this eBook and how to obtain them.

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Please share this PDF version with anyone you care about:

- as the risk factors that contribute to breast cancer are often associated with other forms of cancer, in men and women alike, and
- it is my mission to share preventive education freely, impacting every life able to receive it.



Our mission at The Thermogram Center is, in part, to empower clients with preventive education. Many underlying causes of cancer are manageable. We hope to be a part of your efforts to secure a healthier tomorrow. Learn the mitigation techniques to help you and your loved ones, pets included, to reduce the risk of cancer. Be the Cure. Support Prevention.

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Part 1. Breast Cancer Development & Detection

Breast Cancer Development



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Breast cancers typically begin in the cells of the breast ducts or milk glands, which are referred to as lobules. The ducts are the pathways that deliver milk from the milk glands to the nipple for breast feeding.

Depending on factors like the health of the internal environment of the breasts, hormones, and other influences, cancer can behave in a variety of ways.

In Situ Breast Cancer

For instance, cancer can remain **in situ**, which is to say that it is confined to the immediate area where it began, whether this is in the ducts or the lobules themselves.

When in the ducts, it is referred to as ductal carcinoma in situ, or DCIS, and when in the lobules, lobular carcinoma in situ, or LCIS. In either case, the cancer has not invaded surrounding breast tissue or other organs in the body and is referred to as pre-invasive cancer or **pre-cancer**.

Adults are thought to have precancerous cells in their bodies each day with ~90% going away naturally.

Invasive Breast Cancer

When a cancer breaks through the ducts or lobules to invade surrounding tissue, it is called an **invasive or infiltrating cancer**. If it makes its way into the lymphatic system, which collects waste products and toxins from the tissues and extracellular fluid, then the cancer can spread to the lymph nodes.

At this stage, it is known as **regional metastasis**. Once breast cancer spreads to the lymph nodes under the arm or under the sternum (breastbone), there is an increased chance that the cancer can spread to other organs of the body, known as **distant metastasis**.

Learn More

For more information on all known breast cancer types, their frequency of occurrence, treatment, and prognoses, visit the [American Cancer Society](#).



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Standard of Care Detection



Photo by [National Cancer Institute](#) on [Unsplash](#)

Before the advent of mammography in 1913, breast cancer detection was dependent upon self-exam and clinical palpation, where the fingers are used to study the texture of the breasts and to search for masses. Mammography is an x-ray based technology that can detect masses years earlier, when the size of a mass is too small to be felt by palpation.

Mammography

Recent advancements in mammography are enabling the detection of smaller cancers and more in-situ cancers, which are not malignant, but rather pre-cancerous. Because of this, some argue that mammograms are over diagnosing cancer, as many health providers suggest treating pre-cancers as though they are active cancers, often employing surgery, chemo and radiation... over treatment.

Mammograms also detect microcalcifications, deposits of calcium, which are not cancers themselves, but are occasionally present with in-situ, pre-cancers of the duct. Following mammograms that are either suspicious or not clearly normal, or for young women with dense breast tissue that can make mammograms difficult to read, ultrasounds are often performed.

Ultrasounds

Using high-frequency sound waves, ultrasounds can help distinguish the fluid versus solid characteristics of tissue and masses. This is important because cancerous, malignant tumors are solid filled while benign, non-cancerous and pre-cancerous cysts are fluid filled. When solid filled masses are detected, breast biopsies ensue to obtain diagnosis.

The Women's Imaging Center in Denver, where Dr. Kelly McAleese is Medical Director and Radiologist, is one of many comprehensive breast and imaging centers across the country offering mammograms, ductograms, ultrasounds, biopsies, and bone density testing.

MRIs

Moving up in expense and sophistication are MRIs and PET scans. An MRI involves injection of a rare earth mineral (gadolinium), magnetic fields, and radio waves to help evaluate the extent and locations of breast cancer. However, because gadolinium can cross the blood-brain barrier, cannot be completely eliminated from the body and can accumulate, some woman prefer to avoid them.

Because mammograms and ultrasounds are anatomical tests and size dependent, the average active cancer has typically been growing up to 10 years before it is large enough for detection.

MRIs are both anatomical and functional and non-standard-of-care thermograms are functional. Functional tests are not dependent on size but rather tissue behavior/functioning, so active cancers may be detectable up to ten years earlier.

PET Scans

A PET scan is another anatomical test that uses an injection of glucose with a radioactive component to observe the location of an invasive breast cancer and to help in staging the extent of the disease once diagnosed.

It's important to note that **all breast exams, including mammograms, ultrasounds and non-standard-of-care thermograms, cannot diagnose cancer. Only the histology lab and pathology reports can diagnose breast cancer by studying actual tissue** obtained from the breast by biopsy or surgical procedure. All breast exams then, are looking for signs that cancer may be present.

Standard of Care

Do you know that mammography is the only exam approved by the U.S. Food and Drug Administration (FDA) to screen for breast cancer in women with no symptoms of the disease and the only “standard of care” breast screening exam? This is why our healthcare providers typically initiate breast screening with a mammogram. The other exams are FDA approved as supplements, not replacements, for mammograms.

Issues with Standard of Care

Health providers who take an oath to practice standard of care can lose their medical license, be fined \$10,000 and serve jail time for recommending any breast screening exam other than mammography. Their hands are tied.

Nearly 40% of U.S. women aren't getting routine screening by mammogram. While some argue that these women might be missing out on early detection that can save lives, some argue that an x-ray based technology that is more than 100 years old is antiquated and no longer an intelligent, healthy or safe way of serving or protecting women's lives in an era when prevention may be the only cure.

It is incumbent upon each individual to make informed consumer decisions.

There are more health choices than ever in America.

Being Breast Aware

It is important to be breast-aware at every life stage, whether under age 40 (when cancers are most aggressive), pregnant or nursing (when tests are less sensitive), or over age 50 (when most breast cancers are diagnosed).

It is also important to understand each breast test's unique and complementary role in detection, and to employ appropriate tests available in order to increase the likelihood of early detection (or prevention):

Breast Test	Palpation/ Self-Exam	Thermogram	Mammogram	Ultrasound	MRI
Age Guidelines	20+	20+	50+	When warranted	When warranted
What it Detects	Tissue changes	Inflammation; signs of active cancer	Masses; calcifications	Fluid vs solid characteristics	Extent and locations of cancer
Strengths	Frequency, ie monthly	signs of increased risk can prompt earlier detection or intervention & prevention	“gold standard” in standard of care; universally understood	can help distinguish cancerous from non-cancerous masses, i.e. fibrocystic changes	can increase sensitivity of breast testing; earlier detection
Weaknesses	can be limited when breasts are dense or thick, or when lesion is deep	Non-standard-of-care; cannot precisely locate masses	can be limited when breast tissue is dense	can be limited when breast is fatty or thick	can be limited for in-situ/pre-cancers; expensive
What it means for women...	Women can participate in the breast evaluation process; complements all other	Good for: assessing risk of developing cancer; dense or thick tissue; pregnant/nursing mothers; complements all	Good for: detecting lesions too deep to be palpable; seeing calcifications that may	Good for: dense tissue; evaluating a palpable mass or abnormal mammographic finding	Good: prior to surgery planning for known cancer; for high-

	breast exams	other breast exams	indicate in-situ cancer in the duct		risk patients
Cost	none	moderate	moderate	moderate	high

Learn More

For information on self-exams, mammograms, and ultrasound, visit the [American Cancer Society](#). For information on advanced thermography, visit [The Thermogram Center, Inc.](#)



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Part 2. Prevention – Learn the Risks

Prevention – Learn the Risks



Cover by Suzy Cohe, RPH

To enable (breast) cancer prevention, we first need to understand the most-likely causes, or risk factors, that contribute to its development and how to reduce their impacts on health.

Risk Factors Worksheet

Before you begin learning about the risk factors that contribute to the development of (breast) cancer and how to reduce their impacts on health, complete the below risk factors worksheet to identify the risk factors in *your* life.

Rather than focus on all the risk factors that contribute to the development of cancer, which can seem a daunting task, consider focusing your attention and efforts on only those risk factors pertinent to you.

Prioritize *your* risk factors and efforts to reduce them.

The goal is to enable you to reduce the risk factors for which you have some control to make up for those for which you have no control.

Be The Cure. Support Prevention.

Print and Complete the Following Worksheet

Risk Factors for Which We Have Some Control

(in the order each appears in the book, Better Breast Health - for Life!™)

	Prolonged or Continuous:	Level of Added Risk
Environment	toxin or carcinogen exposure, i.e agricultural and petro-chemicals	H
	pollutant or chemical exposure, i.e. non-natural personal products	L to M
	radiation exposure to breasts aged 8-20 years old	L to M
	high-powered EMF (electromagnetic frequency) exposure	EH
Hormonal & Genetic	waist to hip ratio greater than .81	H
	Body Mass Index over 25	L to M
	* no full-term pregnancy	L
	* using HRT or estrogen useage now and have been for at least 5 years	L
	* used birth control pills for at least 5 years prior to first full term pregnancy	M to H
	* premature delivery before 32 weeks	L
	* termination of teenage pregnancy between weeks 9 and 24	EH
	improper estrogen metabolism or estrogen dominance	L
Diet	diet is not organic or hormone free	N
	acidic diet vs alkaline diet	N
	higher carb/sugar diet vs ketogenic diet	L to M
	cooked/refined diet vs raw diet	L
	low fiber diet, i.e. less than 30g per day	L
	majority of fat intake is not in the form of organic monounsaturated fats	L
	Omega 6:Omega 3 ratio exceeding 20:1	L
	diabetic or high glycemic (sugar/starch) diet and postmenopausal	L
	little or no nutritional supplementation	N
	low iodine/underactive thyroid	L to M
	microwaving as primary method of cooking	N
	weak, compromised or imbalanced gut microbiome	L to M
Lifestyle	irregular sleep patterns	L to M
	smoking of tobacco	L to M
	alcohol consumption of at least 10 drinks/week	L to M
	drink only small amount of pure water daily (far less than 1/2 oz/lb of body wt)	N
	lack of sufficient sunlight	L
	deep, long-lasting emotional trauma/stress	L
	low to moderate daily stress levels	L
	high daily stress levels	M
	wearing bras more than 12 hrs/day, everyday, particularly if not professionally "fitted"	M
	sedentary lifestyle with little or no exercise	L to M
	never cleanse bodily systems	N
	symptoms of chronic inflammation	L
	medication or drug use	L to M
Dental	cavities and abscesses	N to L
	extractions and cavitations	L to M
	metals in the mouth, ie amalgam filling, crowns	N
	root canals	L to M
	poor oral self-care	L

N** = no clinical risk L = Low; ≤ 2X M = Medium; > 2X and ≤ 5X

H = High: > 5X and ≤ 10X EH = Extremely High; > 10X

* These items represent typical lifetime events rather than prolonged or continuous situations.

** These items represent potential areas of opportunity to support good health, but have no clinically-established association with the development of breast cancer.

Learn the Risks

Risk factors are categorized as:

- Environmental Risk Factors
- Hormonal Risk Factors
- Dietary Risk Factors
- The Gut Microbiome
- Lifestyle Risk Factors
- Dental Risk Factors

Consider learning how to reduce the impacts of risk factors in your life with the following chapters.



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Part 2. Prevention – Learn the Risks

Chapter 1. Environmental Factors

Why You Need to Know the Environmental Risk Factors for Cancer



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***Do you know that the environment is the number one cause of cancer?
Do you know what you can do to avoid environmental risk factors and live
the vibrant, healthy life you deserve?***

Americans are typically exposed to hundreds of environmental chemicals and pollutants every day. Understanding these environmental risk factors provides you the opportunity to make healthier choices.

Be Empowered – Learn About the Environmental Causes of Cancer

Environmental chemicals and pollutants can enter the body by way of ingestion, breathing, or skin penetration. Once in your body, they may alter hormones, impact cellular health and compromise the immune system.

Ultimately, our **exposure to environmental contaminants leads to 70 to 90% of the nearly two million cancers diagnosed each year** in the United States. By learning more about environmental risk factors, you'll be prepared to select mitigation techniques and healthier alternatives.

As consumers, when we become proactive and take charge of our well-being, the consumer products we choose yield healthier outcomes. We can demand and expect products and services that are natural, organic, and sustainably sourced.

Chapter 1 Covers Environmental Risk Factors

- Industrial and Agricultural Chemicals
- Non-organic vs. Organic Foods
- Personal Products and Commercial Fragrances
- Common Household Cleaning Products
- Water Sources, Quality and Filtration
- Plastics, Plastics Everywhere
- Electromagnetic Frequencies (EMF) and Radiation

Take the Time to Learn – Earn the Time to Live Your Best Life



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Deadly Effects of Toxic Chemicals on Human Health



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The National Institute of Health (NIH) estimates that **two-thirds or more cancers are linked to toxic chemicals in the environment**. The staggering numbers associated with the environment is not a guess. The harmful effects of chemicals in our daily life are identified through studies of occupational groups with higher exposure to industrial and agricultural carcinogens.

***Are you at risk if you don't work in chemical plants or agriculture settings?
Yes. You are at risk.***

Petroleum-based chemicals, agricultural chemicals, organochlorines, and dioxins are in the air you breathe, the food you feed your family, and the products you use in your home.

Hazardous Chemicals in the Air You Breathe

Petroleum produced chemicals are classified as olefins and aromatics:

- Olefins include ethylene, propylene, butadiene – the raw materials for making plastics.

- Aromatics include benzene, toluene, and xylene – the raw materials for making dyes and synthetic detergents.

Petroleum related products threaten human health, causing cancer and other diseases.

Benzene is present in both crude oil and gasoline and is known to cause leukemia. Handling and breathing gasoline, kerosene, benzene, and formaldehyde – especially when burned – is known to induce cancers in animals' mammary glands.

Among postmenopausal women, breast cancer rates are statistically 1.6 times higher when living within one-half mile of a chemical plant.

For men, occupational studies indicate exposure to gasoline vapors and combustion products indicate an increased risk of male breast cancer.

Dioxins

Dioxins are highly toxic chemical compounds that can cause problems with reproduction, development, and the immune system. They can also disrupt hormones and lead to cancer. Known as persistent organic pollutants (POPs), dioxins can remain in the environment for many years.

Dioxins are created in:

- Forest fires
- Cement kilns
- Coal-burning power plants
- Chlorine bleaching of wood pulp
- Burning trash or firewood

Dioxins are transported primarily through the air and are commonly detected in air, soil, water, food, and animal and human tissues in trace amounts.

Present in the water supply of most industrialized nations, dioxins are highly toxic and likely to double breast cancer risk.

Reduce Your Exposure to Hazardous Chemicals

We can reduce our exposure to dioxins in a variety of ways. Using filtered water rather than tap water can reduce the risk. Certain high-quality water and air filters can purify the air in your home at a molecular level and are widely available.

For example, water filters are available for sink faucets, refrigerator water lines, showerheads, and the main water supply for an entire dwelling. Similarly, high-quality, whole-house and single-room air filters are also available.

Chlorine-Based Chemicals in Your Water, Home, and Personal Products

Organochlorines are any of a large group of pesticides and other synthetic organic compounds with chlorinated aromatic molecules.

Organochlorines are present in:

- Pesticides
- Herbicides
- Fertilizers
- Chlorinated water
- Disinfectants
- Plastics

Chlorine-based chemicals are thought to contribute significantly to breast cancer.

They can mutate genes, alter breast cells to absorb more estrogen, suppress the immune system, and imitate the bad effects of estrogen.

Organochlorines are also present in your water, food, and personal products. They enter your body by:

- Drinking, showering, or swimming in chlorinated water
- Eating meat, dairy, fruits, or vegetables produced with chemicals
- Using personal and cleaning products containing organochlorines
- Storing food in plastics

Organochlorines are metabolized in the liver and by processes supported by phytochemicals like diindolylmethane and glucarate derivatives. However, since the size of organochlorine molecules makes metabolism more difficult, the majority of them end up being stored in fat cells and breast tissue.

Research indicates that women with breast cancer have 50-60% more organochlorine molecules in their tissues than women without breast cancer.

After the nation of Israel banned several organochlorine pesticides, women's breast cancer mortality dropped by a third for women under the age of 44, demonstrating the link between environmental chemicals and increased rates of breast cancer mortality.

To demonstrate the subtle effects of eating non-organic foods, consider a study in the medical journal Lancet which found that men who ate mostly pesticide-free, organic foods had sperm concentrations 43% higher than men who ate a standard diet.

Reduce Your Exposure to Organochlorines

We can reduce our exposure to organochlorines by 80% by:

- Eating organically produced animal products like eggs, milk, cheese, and meat
- Consuming organic produce and filtered water
- Using less plastic and buying fresh versus canned or packaged pantry foods.



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text/call 303-664-1139 • info@thermogramcenter.com

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Five Ways to Reduce Harmful Chemicals in Your Food and Water



Photo by [Somi Jaiswal](#) on [Unsplash](#)

Much of the non-organic food you eat is treated with Roundup. It's killing bees.

Do you think it's any safer for you to eat?

Roundup is **the** most globally used pesticide. In 2015, the International Agency for Research on Cancer declared it a probable human carcinogen and deadly to bees pollinating the fields.

While countries around the world have banned Roundup, the United States has not.

Keep in mind that the glyphosate in Roundup is only one of the hundreds of harmful food substances you may consume every day.

How do We Protect Ourselves From Food Toxins?

Are you ready to eliminate deadly pesticides, antibiotics, growth hormones, and genetically modified organisms allowed in your food and water?

Eat organic and drink pure water!

The first step in going organic is to be familiar with what “organic” means.

Organic food is produced without using most conventional pesticides, fertilizers made with synthetic ingredients or sewage sludge, bioengineering, or ionizing radiation. Organic meat, poultry, eggs, and dairy products come from animals not given antibiotics or growth hormones.

One: Read Labels to Reduce Harmful Chemicals in Food

- “Organic” means the product comes from at least 95% organic ingredients.
- “100% Organic” means all the ingredients are organic.
- “Made with Organic” means at least 70% of the ingredients are certified organic ingredients.
- “Natural” is NOT organic. In general, it means no artificial colors, flavors, or preservatives are used in the ingredients. The ingredients, however, can be grown with toxic chemicals.
- Organic labeling standards are verified by a USDA-accredited certifying agent. For more details on food labeling, consider [Food Labels Explained](#).

Two: Cut Toxic Chemicals in Half with Organic Produce

The USDA recommends nine servings of fruits and vegetables a day - about half of your food servings. The phytonutrients in fresh produce are essential to good health. But the bioaccumulation of pesticides, fertilizers, and genetically modified organisms contributes to disease.

Anti-cancer diets include an abundance of organic fruits and vegetables and may reduce the risk of breast cancer by 46%.

Berries are typically high in anti-oxidants, which protect our cells from damage caused by the free- radicals that are created as our cells metabolize or encounter environmental pollution.

Cruciferous vegetables are high in phytochemicals, plant chemicals that have protective, disease-fighting qualities. Cruciferous vegetables include those with

crowning heads like broccoli, cabbage, and cauliflower. Garlic, onions, and red peppers are particularly rich in anti-cancer nutrients as well.

In a Harvard survey, women who ate only one daily serving of a vitamin A rich food had 25% more breast cancer than those women who ate at least two servings a day.

Dark, leafy greens, orange and yellow produce are good sources of vitamin A (beta-carotene), i.e. carrots.

For more information on anti-cancer diets, consider [Ask Dr. Sears](#).

How do you source the healthiest produce?

Buy a wide variety of organic fruits and vegetables whenever you can, and be aware that not all fruits and vegetables are equally toxic.

To better navigate your grocery aisle, learn about [The Dirty Dozen and Clean 15](#).

Studies at the Mayor Clinic found organic produce contains:

- Increased nutrients
- Increased antioxidants
- Reduced toxic metals
- Reduced pesticides

Three: Reduce Toxic Chemicals with Organic Proteins

Non-organic meat and dairy products have two ingredients you don't need - antibiotics and growth hormones. Over time, the bioaccumulation of these toxins can lead to:

- Antibiotic resistance
- Upset gut microbiome and negatively impact immunity
- Excess estrogenic effects contributing to abnormal tissue growth, including cancers.

Eat heart-healthy protein.

Organic meat, dairy products, and eggs result in generally higher levels of omega-3 fatty acids, making them more heart-healthy than other fats. A 2016 study in the British Journal of Nutrition found organic proteins can have up to 50% more omega-3 fatty acids.

Four: Cook Organic Food with Toxic-Free Organic Oils

Your body needs dietary fat for energy, cell growth, digestion, vitamin absorption, and essential hormone production. Fats from organic olive oil and butter can reduce breast cancer risk because they contain some of the phytochemicals that stop breast cancer initiation and progress.

What to know about cooking oils:

- Select organic, cold-pressed oils such as extra-virgin olive oil in containers that reduce sun exposure and heat to preserve fatty acids.
- Avoid using excess heat, which can destroy essential fatty acids and create damaging free radicals.
- Charred foods are cancer-causing. Avoid blackened dishes.

From salad dressing to stir fry oils, consider [How to Choose the Healthiest Oils to Cook With](#).

Five: Drink From the Earth – Not the Toxic Tap

Pure water is essential for life and is free of toxic metals and chemical contaminants detrimental to your health.

Chemicals in your drinking water can lead to:

- Skin discoloration
- Nervous system conditions
- Organ damage
- Developmental delays
- Negative reproductive effects

Pure or filtered water, versus tap water, is best. Pure water can be sourced from artesian wells or springs without added ingredients, outside of antimicrobial agents.

While our Colorado mountain-supplied tap water is chlorinated to purify and kill microbes, some municipalities in the United States recycle water.

*What about all the industrial chemicals and prescription drugs
flushed into the water system?*

According to Harvard Health, sewage treatment plants and water treatment facilities are not currently designed to remove pharmaceuticals from water.

Water, water everywhere, but which one is safe to drink?

- **Reverse osmosis** is very effective for filtering heavy metals, uranium, chlorine, and fluoride. Reverse osmosis effectively filters dissolved inorganic solids (such as salts), heavy metals, uranium, chlorine, and fluoride. Colorado's Eldorado Springs is one of the purest waters in the world. Eldorado water has been tested to be some of the purest and best tasting spring water in the US.
- **Steam distilled water** is pure, but some experts believe that it should not be consumed for prolonged periods since it leaches minerals from the body, contributing to reduced bone density among many other mineral-deficient disease states.
- **Active charcoal carbon filters** remove chlorine, sediment, volatile organic compounds (VOCs), taste, and water odor. They are not effective at removing minerals, salts, and dissolved inorganic compounds.
- **Multi-stage home water filtration systems** can be expensive and difficult to relocate when their owners move. Consider Enviro Products Shower Filter Cartridges to remove chlorine and purify tap water before it hits your skin in the shower. After all, our skin is the body's largest organ. Consider their 10-stage water filter under the kitchen sink to purify tap water.

And remember, water storage is also an important health consideration. Excess sun and heat can cause harmful chemicals in plastic water bottles' walls to migrate into the water. While the thicker and harder plastic bottles reduce this risk, using sterilized glass or stainless steel containers eliminates this risk.

Going Organic Can Reduce Toxins by 80%

At first, when you choose organic foods and pure water over the convenience of non-organic products and tap water, the change may seem overwhelming.

Is it worth it?

The benefits of going organic are potentially life-saving since your efforts will reduce your chemical exposure by 80%.

Plus, organic foods are the most heavily regulated food system in the United States. Only organic guarantees no toxic pesticides, synthetic fertilizers, or GMOs and no antibiotics or growth hormones in livestock.



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Are Harmful Chemicals Hiding In Your Personal Products?



Photo by [Kimia Zarifi](#) on [Unsplash](#)

If you wouldn't eat it, why would you rub it into your skin?

Your skin is your body's largest organ. Up to 60% of what goes onto your skin is absorbed into your bloodstream and circulated throughout your body.

Are you reading labels?

If not, you might want to start looking for all-natural ingredients.

Everyday Beauty Products May Contain Harmful Chemicals

Most of us use at least nine personal care products every day. Often, we don't give our daily regimen a second thought past a good "two-for-one" sale. But many of these products are heavily laden with unnatural ingredients.

Consider that all of these products can add to your toxic load:

- Soaps, Shampoos, and Conditioners

- Bath Bubbles, Balms, and Oils
- Mouthwashes and Toothpastes
- Antiperspirants and Deodorants
- Moisturizers and Lotions
- Sunscreen
- Skin and Eye Cosmetics
- Shaving Creams and After Shaves
- Perfumes and Colognes
- Hair Treatments and Colors
- Nail care products

Toxic Chemicals to Avoid In Your Personal Care Products

The personal products we use each morning can expose us to more than a hundred toxic chemicals before we leave our homes (or bathrooms) for work each day. You might assume their ingredients are tested and safe. They are not.

Toxic Fragrances-The Scent of Danger

Commercial perfumes, colognes, cleaning products, dryer sheets, and laundry products often contain synthetic fragrances. These fragrances not only contain chemicals, but some are neurotoxic, especially for pets. The answer may be in using fragrance-free products or adding essential oils for fragrance.

Deodorant or Antiperspirant? Know the Difference

Deodorants work by deodorizing perspiration. Antiperspirants reduce perspiration and reduce your body's ability to purge toxins. For more info, consider the subchapter, "Antiperspirants & Deodorants."

Disruptors of Normal Body Functions

An endocrine disruptor is a synthetic chemical that mimics or blocks hormones and disrupts normal body functions. For more information, consider [9 Ways to Avoid Hormone Disrupting Chemicals](#) and [Toxic Load: What's in Your Personal Care Products?](#)

Alternatives to Toxic Personal Products

Taking the time to be informed about the products and brands you use is the best way to ensure you're using safe, natural products. Research the products and carefully read the labels.

Are all the ingredients naturally derived or are some synthetically-derived chemicals?

DIY Safe Personal Products

Making your organic products at home is easier than you might think. For more information, consider [Don't Mess with Mama](#).



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Antiperspirants & Deodorants



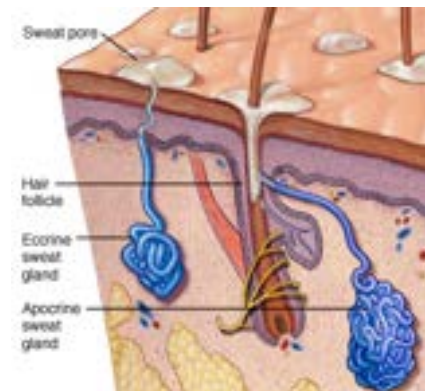
Photo by [Women's Fitness](#)

Each of us chooses how to manage underarm perspiration and odor. But is our method safe or adding to our breast cancer risk? Let's sort fact from fiction and explore healthy options.

What is Sweat?

Each person has between two and four million sweat glands in the dermis under the skin's surface, which also contains nerve endings, hair follicles, blood capillaries, and other structures:

Nerve endings stimulate sweat gland production and are influenced by our level of physical activity, emotions and more. While most of our bodies' sweat glands lead to pores on the skin surface, the sweat glands in the underarms lead to hairs through the follicles.



The Sweat Glands.

Source: [Mayo Clinic](#)

Like plasma, the colorless fluid in our blood, sweat is comprised of water and minerals, i.e. sodium and chloride. Underarm sweat also contains proteins and

fatty acids. While sweat has no odor, bacteria on the underarm skin metabolize the proteins and fatty acids, producing odor.

Why We Sweat

Sweating helps keep our bodies cool and provides an auxiliary pathway for toxin elimination.

As sweat evaporates from the skin surface, it removes excess heat, acting as a whole body cooling system to reduce body temperature. In addition, sweat transports not only minerals, but also heavy metals and other toxins.

While many of our bodies' toxins are collected by the lymphatic system, processed through the liver and kidneys and eliminated by feces and urine, some studies indicate higher concentrations of heavy metals and toxins in sweat, as some toxins in the tissue and blood diffuse into sweat glands.

So while exercise may enhance the body's ability to detoxify by facilitating sweating, urination and defecation, induced sweating through (infrared) saunas, bikram yoga, sweat lodges, etc. can help as well.

Do Antiperspirants Cause Breast Cancer?

There is insufficient clinical evidence to suggest that antiperspirants or deodorants cause breast cancer. At most, they may increase risk. Some of my clients believe that antiperspirants contribute to a backflow of the lymphatics from the underarm into the breast tissue. But the lymphatic system and the sweat glands are two separate systems.

The active ingredients in most antiperspirants include aluminum salts to plug the pores that release sweat. While deodorants control odor without using aluminum salts, both deodorants and antiperspirants may contain parabens.

Parabens are preservatives used in many personal care products, cosmetics and drugs. Parabens and aluminum can bio-accumulate in breast tissue and have an estrogenic effect, increasing breast cancer risk.

How we manage our underarm perspiration then, can affect our breast cancer risk.

Studies indicate that in addition to heavy metals and toxic elements, sweat has been found to transport phthalates and Bisphenol A (BPA). These plasticizers are endocrine disruptors that can contribute to breast cancer.

Common sense says that allowing our underarms to perspire and detoxify may reduce our risk of breast cancer. But how do we deal with the odor safely?

Sweat is Odorless. So Why Do We Smell?

Sweat itself has no odor, but when bacteria on the skin metabolize the proteins and fatty acids of underarm sweat, they produce an odor. Just as our guts and mouths host a microbiome, so too does our skin. A healthy underarm microbiome will create less odor than an unhealthy or altered microbiome.

Because our microbiome plays an important role in our bodies' health defense, it makes sense to nurture it. The application of chemically-laden personal care products, i.e. soaps, antiperspirants, skin lotions, etc. can alter or devastate our microbiome. So going with less or natural can be healthier. But how can we deal with the odor safely?

Managing Odor Safely

To reduce our risk of breast cancer and to support our skin's microbiome, we can **consider an all-natural deodorant.**

This will allow our underarms to perspire and detox, while reducing odor and the impact on the microbiome. Many of my clients use natural deodorants without alum or chemicals and some make homemade deodorants with baking soda and essential oils, among other methods.



As for me I use the Thai Crystal salt stick which has no aluminum, alum or preservatives and lasts me 5+ years.

Be advised: if you have been using an antiperspirant and switch to a salt stick, which acts like a sponge to draw sweat out of your pores, be aware that you are altering the microbiome, opening the floodgates and facilitating detoxification. This means you may have intense odor production for days or weeks.

I recommend that you work through this detoxification process until your odor is normalized. You may overwhelm the salt's ability to kill odor-causing bacteria with only one application a day, so consider carrying your salt stick and a washcloth with you in order to rinse/wash and reapply multiple times throughout the day.

Jamye L.D. Richardson is a Fort Collins-based certified massage therapist, neuromuscular rehab therapist, and viniyoga instructor at balancebodywork.net who had experienced difficulty in finding an effective natural deodorant.

For her, she had to try multiple deodorants until she found one that worked effectively with her microbiome to reduce odor. She now employs the \$4 all-natural deodorant made by [Golden Poppy Herbal Apothecary](http://GoldenPoppyHerbalApothecary.com).

**Golden Poppy
Deodorant
Ingredients:**
Baking Soda
Arrowroot Starch
Coconut Oil
Beeswax
Essential Oils
Vitamin E
Rosemary antioxidant

Beware that formulas containing lavender oil can have an estrogenic effect for some women, so I suggest using formulas without lavender oil.



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Beware of Dirty Secrets in Harmful Cleaning Products



Photo by [CDC](#) on [Unsplash](#)

***Do you assume your household cleaning products are tested for safety?
They're not!***

The most significant danger in household cleaning products is that our government does not test their safety. Even worse, manufacturers are not required to test them either.

The Dirty Secret?

The truth is from 65,000 to 100,000 untested chemicals are in the common household cleaners you use in your home.

Manufacturers argue these toxic ingredients aren't likely to be a problem in small amounts. They are unconcerned with the toxic build-up in our bodies over time.

Toxic Chemicals in Everyday Cleaning Products

Walking down the cleaning aisle of your grocery store, you'll find a cleaner for every surface in your home. The average number of toxic chemicals in any one of those plastic bottles is about 62.

But you won't find a complete ingredient list on the product. Why?

The government only requires manufacturers to list “chemicals of known concern.” Since they are not tested, how do we know if we should be concerned? We don't!

These Untested Products May Contain Toxic Ingredients

- Laundry detergent, bleach, fabric softener, and dryer sheets
- Dish soap, dishwashing detergent, rinse aid
- Toilet bowl cleaner, tub & tile cleaner, and glass cleaner
- Granite cleaner, stainless steel cleaner, and all-purpose cleaner
- Floor cleaner, carpet cleaner, and dusting spray
- Air freshener sprays and plugins

The Harmful Effects of Cleaning Products

Animal research has shown the harmful effects of chemicals used in cleaning products. However, we don't know if the same harm applies to humans.

Do you want to take the following risks?

- Skin & eye irritation
- Reproductive problems
- Stimulated growth in human cancer cells
- Link to pancreatic cancer
- Upper respiratory tract irritation
- Central nervous system disorders
- Neurotoxins
- Triggers asthma

For more information on chemicals and products to avoid and tips for sourcing safer alternatives, consider: [Harmful Household Cleaners](#).

Can You Smell the Neurotoxins in Your Scented Products?

No. You can't. Yet they can be deadly, especially to your pets!

Who doesn't love a clean bath towel, warm out of the dryer and scented with "the freshness of spring?"

***Where does the spring smell come from in your dryer sheet?
Not from mother nature.***

The unlimited combination of scents in your candles, air fresheners, laundry, and cleaning products comes from about 4,000 chemicals.

While mother nature uses a breeze, the rain, and spring blooms to create the scent of spring, manufacturers use secret formulas. Fragrance formulations are classified as "trade secrets" and therefore kept from the public. Look on the labels. You'll see "fragrance" in place of the 50 to 300 chemicals used to formulate a single scent.

For more information on the toxic secrets of synthetic fragrances, consider [The Truth About Toxic Fragrances](#)

Safer, Healthier Alternatives to Everyday Commercial Cleaning Products

Homemade products

One of the best ways to avoid hazardous chemicals in your cleaning products is to make it yourself. **Go DIY!**

Since you can't trust labels, why not combine a few safe ingredients in seconds and safely clean your home?

Every link in this article includes DIY ideas for home cleaning. For more information on getting started with natural cleansers and scents, consider [Wellness Mama](#)

Want to freshen the scent in your laundry?

- Avoid Tide, Downy, and the big commercial branded detergents, softeners, and dryer sheets – their synthetic fragrances are neurotoxic, especially to pets.

- Consider using more naturally formulated brands and/or DIY recipes.

Want to freshen the scent in your home?

- Avoid the big commercial branded candles, sprays, and plug-ins.
- Consider using high-quality essential oils, diffusers, and DIY recipes.
- Consider slicing organic oranges and/or lemons, adding a cinnamon stick, and stewing on top of the stove to fill your home with a completely natural scent.



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Why the Quality and Quantity of Your Water is Vital to Your Health



Photo by [Johnny McClung](#) on [Unsplash](#)

Your body is 50% to 70% water. Even your bones are 31% water.

Every cell, tissue, and organ in your body needs water for optimal health.

The quality and quantity of the water you use are essential for:

- Maintaining body temperature
- Eliminating waste
- Lubricating joints
- Protecting organs and sensitive tissue
- Flushing waste from kidneys and liver
- Dissolving minerals and nutrients for use in the body

How to Determine the Quantity of Daily Water Intake

Without enough daily water, you risk dehydration. Severe **dehydration limits normal body functions**. Even mild dehydration drains your energy. Consider consuming at least one-half of your body weight in ounces of pure water daily.

If you weigh 150 pounds, drink 75 ounces of water daily. Drink additional water when exercising or stressed.

You may have been advised to alkalize drinking water with several drops of lemon or lime juice, apple cider vinegar, chemically, or through countertop equipment (ionized alkaline water). It is important to note that alkalized drinking water should be avoided around mealtimes so that your stomach and digestive tract can sustain the acidic pH it requires to digest food.)

How to Source Quality Water

Pure or filtered water, versus tap water, is best. Pure water can be sourced from artesian wells or springs without added ingredients, outside of antimicrobial agents.

While our Colorado mountain-supplied tap water is chlorinated to purify and kill microbes, some municipalities in the United States recycle water.

What about all the industrial chemicals and prescription drugs flushed into the water system?

According to Harvard Health, sewage treatment plants and water treatment facilities are not currently designed to remove pharmaceuticals from water.

Chemicals in your drinking water can lead to:

- Skin discoloration
- Nervous system conditions
- Organ damage
- Developmental delays
- Negative reproductive effects

Consider using tap water only for cleaning.

What water is safest for you and your pets to drink?

- **Reverse osmosis** is very effective for filtering heavy metals, uranium, chlorine, and fluoride. Reverse osmosis effectively filters dissolved

inorganic solids (such as salts), heavy metals, uranium, chlorine, and fluoride. Colorado's Eldorado Springs is one of the purest waters in the world. Eldorado water has been tested to be some of the purest and best tasting spring water in the US.

- **Steam distilled water** is pure, but some experts believe that it should not be consumed for prolonged periods since it leaches minerals from the body, contributing to reduced bone density among many other mineral-deficient disease states.
- **Active charcoal carbon filters** remove chlorine, sediment, volatile organic compounds (VOCs), taste, and water odor. They are not effective at removing minerals, salts, and dissolved inorganic compounds.
- **Multi-stage home water filtration systems** can be expensive and difficult to relocate when their owners move. Consider [Enviro Products](#) for Shower Filter Cartridges to remove chlorine and purify tap water before it hits your skin in the shower. After all, our skin is the body's largest organ. Consider their 10-stage water filter under the kitchen sink to purify tap water.
- **And remember**, water storage is also an important health consideration. Excess sun and heat can cause harmful chemicals in plastic water bottles' walls to migrate into the water. While the thicker and harder plastic bottles reduce this risk, using sterilized ceramic, glass or stainless steel containers eliminates this risk.

Colorado's Purest Drinking Water

In Colorado, [Eldorado Springs water](#) is the best source for drinking and cooking.

Colorado's Eldorado Springs has some of the purest waters in the world. In addition, Eldorado water is tested for purity and ranks as one of the best tasting spring waters in the U.S.



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Avoid the Dangers of Using Plastic Food and Water Containers



Photo by [tanvi sharma](#) on [Unsplash](#)

The same plastic threatening our planet is a threat to your health.

Research suggests that plastics may leach harmful chemicals when scratched or heated. At certain exposure levels, some of the chemicals in plastics may cause cancer.

It is impossible to avoid all plastics. However, you can reduce your risk by reducing your use of plastics, selecting the safest plastics, and sourcing alternative food and water storage containers.

Toxic Chemicals in Plastics

A study published in the journal "Environmental Science and Technology" analyzed 34 commonly used plastic products. A shocking 74% tested toxic.

Xenoestrogens Imitate Hormones with Hazardous Outcomes

Xenoestrogens are substances found in plastics that are close enough in molecular structure to estrogen that they can bind to estrogen receptors in the body with potentially hazardous outcomes.

They are particularly detrimental to hormone-sensitive organs like the breast, uterus, immune and neurological systems, and human development.

Organochlorines May Contribute Significantly to Breast Cancer

Plastics also contain organochlorines. These are chlorine-based chemicals thought to contribute significantly to breast cancer. They can mutate genes, alter breast cells to absorb more estrogen, suppress the immune system, and imitate estrogen's harmful effects.

Organochlorines are metabolized in the liver and by processes supported by phytochemicals like diindolylmethane and glucarate derivatives. The size of organochlorine molecules, however, makes metabolism more difficult. The majority end up stored in fat cells and breast tissue.

Some research indicates that women with breast cancer have 50-60% more organochlorine molecules in their tissues than women without breast cancer.

Phthalates in Plastic Adversely Impact Human Development

Most water, soda, juice, sports-drink bottles, yogurt cartons, bread bags, boil-in-bag pouches, cereal-box liners, and food-storage bags are examples of food-grade plastics with no known health hazards when they are not exposed to heat.

However, these containers are generally intended for single use, i.e., #1 PET or PETE, and should be discarded after their initial use rather than cleaned and re-used.

In general, the more flexible the plastic, the more likely it is to contain plasticizers called phthalates, which make plastic more pliable. While some phthalates are harmless, others may contribute to cancer.

Endocrine-disrupting chemicals, phthalates, can migrate from plastics, especially in the presence of heat. Being fat soluble, phthalates can concentrate in the fatty organs of our bodies, including the breasts.

A recent study published in Environmental Health Perspective also links the irregular genital development in boys of mothers exposed to multiple phthalates during pregnancy.

Bisphenol-A Linked to Breast and Prostate Cancer

Another endocrine disruptor is bisphenol-A. According to Endocrinology, *"Humans are exposed to bisphenol-A (BPA), an estrogenic compound that leaches from dental materials and plastic food and beverage containers."*

Animal experiments have linked bisphenol-A to an increased risk for breast and prostate cancer, low sperm counts, and female infertility at very low levels of exposure. Some polycarbonate plastics, #7 PC, found in food can linings, baby bottles, 5-gallon water jugs, and Lexan or Nalgene water bottles contain bisphenol-A.

How to Reduce the Dangers of Using Plastics

- Keep plastics out of the heat of a microwave, hot storage areas, and sunlight
- Do not heat food in plastic intended for storage only—such as margarine tubs
- Do not put top-shelf plastics on the bottom shelf of the dishwasher—such as children's sippy cups and baby bottles
- Recycle plastic containers when they look cloudy or scratchy or have an odor
- Heat and store food and water in glass, ceramic, or stainless steel
- Substitute glass, ceramic, stainless steel, waxed-paper sheets and bags, parchment paper for plastics when possible
- Use Polypropylene, #5 PP plastic

- Use high-density polyethylene, #2 HDPE plastic
- Use low-density polyethylene, #4 LDPE plastic



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by Tirza Derflinger

President, Author, Health Educator, CTT, MBA

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How to Protect Yourself from Electromagnetic Radiation (EMF)



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Electromagnetic fields (EMFs) are present everywhere in our environment but are invisible to the human eye. Your only protection is knowing the sources and taking precautions to reduce the cumulative and harmful effects of electromagnetic radiation surrounding you.

They are everywhere, and they present increasing dangers to your health.

Since the beginning of the universe, the sun has emitted waves that create EMFs or radiation. Since the 1800s, the human-made gadgets that power our lives surround us with increasing EMF radiation levels.

Power lines, cell phones, microwaves, Wi-Fi routers, and X-rays are only a few sources of EMF radiation we have added to our daily exposure.

Some sources present low doses, but other sources are high and a cause for concern.

Radiation exposure is measured in units called millirads (mrad). For example, one week of living at a high altitude in Denver presents about one mrad of

radiation. A 6-hour jet flight presents about five mrads. Yet, a screening mammogram presents about 300 mrad.

Mammograms and EMF Dangers

Dense breast tissue among premenopausal women requires about twice the mammogram radiation than that of postmenopausal women who typically have less dense and fattier tissue.

Risk is substantially increased if radiation is absorbed in the **developing breast tissue** of females aged 8 – 20. For those females in this younger age range who are so sensitive to radiation that they become physically ill after exposure, the low-level accumulation can increase risk and initiate cancer. Cancer can then appear up to 10 years after exposure and does not peak until 40 years after exposure.

However, the mammography industry reports that for non-sensitive women over 40, the added risk of mammography is statistically insignificant.

Electrical Devices and EMF Dangers

EMF radiation surrounds all electrical devices. **As a part of our everyday lives, constant exposure increases breast cancer rates.**

For example, evidence suggests that women who work with telephone line installation or repair are up to 200 times more likely to develop breast cancer. EMF can disturb the normal growth of cells by interfering with hormone, enzyme, and chemical signals. The result is DNA damage and the potential for cancer.

Computer monitors typically emit electric and magnetic fields in the very low frequency range (VLF) and the extremely low frequency (ELF) ranges. For women who sit in front of computer monitors during work hours, grounded glare screen filters reduce the electric fields.

Reducing the magnetic fields requires additional equipment to surround and shield the top and sides of the monitor. Flat-screen monitors such as liquid crystal displays, or LCDs, and plasma displays, typically emit less EMF than do cathode ray tube, or CRT, monitors.

Melatonin and EMF Dangers

EMF also reduces the production of melatonin, a brain chemical that contributes to breast cancer when in a state of deficiency.

Some flight attendants have higher incidence rates of breast cancer due to irregular sleep patterns disturbing their melatonin levels.

Reducing EMF Radiation

EMF radiation can be reduced by 80% when common household appliances are kept at least 28 inches away from your body.

These appliances include electric clocks, electric wiring, TVs, computer monitors, electric blankets, electric fans, and other common household electric appliances. Hairdryers and bedside clocks can do more damage than televisions because they are typically closer to the head and the glands that regulate melatonin and other hormones.

For an in-depth understanding of EMF radiation risks and mitigation tips, consider:

- [Electromagnetic Frequencies \(EMF\)](#)
- [Learn the Risks: Electromagnetic Frequencies](#)
- [Cars and EMF](#) and [Healthful Tips](#)
- [Cell Phones](#) and [Safety Tips](#)
- [Is Your Home Healthy for You?](#) and [Managing EMF](#)
- [Dumbing Down your Smart Meter](#)



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Part 2. Prevention – Learn the Risks

Chapter 2. Hormonal Factors

Why You Need to Know the Link Between Estrogen and Cancer



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What is the link between estrogen and cancer?

The link involves how your cells divide during the natural growth and repair cycle.

Cancer involves uncontrolled cellular growth. Growth occurs when cells divide—one becomes two, two become four, and so on.

Normal breast cells can progress to a state of overgrowth or hyperplasia. If this results in unusual cells, it becomes atypical hyperplasia. With atypical hyperplasia, cancer can result if mutations occur during the cellular division process. Under certain circumstances, estrogen can stimulate the breast tissue to increase cellular division.

Prolonged exposure to excess estrogen is probably the most significant risk factor currently known for developing breast cancer.

While the link between estrogen and breast cancer is well documented, **excess estrogen promotes cellular growth and can increase cancer risk anywhere in the bodies of women *and* men.**

Chapter 2 Covers these Hormonal Risk Factors

- Menstruation
- Pregnancies & Abortions
- Breast Feeding
- Birth Control Pills
- Hormone Replacement Therapy
- Soy
- Managing Estrogen in Your Body



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Why Early Puberty May Increase the Risk of Breast Cancer



Photo by [si Janko Ferlič](#) on [Unsplash](#)

Do you remember how old you were when you started your period?

Have you noticed girls seem to be buying their first bra at younger and younger ages?

Menstruation, Longer Estrogen Exposure, and Breast Cancer

In the early part of the 20th century, the age at which girls began menstruation began dropping. The average age has declined from 16-17 years to 11-12 years over the past century. **Half of the girls in the United States begin developing breasts before the age of 10.**

When girls develop breasts and begin menstruation at younger and younger ages, the time between puberty and first full-term pregnancy is usually longer.

During this time, breast tissue tends to be immature, overactive, and sensitive to hormonal influences. Immature breast cells have unstable DNA and are more susceptible to mutation and the cancer process.

Plus, **increased numbers of menstrual cycles over a woman's lifetime increase her exposure to estrogen.** During each menstrual cycle, our estrogen levels change, elevating in preparation for ovulation.

Why the Rising Rates of Early Puberty in Girls is Cause for Concern

- Girls are entering puberty five years earlier than a century ago.
- An additional five years of estrogen production can increase breast cancer risk.
- Early puberty increases the time until a woman has a full-term pregnancy.
- The longer the time between puberty and a first full-term pregnancy can increase breast cancer risk.

Why Late Menopause May Increase the Risk for Breast Cancer

Just as early puberty increases a woman's menstrual cycles, so does delayed menopause.

Fortunately, there is no indication of growing numbers of late menopause.

However, lifestyle and medical contributors that extend your age until menopause should be considered. According to the American Society of Clinical Oncology, women experiencing late-onset menopause after 55 have an increased risk of uterine and breast cancer.

For every year older a woman is at menopause, her breast cancer risk increases by approximately 3%.

Genetic factors are primarily responsible for the length of a woman's reproductive life. Although you have no control over your heritage, healthy choices remain the key to reducing your risk for breast cancer.

Healthy Choices for Early Puberty and Late-Set Menopause

The good news is, according to the National Cancer Institute, prevention strategies work. Girls and women of all ages may reduce their exposure to excess estrogen with the following strategies.

- Maintain healthy weight
- Exercising regularly
- Maintain thyroid health
- Reduce antibiotic use
- Use safe household cleaners
- Avoid plastics
- eliminating hormone-laden animal products in diet



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Pregnancy and Breast Cancer Risk



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Studies have shown the risk of developing breast cancer is related to a woman's exposure to chemicals, xenoestrogens (estrogen mimickers), estrogen, and the hormones produced by her ovaries.

Pregnancies reduce the number of menstrual cycles, thereby reducing a woman's exposure to ovarian hormones.

While women in today's society have fewer children at later ages, let's take a closer look at reproduction information regarding breast cancer and prevention.

Pregnancy Factors Lowering the Risk of Breast Cancer

A woman with multiple, full-term births in her twenties has a reduced risk of breast cancer.

- During full-term pregnancy, breast cells mature. Mature breast cells are more resilient against mutation than immature cells. Hence, full-term pregnancies add protection against cancer.
- Women birthing five or more children may have a 50% less risk of breast cancer than women with no children.

- Women completing their first full-term pregnancy before age 20 reduce their risk of hormone receptor-positive breast cancer by 50% compared to women whose first full-term pregnancy occurs after 30.
- Women who have had preeclampsia may have a decreased risk of developing breast cancer.

Pregnancy Factors Increasing the Risk of Breast Cancer

The older a woman is at her first full-term pregnancy, the higher her risk of breast cancer.

- During pregnancy, breast cells grow rapidly. Genetic damage in the breast cells copies as the cells multiply. Damage may lead to breast cancer, and the likelihood increases with a woman's age.
- Women older than 30 who give birth have a higher risk of breast cancer than women who never give birth.
- Recent childbirth increases the short-term risk of breast cancer—the risk of cancer declines after ten years.
- The use of diethylstilbestrol (DES) during pregnancy may have a slightly higher risk of developing breast cancer. DES, a synthetic estrogen, was used between 1940 and 1972 to prevent miscarriages.
- Daughters of women who took DES during pregnancy may also have a slightly higher risk of developing breast cancer after 40.

Premature Deliveries and Breast Cancer

Abortions or miscarriages may increase the risk of breast cancer.

- During the first two trimesters, high estrogen levels stimulate cellular division in the breasts and increase the number of immature breast cells.
- Breast cells only mature during the third trimester.
- Some studies suggest that premature deliveries before 32 weeks may double the risk of breast cancer.
- One study suggests a teenage pregnancy terminated between weeks 9 and 24 increases breast cancer risk by 30%.

Reducing the Risk of Breast Cancer Based on Reproductive History

Along with considering a healthy lifestyle and this reproductive information, women can consider reducing estrogenic exposure and consulting with functional health professionals to test and address estrogen metabolism and balance issues in the body.



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Nursing and Breast Cancer Risk



Photo by [SI Janko Ferlič](#) on [Unsplash](#)

Good news for nursing mothers!

Evidence suggests that women who nurse for at least six months after the age of 20 can reduce their breast cancer risk by 25%.

Breast Feeding Factors Lowering the Risk of Breast Cancer

Breastfeeding is a personal decision and depends upon your unique situation. If breastfeeding is an option, there are several reasons why it may protect your breast health:

- Nursing promotes breast cell maturation and stabilizes DNA.
- Nursing 24/7 limits breast cells' ability to mutate.

- Nursing reduces the number of a woman's menstrual cycles resulting in lower estrogen levels over her lifetime, thus reducing estrogen exposure.
- Sustained exfoliation of breast tissue during lactation may eliminate cells with DNA damage and mutations.
- Nursing mothers tend to eat more nutritious foods and follow healthier lifestyles (limit smoking and alcohol) while breastfeeding.

Nursing's Positive Effect on Women's Overall Health

A Harvard Medical School study finds **breastfeeding has a positive effect on a woman's overall health in many ways.**

- In the optimal group of the Harvard study, most mothers breastfed as recommended for a total of one year and exclusively for six months. The study found breastfeeding may not only **help prevent cancer but diabetes and heart disease as well.**
- Additional studies concur and indicate breastfeeding **may also reduce a mother's risk for rheumatoid arthritis.**
- Plus, mothers who breastfeed **recover from childbirth more quickly.** The hormone oxytocin, released during breastfeeding, returns the uterus to normal size faster and may reduce postpartum bleeding.

For information on breastfeeding for yourself or a loved one, consider [KellyMom](#) and [La Leche League International](#). Their missions are to support and encourage breastfeeding mothers as an essential element in the healthy development of the baby and mother.



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The Birth Control Pill and Breast Cancer Risk



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While the birth control pill is one of the most effective forms of birth control, **there is an association between estrogen exposure and an increased risk of breast cancer.**

Does Use of the Birth Control Pill Increase the Risk of Developing Breast Cancer?

Most prescribed birth control pills contain synthetic versions of the natural female hormones estrogen and progesterone. Prolonged estrogen exposure is considered to be one of the highest risk factors for developing breast cancer.

While early birth control pills contained much higher levels of hormones and posed a higher risk, many experts suggest that the benefits of today's low-dose pills outweigh the risks.

The Bottom Line

Studies indicate that the use of the birth control pill increases the risk of developing breast cancer. But the reported increases vary significantly by study, from say 7% to

60%, indicating that there are likely compounding risk factors at play. For instance, does the user eat healthily, exercise, drink alcohol, smoke, etc?

Does the Risk of Breast Cancer Vary with the Duration of Use of the Pill?

The risk of breast cancer increases with duration of birth control pill use, as prolonged exposure to estrogen increases a woman's risk. However, risk declines after cessation of the pill, with no increased risk evident 10 years after use.

Does the Risk from Birth Control Pill Use Vary by Age?

Breast cancer risk increases with age, so younger women are at lower risk of breast cancer than older women. Taking the pill while young and at low risk for breast cancer is considered relatively safe.

While studies indicate that women aged 45 and over who use the pill are nearly one-and-a-half times more likely to develop cancer, it may be due to duration of use, the fact that pills created decades earlier contained higher levels of hormones and the presence of other compounding lifestyle factors.

Is it Safe to Use Birth Control Pills with a Cancer Diagnosis?

The World Health Organization suggests that women with breast cancer or who have abnormal breast tissue findings or a higher-than-average risk of breast cancer **avoid all forms of birth control that use hormones**, including the birth control pill, patch, ring (Mirena), injections (Depo-Provera), and implants, as well as progestin-only pills.

Is it Safe to Use Birth Control Pills with a Family History?

For anyone with a family history or a genetic mutation linked to a higher risk of breast cancer, like a BRCA1 mutation, **it is advisable to choose alternatives to hormonal birth control.**

Here are Some Alternatives to Consider:

- Many doctors recommend using barrier methods of birth control: condoms or a diaphragm with spermicide.
- Another option is a non-hormonal intrauterine device (IUD) such as ParaGard, made of copper. (It is best to avoid IUDs that use hormones, like Mirena.) Highly effective for birth control, ParaGard doesn't carry the risk of added hormones and works for 10 years after uterine insertion. It can also be removed if a woman wants to become pregnant.
- For women who are certain they do not want to become pregnant in the future, permanent birth control is an option. For women, surgery closes the fallopian tubes and stops eggs from entering the uterus. For men, vasectomy cuts and seals the tubes that carry sperm in the semen.

Does Birth Control Pill Use Impact the Risk of Any Other Cancers?

- **Cervical cancer:** A *Lancet* study found a 10% increased risk with less than 5 years of use, a 60% increased risk with 5 to 9 years of use, and doubling of risk with 10 or more years of use.
- **Endometrial cancer:** Risk is reduced by at least 30%, with a greater risk reduction the longer the pill is used.
- **Ovarian cancer:** Risk is reduced by as much as 30%-50% with at least three years use.
- **Colorectal cancer:** Risk is reduced 15% to 20%.



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Hormone Replacement Therapy and Cancer Risk



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The most significant risk factor for developing (breast) cancer is prolonged exposure to estrogen and chemicals, particularly those that mimic estrogen, known as xenoestrogens or estrogen mimickers.

How can women **safely** address menopausal symptoms, low libido, UTIs, vaginal dryness or signs of aging with hormone replacement therapy, HRT?

Get informed! Learn about estrogens, how your body processes hormones, and how **bio-identical and naturally compounded hormone treatments create less cancer risk than synthetic hormone treatment.**

The Subject of Hormones Can be Confusing

Whether you have questions about the hormones that your own body is producing or regarding hormone replacement therapy, **it is important to be informed.** Please consider the following:

- [What are estrogens?](#)
- [How are estrogens metabolized?](#)

To learn if you are genetically or epigenetically disposed to metabolize or methylate hormones poorly, creating cancer-causing estrogens in your body, consider "Testing & Intervention: Resources," below.

You Convert Testosterone and Progesterone to Estrogen!

Prolonged exposure to excess estrogen is the greatest risk factor for developing cancer and **every man and woman converts some progesterone and testosterone to estrogen**, often without symptoms. No wonder so many people are blind-sided with a diagnosis of cancer! Please... *spread the word*.

To see how, consider [Hormone Cascade](#) for a diagram.

Don't underestimate the **importance of testing and intervention** as an integral part of your cancer prevention plan.

For more information and resources, consider "Testing & Intervention: Resources," below, and [About Aromatization](#) by Dr. David Jockers DC, MS, CSCS and [Converting Testosterone to Estrogen](#) by Dr. Len Lopez.

Testing & Intervention: Resources

Many Functional (Genomic) Nutritionists, Functional Medical Doctors and Naturopathic Doctors can test and tell you how much progesterone and testosterone you are converting to estrogens, explain inherited genetic variations-epigenetics-gut-hormone connections, and recommend nutritional, nutraceutical, and behavioral changes to intervene. (They often use DUTCH and MTHFR tests.)

Living in Erie, CO, the author's Naturopathic Doctor is **Mary Shackleton, MPH, ND** at <https://holisticacare.com/> and (303) 449-3777 because of her expertise in environmental toxic exposures including Rocky Mountain Spotted Fever and Lyme, hormonal support and gut health. Additionally, the staff includes Nurse Practitioners, a second Naturopathic Doctor and multiple Medical Doctors (great for prescriptions). They also provide IV infusions, ozone, and infrared sauna.

Tirza Derflinger's Functional Nutritionist is **Kaye Reich CNTP, CGP** at greensandgenes.com and (303) 834-8500 because of her holistic approach, wealth of knowledge and experience, and because we share common philosophies of self-care education and extensive handouts. (She also does TeleHealth, so you need not leave your home, and provides initial 15 minute phone consultations at no charge.)

Estrogen Dominant?

If you've been told that you are "estrogen dominant" or if you suspect that you might be, be aware that:

- Prolonged exposure to excess estrogen is the greatest risk factor for developing cancer.
- **Consumption of sugar** and refined carbohydrates are intrinsically linked to an excess of estrogen in the body, so reducing consumption may help reduce estrogen dominance, which in turn may reduce the risk for breast cancer.
- Your Functional (Genomic) Nutritionist, Functional Medical Doctor or Naturopathic Doctor can make recommendations for intervention and improvement, typically based on **nutritional, nutraceutical, and behavioral modifications**.

Please consider these articles:

- [Aromatization](#)
- [Best Aromatase Inhibiting Foods](#)

Low Libido, UTIs, Vaginal Dryness or Menopausal Symptoms?

Many women use a vaginal cream formulation containing small amounts of estriol and progesterone (and sometimes testosterone) for treating Vaginal Dryness and UTIs and for addressing Menopausal Symptoms like hot flashes and night sweats.

- Keep in mind that **bio-identical hormone support carries less cancer risk than synthetic hormone support**, and since vaginal absorption is more effective than other skin surfaces, smaller dosages are used.

- **Consider choosing health professionals already familiar** with such protocols to suggest the right treatment for you.
- **Be aware that non-hormone based treatments may be appropriate for you** that are herbal based. For instance, since the adrenal glands produce some of the sex hormones once produced by the ovaries in menopausal women, supporting the adrenal glands can help reduce menopausal symptoms. Your Functional (Genomic) Nutritionist, Functional Medical Doctor or Naturopathic Doctor can help.

(***Note*** From Jonathon Wright: Women with estrogen receptor-positive breast cancer should not use any form of estrogen. Some doctors are still concerned that even natural bioidentical estrogen and testosterone could induce breast and other cancers by stimulating excess cellular proliferation.)

Learn more here:

- [Bio-Identical Hormones](#)
- [Estriol: Its Weakness is Its Strength](#)
- [What is the Difference Between Estriol and Estradiol?](#)
- [What is the DUTCH test?](#)

For the scientifically-minded:

- [Estrogen Metabolites Information Guide](#)
- [Estrogen Metabolism and Breast Cancer](#)

Hormone Replacement Therapy Considerations

- Since **prolonged estrogen exposure** is a major risk factor for developing breast cancer, please take these watch-outs seriously.
- Consider herbal, nutraceutical and nutritional support before hormone replacement therapy.
- When hormone replacement therapy is warranted, **consider naturally compounded or bio-identical hormone replacement therapy** instead of synthetic hormones.
- **Consider the lowest possible dosages** to obtain the symptomatic relief needed.

- Since many doctors do not provide functional or **metabolic pathway testing**, be sure to ask for such testing and/or seek a Functional Medical Doctor, Functional Nutritionist or Naturopathic Doctor.

Hormone Replacement Therapy Watch-Outs

According to Dr. Laura Ellis, women should:

1. avoid prescription estrogen that is administered orally,
2. never take prescription estrogen without progesterone, and
3. avoid prescription estrogen that is administered orally,
4. never take prescription estrogen without progesterone, and
5. consider functional testing to determine how the body is metabolizing hormones.



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Managing Estrogen in Your Body



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What is the link between estrogen and cancer?

The link involves how your cells divide during the natural growth and repair cycle.

Cancer involves uncontrolled cellular growth. Growth occurs when cells divide—one becomes two, two become four, and so on.

Normal breast cells can progress to a state of overgrowth or hyperplasia. If this results in unusual cells, it becomes atypical hyperplasia. With atypical hyperplasia, cancer can result if mutations occur during the cellular division process.

Under certain circumstances, **estrogen can stimulate the breast tissue to increase cellular division. Prolonged exposure to excess estrogen is probably the most significant risk factor currently known for developing breast cancer.**

Excess estrogen also promotes cellular growth in the reproductive organs, increasing cancer risk in the ovaries and uterus.

The Role of Estrogen in Breast Cancer

According to Dr. Susan Love, author of Dr. Susan Love's Breast Book, women who take estrogen for 5 to 10 years generally increase their breast cancer risk up to 1.5 times.

Taking estrogen may add slightly to your level of risk.

The U.S. Food and Drug Administration (FDA) has recommended women discuss with their healthcare providers whether the benefits of taking estrogen and progesterone outweighs the risks. The FDA also recommends hormones should be prescribed “at the lowest doses for the shortest duration to reach treatment goals.”

Sources of Excess Estrogen

Estrogen mimickers are artificial hormones with a different chemical structure that behave the same as estrogen in your body. Sources of excess estrogen include:

- Hormone Replacement Therapy
- Synthetic Estrogen in Birth Control Pills
- Environment
- Ovaries
- Fat Cells
- Adrenal Glands
- Growth Hormones in Non-Organic Meats and Dairy

Measuring How Your Body Metabolizes Estrogen

Estrogens are metabolized, or broken down, by the liver into either:

- Beneficial Cancer-Fighting Metabolites, or
- Cancer-Promoting Metabolites

Many women's health care specialists provide tests that determine how well a woman is metabolizing or breaking down her estrogens. These include metabolite ratio tests, [DUTCH](#) testing, and testing for adrenal and ovarian hormones. Based upon the results, they can then offer assistance to treat hormonal and metabolic imbalances.

Genomics health professionals can provide [MTHFR](#) testing to check for inherited genetic variations that warrant nutraceutical support with nutritional and lifestyle modifications.

Reducing Excess Estrogen

The good news is you can reduce your risk from excess exposure to estrogen or their cancer-promoting metabolites with a prevention strategy that includes:

- Strenuous Physical Activity
- Diet
- Specific Nutraceuticals/Herbs
- Specific Pharmaceuticals
- Proper Hydration
- Menopausal Support

Dietary Support to Block Cancer Promoting Estrogens

Adding phytoestrogens or phytochemicals to your diet is one way to block cancer- promoting estrogens. Phytoestrogens are compounds found in plants that may act like the estrogen produced naturally in your body.

For example, wild yams are rich in phytoestrogens. These weak, estrogen-like compounds can attach to the estrogen receptor sites in the breasts and block stronger cancer-promoting estrogens and xenoestrogens (chemicals that mimic estrogen) from attaching.

Phytochemicals are plant chemicals that have protective, disease-fighting qualities.

Some favorably affect estrogen metabolism in the liver. Phytochemicals are compounds in foods such as fruits, vegetables, whole grains, nuts, seeds, and legumes.

Phytochemicals give plants their color, flavor, and aroma. The expression “eat a rainbow” refers to the health benefits of adding various colored foods to your diet, preferably organically grown.

According to Dr. Susan Lark, author of multiple self-help books on women's health, phytochemicals like diindolylmethane (**DIM**) **can support normal estrogen metabolism for healthy breast tissue.**

Broccoli, bok choy, cauliflower, cabbage, and Brussel sprouts contain DIM. ***These vegetables can also reduce breast tenderness and mood swings associated with our menstrual cycles.***

Dr. Lark also points out that **glucarate**, a phytochemical found in apples, apricots, cherries, broccoli, alfalfa sprouts, bean sprouts, and Brussel sprouts, **supports the elimination of metabolized estrogens from the body through our bowels.**

Supplements to Block Cancer Promoting Estrogens

Many functional health professionals recommend **calcium D-glucarate** supplementation when warranted **to help bind and escort estrogen metabolites out the colon.**

The body forms glucuronic acid from glucarates. In the absence of glucarates, the liver cannot properly metabolize estrogens, and the body cannot eliminate estrogen through the bowels.

Instead, estrogens can get reabsorbed from the intestines into the bloodstream, adding to the level of estrogen in the body.

The body reabsorbs water from the bowels, so water-soluble metabolites and estrogens from the liver can get reabsorbed into the bloodstream. **Staying well-hydrated can help offset this**, as can having sufficient glucarates in the bowels to bind liver metabolites.

Increased fiber in the diet can also help reduce estrogen metabolite reabsorption from the bowels.

While glucarates can help support the liver's ability to metabolize estrogen and the body's ability to eliminate it, **there are many herbs, phytonutrients, and nutritional supplements to consider.**

Consult with a functional healthcare provider to determine the nutraceutical supplements that are right for you.

Chapter 2 Covers these Hormonal Risk Factors:

- Menstruation
- Pregnancies & Abortions
- Breast Feeding
- Birth Control Pills
- Hormone Replacement Therapy
- Soy and Estrogenic Activity
- Managing Estrogen in Your Body



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President, Author, Health Educator, CTT, MBA

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Soy and Estrogenic Activity



Photo by [Curtis Thornton](#) on [Unsplash](#)

Soy is a Legume Known for its Phytoestrogens

Soy is a legume known for its phytoestrogens. But it comes with good and bad aspects. That is, it is good in some forms and for some women, but not all forms and not for all women.

Soy contains many phytonutrients and isoflavones, which are phytochemicals with potent antioxidant properties and many health benefits. However, to maintain the synergistic, or combined value, of these nutrients:

Consume soy in natural and whole-food forms of edamame, which is a whole, green soybean, tempeh, soy sprouts, tofu, and others.

Fermented Forms of Soy Products Contain Probiotics

Fermented forms of soy products contain probiotics, **particularly the friendly bacteria lactobacilli, that ease digestion and have higher isoflavone availability.**

Fermented soy products include: natto, miso, tamari, tempeh, soy sauces, and fermented tofu and soymilks. Of course soy forms should be organic to

avoid synthetic chemicals and organochlorines. Non GMO means the soybean is not a genetically modified organism.

Less Desirable Forms of Soy

This means that the potentially less ideal forms of soy include **those that are not organic, have been genetically modified, overly processed, or refined, isolated, or concentrated.**

While research shows that some of these forms, particularly low-quality soy protein concentrates and isoflavone isolates can inhibit protein and mineral absorption, inferior or low-quality products are often processed with chemicals and at high temperatures.

Soy Isn't Right for Everyone

Now that we have covered different forms of soy, let's explain why soy isn't right for everyone. For some people, soy, especially in low-quality products, **can cause allergic reactions, be hard to digest, and can reduce pancreatic enzymes.** For these people, soy, particularly low-quality soy, is likely *not* the best choice.

Soy Can Add to Estrogen Activity

Regarding women, **soy can add to the estrogen activity in the breasts** of women with low estrogen, or lower estrogen activity in the breasts of women with excess estrogen.

Here's an example. Imagine a row of seats in an auditorium or a stadium. Each seat represents an estrogen receptor site in the breasts. Now, imagine that a little girl sits in a seat. She is like a weak estrogen or phytoestrogen and now her seat, or space, is occupied. Next, imagine that a large muscular man approaches the little girl. While he is much stronger, he would not displace her from her seat. Instead, he passes by to find an available seat. He represents stronger estrogens in the body.

If there are unoccupied estrogen receptor sites in the breasts, they can become occupied by phytoestrogens and slightly add to the estrogen

activity in women with low estrogen.

However, for women with excess estrogen, some phytoestrogens actually compete with the stronger estrogens for receptor sites and can slightly reduce estrogen activity.



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Part 2. Prevention – Learn the Risks

Chapter 3. Dietary Factors

Why You Need to Know Dietary Risk Factors for Cancer



Photo by [Alexa Suter](#) on [Unsplash](#)

Experience has taught me the simplest yet most discerning and profound question to ask myself regarding my diet:

“Is what I am about to put in my mouth for nutrition or some other purpose?”

I don’t know about you, but living alone and dealing with COVID compelled me to eat and drink more for *comfort* than usual. As we distance ourselves from the pandemic, let’s not only think about returning to a new normal, but also eating for nutrition again.

How Can Diet Reduce the Risk for Cancer?

Chapter 1 revealed that **the environment is the number one cause of cancer**, due in part to the abundance of industrial and agricultural chemicals in modern civilization. So while the subchapter, “Five Ways to Reduce Harmful Chemicals in Your Food and Water” reveals that eating organically can help reduce the risk of cancer, **there are other important dietary concepts that may support inflammation and risk reduction**, especially when employed together.

Eating for Nutrition Boosts the Immune System

When we eat healthy, nutritional foods, we may boost our immune system – an internal defense against cancer. But the chronic consumption of unhealthy, anti-nutritional foods may lead to:

- increased toxicity and inflammation,
- compromised immune system,
- susceptibility to disease, and
- vulnerability to cancer.

How to Eat for Nutrition

In this chapter, we will be addressing **several key dietary concepts that, when employed together, can improve nourishment and immunity, reduce inflammation and cancer risk, and support vitality and longevity.**

Chapter 3 Covers these Dietary Factors

- Anti-cancer diets are primarily organic
- Alkalizing and ketogenic diets fight cancer
- Common food toxins and antinutrients cause inflammation
- Water, minerals and supplementation are essential
- Consume whole food sourced vitamins
- No fat diets may cause cancer
- Glycemic index versus load and menopausal women
- Cooking methods for optimal nutrition
- How to wash produce to reduce microbes



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Eat Organically to Reduce the Risk of Cancer



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Eating organically may reduce the risk of all cancers, especially postmenopausal breast cancer and lymphomas.

According to [JAMA](#), **promoting organic food consumption could be a promising preventive strategy against cancer.**

Since our immune system is our defense against disease, eating for nourishment, versus pleasure and comfort, and introducing less toxins into the body, which can overload the immune system, is key to a strong defense.

[Organically farmed foods](#) **are less toxic than conventionally produced foods** because organic methods restrict the use of pesticides, fertilizers, antibiotics, irradiation, industrial solvents, and synthetic food additives. Organically farmed foods also bear **slightly to modestly higher nutritional content.**

Organics May Also Reduce the Risks of Allergy and Obesity

According to the [National Institute of Health](#), NIH, **organic food production has several documented and potential benefits for human health**, and wider application of these production methods would benefit human health.

The NIH also states that: the main source of human exposure to pesticides and residues is in the consumption of conventional fruits and vegetables; that the use of antibiotics in conventional animal production as a key driver of antibiotic resistance in society; and that:

Epidemiological studies report adverse effects of certain pesticides on children’s cognitive development.

Cleaner Foods. Cleaner Diets. Cleaner Bills of Health.

Organic Foods Are Less Toxic

Organic foods can reduce our exposure to:

- pesticides, fertilizers, antibiotics, irradiation, industrial solvents,
- artificial colors, flavors and preservatives and
- GMO foods, ingredients and contamination

Organic Foods Are More Nourishing

Compared to conventionally-raised foods, organically-raised foods contain:

- modestly higher contents of antioxidants in fruits and vegetables and
- higher contents of omega-3 fatty acids in dairy products and meats

Farming’s Effects on the Environment

According to [Wiki](#), “from an environmental perspective, fertilizing, overproduction, and the use of pesticides in conventional farming may negatively affect ecosystems, biodiversity, groundwater, and drinking water supplies. These environmental and health issues are intended to be minimized or avoided in organic farming.”

Five Ways to Reduce Harmful Chemicals in Your Food and Water

Consider the subchapter, “Five Ways to Reduce Harmful Chemicals in Your Food and Water.”

15 Reasons to Eat Organic

Also, consider [15 Reasons to Eat Organic](#)



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Alkalizing Diets Slow Cancer Progression



Image by: mattifycosmetics

Cancer cells thrive in acidic, not alkaline, environments. Diets designed to be more alkalizing to the body may slow the progression of cancer. Consider then, the power of the alkalizing diet.

Alkalizing vs Acidifying Diets

When it comes to our diet, alkalinity and acidity have to do with how our bodies digest foods and the impact of digestion on our blood pH, or the resulting level of acidity versus alkalinity in the blood.

The 80/20 Principle

Hippocrates was a great Greek physician who some recognize as the father of medicine. He practiced the 80/20 principle, professing that **a diet comprised of 80% alkalizing foods and 20% acidifying foods supports good health.** He also increased the proportion of alkalizing foods in times of health crises.

The premise is that most viruses, bacteria, molds, fungus, yeast, and perhaps cancers, require an acidic environment and cannot thrive in blood or breast tissue that is alkaline.

Foods That Improve Alkalinity

Foods that tend to support an alkaline pH include fruits that are acidic to the mouth, like: lemons, limes, grapefruit, and tomatoes, as well as almonds, avocados, cucumbers, strawberries, watermelon, most fruits and vegetables, and buckwheat and millet flours.

Foods That are Acidifying

Acidifying foods include all meats, which require a substantial amount of hydrochloric acid in the stomach to be digested, **along with most dairy products, alcohol, commercial coffees, soft drinks, flours, and sugars.**

Alkaline/Acidic Food Charts

To learn which foods typically result in alkalinity or acidity, consider our [Food Chart](#). Be advised, however, that some people do not metabolize foods according to these generalized charts.

Your Metabolic Type Impacts pH

To learn which foods typically result in alkalinity or acidity in your body, please consult with a provider of metabolic typing, as each of the nine different metabolic types effects the way each body metabolizes food. Also consider [metabolic typing questionnaire](#).

Acidifying Diets Contribute to Osteoporosis

By now you may have surmised that **the Standard American Diet is acidifying**... especially fast foods, often made up of breads, meats, dairy, soft drinks, and processed packaged foods. In order for the blood to neutralize the acidifying effects of these foods, **the blood extracts alkalizing minerals and calcium from bone and body tissues**. Afterwards, these minerals do not return to the tissues or bone... they have been consumed.

This process can contribute to osteoporosis, which takes more lives than uterine, ovarian, and breast cancers...combined.

Now you understand why an alkaline diet is so very important as a basic fundamental to good health.



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Ketogenic Diets Starve Cancers to Death



Photo by [Louis Hansel](#) on [Unsplash](#)

Cancer cells thrive on sugars, not typically fats. Diets based on fats versus carbohydrates and sugars may not only slow the progression of cancer, but “starve it to death”. **Consider then, the power of the ketogenic diet.**

Cancer Cells Feed on Glucose

Cancer cells metabolize and thrive on glucose, so **if one’s diet restricts the carbohydrates and sugars** that break down to glucose, **cancer cells are essentially starved to death.**

The Ketogenic Diet

The [Ketogenic Diet](#) eliminates sugars, restricts carbohydrates (except for non-starchy vegetables), includes low to moderate amounts of high-quality protein, and emphasizes beneficial fats.

Starving Cancer to Death

From Dr. Mercola, “The premise is that since cancer cells need glucose to thrive, and carbohydrates turn into glucose in your body, then lowering the glucose level

in your blood though carb and protein restriction literally starves the cancer cells into oblivion. Additionally, low protein intake tends to minimize the mTOR pathway that accelerates cell proliferation.”

Fat Burning vs Carb Burning

Carbohydrates break down to sugars and glucose, while **fats break down to ketones**. The Ketogenic Diet forces the body’s cells to adapt from depending on carbohydrates to depending on ketones for energy. In essence, the body shifts from carb burning to fat burning.

Cancer Cells Cannot Metabolize Ketones

Cancer cells cannot make the shift: they depend on glucose for energy. Eliminating sugars and restricting carbs to only non-starchy vegetables effectively starves cancer.

***Carbohydrates and Sugars Feed Cancer
Fats and Ketones Starve Cancer***

Reduce Blood Glucose Levels

Consider reducing blood glucose levels and following a **Low Glycemic Load/Index** (see our article coming July 7, 2021). Are you aware that fruits are typically high in sugar? But there are exceptions, i.e. coconuts and avocados.

Even though it is a fruit, an entire avocado has only about 1 g of sugar, with healthy fiber and fat content!

Beware: Insulin and Leptin Resistance

Some people have become [leptin-resistant](#) (like becoming insulin-resistant) through continuous overexposure to a diet high in sugar (particularly fructose), grains, and processed foods. As sugar (fructose) gets metabolized in fat cells, they release surges in leptin. Over time, the body can become leptin resistant, just as it can become resistant to insulin, and [overweight](#).

Whole Food Diets Combat Leptin Resistance

To re-establish proper leptin (and insulin) sensitivity, a whole food diet that emphasizes healthy fats and avoids blood sugar spikes with targeted supplements can enhance insulin and leptin sensitivity. Consider functional health professional guidance, i.e. nutritionists or naturopaths.

Resistant Starches

[Resistant starch](#) is found in starchy plant foods, **especially when cooked, cooled and reheated**, like rice, oats, barley, potatoes and pasta, but properly prepared whole foods are more beneficial, like raw green bananas, plantains, yams, and other root vegetables. (Consider [The Definitive Guide to Resistant Starch](#))

From one local nutritionist, “They share many properties with fiber, helping food pass through the gut and generally improving digestion. Once it reaches the lower gut, resistant starch feeds our beneficial bacteria, which in turn produce chemicals which can help our immune systems, cardiovascular health and many other benefits.”

Resistant Starches Don’t Spike Blood Glucose

[Digestive-resistant starches](#) **essentially act as prebiotics**. They slowly ferment in the large intestine, nourishing healthy flora. Rather than boosting blood sugar levels, they **improve insulin regulation**. They also help add volume to bowel movements without bloating or excess gas.

Butyrate Fuels Intestinal Cells

Resistant starch feeds the good bacteria in the intestines and increases the production of short chain fatty acids (**butyrate**). Butyrate is the preferred fuel of cells that line the colon and acts as **a powerful anti-inflammatory agent** for the colonic cells, and functions to improve the integrity of our gut by decreasing intestinal permeability and therefore keeping toxins in the gut and out of the bloodstream.



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Food Toxins and Antinutrients



Photo by [Hello I'm Nik](#) on [Unsplash](#)

Do you know that many supposed “healthy” foods contain toxins and compounds that can undermine your health and wellbeing?

Truth is, many naturally occurring ingredients in produce and foods inhibit nutrient absorption and increase inflammation in the body, contributing to the risk of cancer.

Because the spectrum of symptoms is so broad, many people don’t make the connection between the foods they consume and the symptoms they feel.

Sniffling, sneezing, fatigue, anxiety and depression, feelings of stress, disturbed sleep, memory issues, headaches, joint pain, eczema, and more.

Think of (lymphatic) inflammation as the toxic load being carried in the body. If we reduce the toxic load in the body while increasing its nourishment, the results should be a stronger, more resilient immune system and a healthier, more vital body.

Reduce inflammation and increase nutrition to support cancer prevention.

Learn the common, everyday food items that may be undermining your health so that you can reduce/eliminate the offenders from your diet and the food preparation/cooking techniques that can neutralize their ill effects.

Toxins Occur Naturally in Many Foods & Produce

From [Healthy Eating Politics](#), “The **toxins in food are not limited to manmade chemicals**. There are several toxins which are found in natural foods. Some can be neutralized through the proper preparation techniques of soaking, fermenting or cooking the food substance, others are poisonous in any form.” Also, consider [Plant Paradox](#).

Antinutrients Interfere with Absorption

From Dr. Axe’s [10 Antinutrients to Get Out of Your Diet ... and Life](#), “**Antinutrients** are natural or synthetic compounds found in a variety of foods — especially grains, beans, legumes and nuts — that interfere with the absorption of vitamins, minerals and other nutrients. They can even get in the way of the digestive enzymes, which are key for proper absorption.”

Food Sensitivities Vary by Individual

And “... keep in mind, in sensitive individuals and when eaten in very high concentrations, even “good **antinutrients**” **can inhibit digestion** of copper, iron, zinc and vitamin B1, along with enzymes, proteins and starches found in plant foods. It all depends on someone’s unique reaction, so it’s key that you tune in to your own reactions to different foods so you can adjust your diet accordingly.”

Food Sensitivity Testing

Consider having food items muscle-tested or tested by your functional health professional for sensitivity in your body.

For any item you (suspect you) are sensitive to, Google: “foods rich in [_____]” or “foods that contain [_____]”. Then reduce/eliminate these food items.

Keep in mind that testing each item in the list with some frequency over time is a good way of determining what your body is reacting negatively to at any given time, and that your sensitivities may change with time and worsen with aging.

List of Foods with Toxins or Antinutrients

Below is a list of some foods/natural food toxins that may cause sensitivities, inflammation, and potential gut or health issues.

- eggs
- dairy
- eggs

- gluten
- opioid peptides
- wheat, even organic
- sugars, including alcohol and fruits (except avocados)
- alcohol
- coffee
- industrial seed oils
- alkaloids, solanines and/or chaconines (in nightshades)
- isoflavones and flavanoids
- GMOs
- lectins
- leptins
- goitrogens
- histamine
- salicylates
- oxalates
- phytates and phytic acid
- saponins
- trypsin inhibitors
- tannins
- fungus/molds
- hydrazines
- psoralens



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Mineralize or Die!



Photo by [Jane Gonzalez](#) on [Unsplash](#)

The human body needs multi-minerals more than vitamins. And while minerals can function in the body without vitamins, vitamins cannot function in the body without minerals. Minerals are essential for all cellular activity and organ and system functions in the body - electrically, glandularly, hormonally, etc.

Consume High-Quality Bio-Available Multi-Minerals

It is important that humans supplement with **high-quality bio-available multi-minerals** as our soils have long been depleted of minerals and farmers only add a few (chemical versions) into the soil while our bodies need 80+ mineral/trace minerals at all times.

Natural (earth and food based) formulas are typically more bioavailable and easily recognized by our bodies than synthetic versions. The **product form**, i.e. transdermal lotion or oral supplement in the form of a mineral salt, mineral acid complex, and amino acid mineral chelate all affect bio-availability.

Our Cells Need 80+ Minerals/trace Minerals At All Times

We need 80+ minerals/trace minerals in our tissues/cells at all times. And the more stressed our bodies are, the more our bodies consume minerals. So for

anyone undergoing chronic stress who is not supplementing adequately, their minerals will become depleted, potentially contributing to vitamin dysfunction, physical and mental fatigue (perhaps grumpiness), thyroid dysfunction, immune compromise, osteoporosis and more.

Natural and Whole Food vs Synthetic Sources

While a good **whole food multi-vitamin** (non synthetic) is worthwhile, minerals are more important. Clients often ask me about the sources of mineral supplements I consume. I try to use only whole food-based multi-minerals/vitamins rather than synthetic versions, as our bodies assimilate food-based vitamins/minerals much more readily than synthetic versions.

Be sure you consider products that provide adequate levels of selenium, zinc, magnesium, Vitamins A, C, E, K2, etc. Whenever you take your supplements, be sure to consume them with meals that contain healthy fats to increase absorbability, particularly for fat-soluble nutrients. This is especially true for proteins and minerals, so add healthy oils or fats.

Consider These Sources of Minerals

As you consider mineral products for your use, here are some that I have used or continue to use:

1. **Himalayan Pink Salt Mix**, which contains up to 85 micro-minerals. I use it to season foods.
2. **New Chapter 55+ Every Woman One Daily Multi** is a whole-food cultured multi-vitamin containing at least trace amounts of many minerals and micro-minerals. Each day I take one tablet with breakfast and/or dinner, each with healthy fat.
3. **New Chapter Fermented Turmeric Force** is also a whole-food cultured and fermented source of curcumin, increasing bioavailability up to 24 times that of extracted curcumin, and clinically proven to support bone growth. Learn more: [Grow Bone with Turmeric Curcumin!](#) Each day I consume one capsule with breakfast and dinner, each with healthy fat.
4. **New Chapter Bone Strength** is a plant-sourced, whole-food cultured multi-mineral formulated for bone growth. Each day I take one tablet with breakfast and dinner with healthy fat.

5. **TraceMinerals Research ConcenTrace Mineral Drops** contains the full spectrum of trace minerals, as it is concentrated seawater from Utah's inland sea. I add 20-40 drops to the 96 ounces of water I intend to drink each day or 20 drinks in a small amount of water to consumer at breakfast and dinner with healthy fat.
6. **Life Extension Neuro-Mag** is Magnesium L-Threonate and able to cross the blood-brain barrier. It does not relax the bowels but aids with memory and cognitive function. I take three capsules with breakfast and dinner and three capsules of **Pure Encapsulations Magnesium Glycinate** at bedtime to offer my body another form of magnesium that relaxes my muscles. It does not relax my bowels either. (If you need to relax your bowels to induce movements, know that many clients depend on **Natural Vitality Calm** (ionic magnesium) as needed to calm the nervous system and/or relax the bowels.)
7. These are in addition to my **leafy greens consumption**. When I am eating at my best, I typically consume ½ to 1 head of red leaf lettuce (a low-oxalate leafy green) each day.
8. I tried **Xymogen OSAplex MK-7**, which supports bone, cartilage and ligaments with D3, K2, choline, mineral complexes and bovine-derived bone extract, but it proved unnecessary over time. Instead, I added **Vital Proteins Collagen Peptides** for skin, hair, nail and joint support.

Iodine Supplementation for Thyroid Support

When in proper balance, **iodine and thyroid hormones generally reduce the risk of breast cancer**. On the other hand, iodine deficiency during puberty can produce the overgrowth of cells in breast tissue that can contribute to cancer risk.

Breast cancer rates are generally higher in regions of the world where iodine is deficient in the soil. Low iodine levels in the body reduce thyroid function, whereas high levels of iodine can help treat breast cancer.

Seaweed is an excellent source of iodine and is believed to contribute to Japan's low rate of breast cancer. It also supports recovery for radiation patients, as does chlorophyll from algae, alfalfa, wheat and barley grasses, and other leafy green vegetables.

Be aware that excess iodine can wreak havoc on the thyroid as well, so it is important to consult with a qualified healthcare provider when considering an increase in iodine consumption or its supplementation and to learn about tests to see if you are iodine deficient.

Here is an in-home self-test of the body's need for iodine:

- Buy a bottle of iodine tincture from the first aid section at your local store.
- As you prepare for bedtime, place a nickel-size amount on the inner bicep or hip and let it dry before putting bedtime clothing on/against it.
- In the morning, inspect the area of application. If the iodine is gone – no more orange color – then your body absorbed it, as the body needs iodine. If the iodine is there – the orange color is still on the skin – then your body didn't absorb it, as the body doesn't need iodine.

Cookware and Silverware Leach Metals

While our body needs minerals, it does not need the **metals that can leach out of cookware and silverware**. Non-stick cookware and plastics have chemicals that can leach into food as well.

Consider replacing plastic water bottles and kitchen storage containers with glass... and metal cookware with lead-free 100% [ceramic cookware](#) (including tea kettle, wok, skillets and saucepans).

While I have kept a 12 quart stainless steel stock pot, which I use very infrequently, I supplement my silverware use with [bamboo silverware](#) and [white porcelain spoon](#)s like those used for Chinese soups.



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by Tirza Derflinger

President, Author, Health Educator, CTT, MBA

Better Breast Health – *For Life!*™

text/call 303-664-1139 • info@thermogramcenter.com

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Supplement to Thrive!



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Nutrition is key to vitality and immunity. Every one of the ~724 trillion cells in our bodies requires adequate amounts of water, minerals, enzymes and more for optimal functioning. It's not just about "filling the void" when we're hungry. It's about understanding the checklist of nutrients needed for more optimal functioning, vitality and long term health. It's about thriving.

The Standard American Diet is Not Nutritious

The Standard American Diet is SAD indeed. Comprised mostly of refined and processed foods, it is calorie rich, not nutrient dense, and high in carbohydrates, sugars, salt, and saturated fats. (Consider [SAD](#))

Fresh, Whole-Food Based Diets

While diets that focus on fresh produce, whole grains, lean protein and healthy oils are more nutrient dense than the SAD, these diets still lack in some of the ingredients necessary for optimal health.

The Consequences of Soil Depletion

While most of our agricultural soils have been depleted of their minerals, farmers typically supplement with three minerals, namely phosphorous, nitrogen, and potassium, when we humans need over over 80 different minerals each day.

When our diet is void of these minerals, we can develop cravings, binge eat, develop obesity, and still be malnourished.

The AMA Recommends Supplementation

Do you know that the U.S. Department of Agriculture recommends 9 servings of fruits and vegetables a day for active males and reports that less than 1% of children under age 16 get 5 servings a day?

The general consensus among the health industry is that Americans need to eat more fresh fruits and vegetables on a daily basis. Because so many of us do not eat enough of the foods that we need for proper nutrition, **the American Medical Association suggests that doctors recommend nutritional supplementation.**

This should include a full spectrum of nutrients in the right form and proportions for each of us, including vitamins, minerals, essential fatty acids, and perhaps enzymes, probiotics, and more. Consult with a qualified healthcare provider regarding your individual supplementation needs. Keep in mind that supplements are intended to supplement a good diet, not replace it.

Supplement to Thrive!

To sustain vitality and thrive, we need to augment our diets by supplementing with these missing ingredients. To help you understand the role of each ingredient on health, the recommended sources for each ingredient, and the amount of each ingredient to target in your supplementation regimen, consider consulting with a qualified health professional, i.e. nutritionist, and learning more about the following ingredients in this chapter:

- Water
- Minerals
- Vitamins
- Fats & EFAs

- Fiber
- Digestive enzymes
- Biotics



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How Do You Source Your Vitamins?



Photo by [Kayla Maurais](#) on [Unsplash](#)

Have you ever wondered why the ingredients label of synthetically-derived multi-vitamins include 1333% of the Recommended Daily Allowance? Or why such high amounts wouldn't lead to toxicity?

It's because our bodies can only assimilate a fraction of synthetically-derived ingredients. In contrast, **our bodies readily assimilate food-based vitamins.** Why waste money on formulas your body doesn't recognize or assimilate?

The Need to Supplement with Vitamins

Colorful and leafy produce can help provide a broad-spectrum of vitamins. But since we may not be able to eat the volume and variety of produce necessary to yield an adequate full spectrum of vitamins, supplementation can help to provide nutrients otherwise unavailable to us.

Vitamin Assimilation Requires Minerals and Fats

Vitamins cannot function in the body without minerals, or be well absorbed without healthy fats. Consider multiple sources of minerals daily (see subchapter, "Mineralize or Die), consuming them throughout the day. And to enhance the absorption of vitamins, consider consuming them with healthy fats,

as some vitamins are fat-soluble while others are water-soluble. Also consider taking your supplements **at mealtime** for a synergistic effect.

Choose a Whole-Food Multi-Vitamin

Consider a whole-food derived multi-vitamin (non synthetic) that provides a broad spectrum of vitamins beyond just the ABCs.

Food-based multi-vitamins are easily recognized by the body as “food” and more readily assimilated than synthetic versions. Consider, for example, [*New Chapter Every Woman's One Daily 40+ Multivitamin*](#).

New Chapter uses a 2-step fermentation method with **certified organic vegetables and herbs and probiotics** to deliver synergistic nutrients that are easily digestible, even on an empty stomach.

With formulas designed to target the nutritional needs of each age of man and woman, *New Chapter* supports immune, heart, energy, eye, bone, brain, and digestion support.

Because some vitamins (and minerals) are more important than others, consider supplementing with a few key vitamins (and minerals), including those below.

Sunshine Supports Vitamin D Production

Sufficient sunlight is important for the body's production of **vitamin D**, which helps to strengthen the immune system and may help to prevent some types of cancer. Vitamin D is formed naturally when skin is exposed to sunlight. Women who live in sunnier parts of the U.S. or in the southern hemisphere have a statistically reduced risk of breast cancer.

Insufficient Sunshine Across Much of the U.S.

In latitudes around 40 degrees north or south of the equator (Sacramento is 38° north while Denver is 39°, and New York City is 40°), **there is insufficient ultraviolet-B radiation for vitamin D synthesis** from November to early March. At locations further north or south of this latitude the “vitamin D winter” is extended.

Because sunlight won't be sufficient at certain times of the year or in certain places, because the body's ability to manufacture vitamin D declines with age, and because amounts of vitamin D higher than the Recommended Daily Allowance are necessary for optimal health, **many people need more vitamin D through foods**, including fatty fish and fish oils, **and/or through nutritional supplementation**.

Supplementing with Vitamin D

The Weston Price diet suggests **naturally produced, unheated, fermented high-vitamin fish/cod liver oil** as an excellent source of vitamins A, D and omegas (which, among other things, may help with infertility issues). Consider, for example, *New Chapter* [WholeOmega Fish Oil](#) (with 17 whole omegas).

To reach and maintain a desirable blood level of at least 40 ng/ml of vitamin D3, many people need **between 5,000 and 20,000 IUs of vitamin D3** a day. To aid in achieving optimal levels of vitamin D, consider liposomal *QuickSilver* [Vitamin D3/K2](#) nanoemulsified sublingual drops.

Vitamin D Assimilation Requires Vitamin K

Since **vitamin D3 needs vitamin K2 for assimilation**, consume formulas that include both, especially to support bone density. And since vitamins D and K are fat soluble, consume them with a meal that includes fat.

For a fermented and plant based formula, consider *New Chapter* [Bone Strength](#). Also, consider consulting with a nutritionist who can test your nutrition at a cellular level, that is intracellular rather than at a blood or extracellular level. Learn more about [Vitamin D3](#) and [Vitamin K2](#).

Stress Depletes Vitamin Bs

Prevalent in animal meats, **vitamins B 2, 3, 5, 6 and 12 are essential for the nervous system, brain function, hormones, heart and much more**. Since they may be lacking in non-animal based diets and since stress depletes vitamin Bs, supplementation may be healthful – or harmful.

Vitamin B Formulas

While formulas like *Liquid Health* Energy & Stress and *B Total Sublingual* are popular for vitamin B supplementation, be aware that inherited genetic variations may make any vitamin B supplementation risky.

Your Genes Impact Vitamin B Assimilation

For instance, up to 50% of women have an [MTHFR gene mutation](#) and cannot optimally assimilate raw, un-methylated vitamin Bs. For these women, methylated vitamin B formulas, including *Xymogen* B Active and *Pure Encapsulations* Ultra B-Complex w/PQQ, taken with meals may be appropriate.

Undermethylation Can Make Vitamin Bs Risky

However, according to [Nutrient Power](#), **some undermethylated individuals do not tolerate even methylated Bs**, especially folic acid or niacin. For these individuals, consuming whole-foods rich in Bs may be more appropriate than supplementing with any vitamin B formulas.



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No-Fat Diets May Cause Cancer



Photo by [Roberta Sorge](#) on [Unsplash](#)

A healthy diet must include healthy fats, as the human body is designed to metabolize fats, not high sugar content, and needs healthy fats in order to assimilate proteins and other nutrients, produce hormones, and support many bodily functions.

Without adequate healthy fats in one's diet, the body can become malnourished and vulnerable to many diseases, including cancer.

The Paleo Diet

The **Paleo Diet** emphasizes low-fat and lean protein, but lean protein is not digestible without healthy fats, leading to undigested food particles in the bloodstream and inflammation throughout the body:

“Boneless skinless chicken breast is one of the most indigestible foods on the menu today. These lean meats are probably part of the reason research finds undigested proteins in the gut/colon. Organ meats and bone broths contribute to complete digestion. Green Pastures fermented cod liver oil is a VERY beneficial supplement for everyone.” - Pati Thomas, C.N.

Animal Proteins Require Animal Fats for Digestion

Only animal fats, not plant fats, contain the activators that enable our bodies to digest and assimilate animal proteins, so be sure to consume animal fats i.e. butter, clarified butter, ghee, which is casein free, fish oil/fermented cod liver oil, etc. with animal proteins.

Plant Proteins Require Fat for Digestion

Plant proteins, minerals and other fat-soluble vitamins and nutrients are made bio-available with either animal or plant-based oils and fats.

Consume animal fat with animal protein, and animal or plant-based oils or fats to plant proteins, minerals and other fat-soluble nutrients so they can be adequately digested and become bio-available.

The Weston Price Diet

According to the **Weston Price Diet**, humans achieve perfect physical form and perfect health when they consume nutrient-dense whole foods and the vital fat-soluble activators found exclusively in animal fats. So, organ meats, bone broths, eggs, raw organic dairy and cod liver oil are some of the nutrient-dense foods included in this diet.

The South Beach, Atkins and Ketogenic Diets

While the **South Beach and Atkins Diets** address the sugar-impact of carbohydrate consumption, the Ketogenic Diet emphasizes healthy fats in lieu of sugary foods. The **Ketogenic Diet** supports the fact that the human body is designed to take in healthy fat and convert it to the sugars (glucose) it can metabolize.

The Standard American Diet

The human body is NOT designed to handle the high sugar and carb content of the **Standard American Diet** (calorie-rich and nutrient-poor). Cancer consumes sugar... not fat (unless it has mutated to do so). Fruits are typically high in sugar.

However fruits like coconuts and avocados are not high in sugar. In fact, an entire avocado has only about 1 g of sugar, with healthy fiber and fat content.

Diets high in sugar and carbs promote cancer.

Put Healthy Fats in Your Diet

Healthy fats (including some saturated fats) should be a part of everyone's daily diet. So in addition to your daily supplements, consider:

- Consume healthy fats like: healthy nuts (good for minerals and fiber too), nut butters, avocados (considered a fruit), eggs, (raw) dairy and oils like olive, coconut, fish and cod liver (all organic and/or cold-pressed, extra-virgin, etc.) Consider [11 Best Healthy Fats for Your Body](#) by Dr. Axe (free subscription membership may be required).
- Consume animal fats with animal protein and animal or plant fats/oils with plant proteins and fat-soluble nutrients.
- Pick your healthy fats based on the ones your body likes the most, without triggering an immune/inflammatory reaction.

Healthy versus Unhealthy Fats

Monounsaturated fats are typically liquid at room temperature, but solidify when refrigerated, while **saturated fats** are usually solid at room temperature.

Hydrogenated fats, which are liquid oils processed into a solid form, often contain trans-fatty acids which are cancer-causing and contribute to heart disease.

Monounsaturated Fats	Saturated Fats	Hydrogenated Fats
Healthy	Necessary	Unhealthy
Avocado, nuts, and vegetable oils, such as canola, olive, and peanut oils.	Animals and dairy, ie butter, cheeses, creams, ghee, suet, lard, coconut oil/milk, palm oil, fish oil/fermented cod liver oil and fatty meats.	Margarine, fast foods, many processed and packaged foods and baked goods, and fried foods.

Monounsaturated fats may help lower your "bad" LDL cholesterol and keep "good" HDL cholesterol levels high. But eating more unsaturated fat without cutting back on saturated fat may not lower your cholesterol. From Types of Fats .	From Benefits of Healthy Fats : Saturated fatty acids: make up at least 50% of the cell membranes, creating stiffness and integrity; play a vital role in the incorporation of nutrients into the skeletal structure, where at least 50% of dietary fats should be saturated; guard the liver from alcohol, medications and other toxins; and improve the immune system.	Trans fatty acids raise blood cholesterol levels and increase heart disease risk more than saturated fats.
--	--	--

Organic vs Non-Organic Fats

Fats from non-organic sources of dairy, meats, oils, and nuts can contain large amounts of organochlorines that may increase the risk of cancer. On the other hand, **fats from organic** olive oil and organic butter can reduce the risk of breast cancer because they contain some of the healthful phytochemicals that stop the initiation and progress of breast cancer.

One Swedish study reported that monounsaturated fats, like those found in olive oil and canola oil, reduce the risk of breast cancer by 45%.

Look for organic, first cold-pressed, extra- virgin olive oils in containers that reduce sun exposure and heat, which can destroy essential fatty acids. Avoid using excess heat with oils, which can destroy essential fatty acids and create damaging free radicals.

Another study finds that Greek women who eat olive oil more than once a day can reduce their risk of breast cancer by 25%. On the island of Crete, which has some of the lowest rates of breast cancer in the world, women get up to 60% of their calories from fat.

However, most U.S. prevention diets limit dietary fats to 20%-30% of daily caloric intake.

Essential Fatty Acids (EFAs)

Many researchers agree that **10-20% of daily caloric intake should be in the form of essential fatty acids**, EFAs, referred to as Omega-3s and 6s. (Omega 9s are synthesized in the body, so they are not considered essential.)

Fish Oil and Omega 3 Reduce Inflammation

Current research indicates that the **Omega 3s have therapeutic benefits** in reducing high triglycerides, lowering hypertension, regulating irregular heart beat as well as assisting in learning disorders, infant brain development and menopausal discomforts.

Health Benefits of Omegas 3 and 6

Some Omega 3s and 6s can aid in improving diabetic neuropathy, rheumatoid arthritis, PMS, skin disorders such as psoriasis and eczema, and cancer treatment. Fish and flax seed are rich in Omega-3s, while borage, black currant and evening primrose oils are rich in Omega-6s:

Common Sources of EFAs		
Omega 3	Omega 6	Omega 9
black currant seed/oil; canola oil; fish/oils; flax seed/oil; hemp seed/oil; soybean/oil; walnuts/oil	black currant seed/oil; borage oil; canola oil; corn oil; evening primrose oil; flax seed/oil; hemp seed/oil; pumpkin seed/oil; safflower oil; sesame oil; soybean/oil; sunflower seed/oil; walnuts/oil	almond/oil; avocado/oil; butter; cashew/oil; filbert/oil; hazelnut/oil; land-animal fat; macadamia/oil; olive/oil; peanut/oil; pecan/oil; pistachio/oil

Our Diets are Already High in Omega 6

The typical American diet is already rich in Omega 6s and can render Omega 6 to Omega 3 ratios of 20:1 to 50:1. While it is important to get both forms of

essential fatty acids, **experts suggest adding Omega 3s to our diets while simultaneously reducing Omega 6s.**

Consume More Omega 3s

Studies indicate that the risk of developing **breast cancer decreases as the ratio of Omega 6 to Omega 3s approaches 1:1.** Hence the need to add Omega 3s, which commonly involves flax and/or fish oil supplements.

A natural form of vitamin E with mixed tocopherols and tocotrienols (groups of antioxidants) is a good complement to EFAs, and is good for breast health and cancer prevention.

Eating the right type and ratio of fats can be helpful in reducing the risk of breast cancer.

For More Information

[Fats that Heal Fats That Kill](#) by Udo Erasmus.



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Carbohydrates: Glycemic Index vs Glycemic Load



Photo by [Mathilde Langevin](#) on [Unsplash](#)

The human body is designed to take in healthy fat and convert it to the sugars (glucose) it can metabolize. The human body is NOT designed to handle the high sugar and carb content of the Standard American Diet (calorie-rich and nutrient-poor).

Since a high sugar and carb diet promotes the development of cancer, consider a Low Glycemic Load/Index diet amongst your prevention strategies.

The Glycemic Index

Glycemic Index (GI) refers to how fast a carbohydrate breaks down and impacts blood sugar levels. The index is on a scale of 0 to 100, where 100 is pure glucose (sugar). The lower a food's GI, the slower blood sugar rises after consumption. Typically, more processed foods have higher GIs, while foods with higher fiber or fat content have lower GIs.

High glycemic foods *elevate blood sugar and insulin levels, stimulate fat-storage, worsen hyperactivity, reduce sports performance and increase the risk of Type II diabetes.*

Low glycemic foods help maintain more stable blood sugar levels to reduce the food-craving hormones which can cause chemically triggered cravings for food and uncontrolled eating binges.

Glycemic Index vs Glycemic Load

While the Glycemic Index depicts how quickly a food's carbohydrates will impact blood sugar, **Glycemic Load (GL)** depicts how much glucose a food's carbohydrate content delivers to the bloodstream. So while it may be helpful to know how quickly one's blood sugar will rise from eating a food to manage blood sugar spikes, it may be more important to know by how much blood sugar levels may rise via the GL.

Watermelon has a GI near 80, but its GL is only 8.

The Glycemic Load

Glycemic load accounts for carbohydrate content and how much each gram of carbohydrate converts to blood glucose levels. Glycemic load is determined by multiplying the grams of carbohydrate in the food by its glycemic index and then dividing by 100.

Simplifying things, the American Diabetes Associations suggests managing one's daily intake of carbohydrates rather than focusing on GI and GL for overall weight, health and diabetes management.

Glycemic Index and Glycemic Load Lists

There are many Glycemic Index and Glycemic Load Lists on the internet, including:

Mendosa.com

DiabetesJournals.org



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Cooking Can Decrease Toxins & Increase Nutrients



Photo by [Kevin McCutcheon](#) on [Unsplash](#)

Do you know that many foods, particularly plants and legumes, contain naturally-occurring toxins and anti-nutrients that can be reduced or neutralized with proper food preparation or cooking techniques?

Or that many food nutrients only become bioavailable with proper preparation or cooking techniques?

Choose the proper preparation and cooking methods that reduce naturally-occurring toxins while enhancing nutritional bioavailability.

Food Toxins are Commonplace

While an organic diet helps to reduce exposure to manmade chemicals, organochlorines, pesticides and herbicides, **there are many naturally-occurring toxins and anti-nutrients found in everyday foods and organic produce.**

These include the alkaloids, solanines and/or chaconines found in nightshades; lectins; goitrogens; phytates and phytic acid; saponins; tannins; oxalates; hydrazines and more.

Some of these toxins and anti-nutrients can be reduced, if not neutralized, through proper soaking, fermenting or cooking. For more information, consider [Healthy Eating Politics](#) and [Plant Paradox](#).

Lectins are Poisons in Seeds, Grains and Legumes

Lectins are toxic protein compounds found in heavy amounts in many plants, especially seeds, grains and legumes. **Many lectins are proinflammatory, immunotoxic, neurotoxic and cytotoxic.**

Excessive lectins can damage the heart, kidneys and liver, lower blood clotting ability, destroy the lining of the intestines, and inhibit cell division.

High lectin foods include nightshades like tomatoes, potatoes and peppers; all legumes like lentils, beans, peanuts, and chickpeas... and more. Consider **soaking and cooking techniques to help neutralize lectins.**

Enzymes are Essential to Survival

Enzymes are critical for many bodily functions, including food digestion and ultimately, the body's ability to absorb nutrients. Without adequate enzymes, we become malnourished.

This can lead to degeneration, arthritis, heart disease, and cancer.

Raw, living foods that are not overcooked provide enzymes. Cooking above 118°F typically destroys enzymes. Some foods release their enzymes when slightly cooked. For instance, slightly cooking carrots breaks down their tough cellular wall, and makes nutrients more available to the body.

Enzyme Inhibitors

Dry nuts, grains, seeds and legumes have built-in protection in the form of enzyme inhibitors. **These inhibitors prevent enzymes from being activated until the seed is germinated, or sprouted.** To activate their enzymes and make them bioavailable, we need to soak and sprout nuts, grains, seeds, and legumes.

According to [Dr. Axe](#), “Sprouting foods that contain antinutrients (or cooking them in the case of most vegetables) **increases absorption of beneficial vitamin B12, iron, phosphorous, magnesium and zinc**, plus it makes the food easier on digestion; decreases risk of allergic reactions; and releases more vitamins, amino acids and fiber from within the seeds.

While sprouted grains and other nutrient-blocking seeds won’t be completely free from all antinutrients after soaking and sprouting, it’s a much better option than eating them unsoaked.”

Soak and Sprout Your Nuts, Grains, Seeds and Legumes

Sprouting involves soaking nuts, grains, seeds and legumes in water for 8 hours to 12 days. Sprouting books and charts available on-line and at many health food stores provide specifics and make this process easier. Consider the [Dial Sprout Chart](#) and [Sprouts](#). Soaking and cooking legumes are effective in removing or reducing anti-nutrients.

Cook Your Foods Properly for Nutrient Bioavailability

To release or maintain more of the nutritional value in foods, choose proper cooking methods. **Some foods require low and gentle heat, some are best prepared by steaming, and some are most nutritious in their raw form.**

Since microwaves disturb the molecular bonds of foods, some people choose to minimize their use, and instead, use more stovetops and ovens.

Below are the effects of boiling broccoli on some of its nutrients from the U.S. Department of Agriculture National Nutrition Database for Standard Reference:

Broccoli

Key Minerals:

	<u>Units</u>	<u>Raw</u>	<u>Boiled</u>	<u>% Change</u>
Calcium	mg	47	40	- 15%
Iron	mg	0.73	0.67	- 8%
Magnesium	mg	21	21	- 0%
Potassium	mg	316	293	- 7%

Key Vitamins:

A	mcg	31	98	+ 216 %
C	mg	89	42	- 53%
E	mg	0.78	1.45	+ 86%
K	mcg	102	141	+ 39%

For more information on how cooking methods impact nutrients, consider [How Cooking Affects the Nutrient Content of Foods](#), the [USDA Table of Nutrient Retention Factors](#), and [International Journal of Gastronomy and Food Science](#), among others.



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How to Wash Produce to Reduce Microbes



Photo by [Alexandr Podvalny](#) on [Unsplash](#)

The subchapter “How to Use Essential Oils in a Neti Pot” explains how to kill off microbes infecting the sinuses. The information left some readers asking, “**where do microbes come from?**”

While some microbes enter our sinuses by breathing, many emanate from our gut and intestines, and some enter our bodies by way of inadequately washed produce. Let’s explore methods for killing the mold, mildew, fungus, parasites and other microbes that accompany our produce—even when it is organic.

Are There Microbes in My Salad?

Microbes are microscopic living organisms that include mold, mildew, fungus, candida, bacteria, protozoa, algae, and more. All plants and produce support, or host, some microscopic organisms. I often chuckle when a client tells me that they thought buying organic meant that their produce would be free of microbes. While it is true that organic produce should be free of agricultural chemicals, **all produce can host microbes.**

“Pre-washed” organic salad and lettuce mixes are not typically microbial free. Consider the “Organic Girl” brand. Its pre-washed mixes undergo multiple tap water rinses with agitation followed by a fresh water rinse (without chlorine).

While this mechanical cleansing method dislodges and removes microbes, it does not kill those left behind.

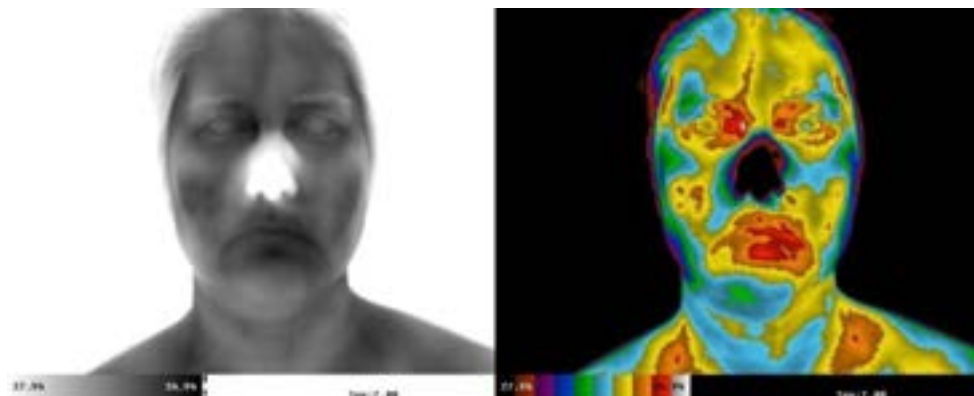
How Do Microbes Affect Our Health?

I have clients who apply washes of grapefruit seed extract or vinegar... even hydrogen peroxide... and they *still* are ending up with microbial infections from their produce. How do I know?

Often, thermal findings suggest significant sinus infection – even when clients feel absolutely nothing. Sometimes, years of clenching is aggravating the sinuses and creating inflammation. But many times, it is a microbial infection. Regardless of its external source or dwelling space(s) in the body, **infection can compromise the immune system, contribute to systemic lymphatic inflammation, and lead to fatigue... and worse.**

Microbial Infection from Unwashed Produce

Take this case, for example:



The Thermogram Center, Inc. Images: Warm/hot cheeks suggest sinus infection.

Can you see the heat over her cheeks? Cheeks should be cool, not warm or hot. Warm findings like hers suggest sinus infection, even though she had no prior awareness.

Following her thermal imaging, this client saw a functional health professional whose testing indicated:

- **Fungus** issue: two strains of aspergillus
- **Yeast/Candida** issue : candida in the sinus area
- **The main source for the mold and fungus is food-based.** Need to do a (food-grade) bleach wash to kill off the sources before consuming the food.
- Tested positive for Thorne Formula SF 722 for systemically treating candida, mold and fungus. Also tested positive for direct application of colloidal/nano/pico silver to the sinus tissue to kill off pathogens. Does not need to do a neti pot at this time.

Microbes Found in Many Clients

While she is one recent case, many clients suffer food-based infections and don't know it. Here are the suspect microbes infecting some of my recent clients (per health professional testing): **mold, fungus, candida, Corn smut, Foxtail smut, Wheat smut, Aspergillus fumigatus, Cladosporium fulvum, Epidermophyton floccosum, Mucor racemosus, Rinkel mold, and E-Coli, among others.**

How to Wash Produce to Reduce Microbes

There are many ways to reduce the population of microbes on produce in the home, some more safe and effective than others. Common methods range from water rinsing, a mechanical form of washing, to the use of chemicals. When applying chemicals, please consider only food-grade chemicals like 5% food-grade distilled white vinegar, 35% food-grade hydrogen peroxide, and food-grade chlorine bleach – using appropriate concentrations and submersion times.

Non-food grades and commercial forms can include additives, thickeners, and fragrances not approved for food use. Research indicates that commercial products like Fit aren't much more effective than mechanical water rinsing.

The safety and effectiveness of chemical washing is dependent upon things like Pre-Washing Preparation, Solution Concentration, Submersion Time, Final Rinse, Drying and Storage Before Consumption (below). Proper care will ensure that your produce will not taste like chemicals, but instead, will taste fresher with more vibrant flavor and will last longer.



Preparations for Washing Produce

Pre-Washing Preparation

To prepare for any produce wash with chemicals, gather waterproof gloves, up to 3 large sanitized bowls, clean absorbent towels and/or a salad spinner. Be sure to wash (sanitize) your hands and any counters, sinks and containers, if your clean produce will come in contact with their surfaces after washing. You may get washing time down to 5 to 10 minutes, so washing produce may simply become a part of meal-time preparation.

Here is how I wash the head of red leaf lettuce I typically consume daily: First, I put on kitchen gloves. (The daily use of latex gloves was causing my fingertip skin to peel, so I switched to latex-free rubber gloves from the hardware store. Then I switched to over-sized stongs to serve as my hands... so no more gloves.)

Then I place two sanitized (hard plastic) bowls in the kitchen sink, and a third on the counter. I fill the first bowl with cold filtered water and the second with wash solution, per the options below. After cutting off the bottom of the stem, I pull the leaves from the stem, placing both in the bowl of filtered water. Then I swish them around for a minute or two, trying to saturate the produce.

This action does two things: first, **it dislodges dirt, debris and little critters**, which would otherwise consume and reduce the effectiveness of the wash solution. Second, it **“quenches the thirst” of the produce**, filling the internal vessels of the stem and leaves with filtered water, so they are less likely to later absorb the wash solution during submersion.

Next, I use tongs to extract the leaves and stem from the filtered water bowl. As I lift them out of the bowl, I allow them to drain into the sink for several seconds

before placing them into the bowl of wash solution. (I use the chlorine option, below.)

I use tongs to **hold the produce under the surface of the wash solution for complete submersion**, gently pumping the produce up and down a few times to force the solution to circulate all around it. I empty the filtered water bowl and move it from the sink to the counter. I replace it with the third sanitized bowl, filling it with cold tap water.

Solution Concentration & Submersion Time

Option 1: Food-Grade Chlorine Bleach Wash

MOST EFFECTIVE. While chlorine bleach is a proven sanitizer, effective against all microbes, and vinegar and hydrogen peroxide are effective against many (not all microbes), I cannot find a source of food-grade chlorine bleach for personal use (beyond water sanitization). (Like me, many of my fellow health professionals resort to plain Clorox.)

According to one chlorine bleach [food safety fact sheet](#), “Most operations, unless the produce is very dirty, will not need a sanitizer concentration greater than 200 ppm total chlorine to achieve the desired sanitizing effect. Contact times of one minute or greater are typically sufficient to achieve a thorough kill.”

200ppm is achieved at **1 tablespoon food-grade chlorine bleach per gallon of water.**

Option 2: 35% Food-Grade Hydrogen Peroxide Wash

According to a hydrogen peroxide [fact sheet](#), which also includes warning, safety and storage tips, “**mix 11 ounces of distilled or reverse osmosis water with 1 ounce of 35% food-grade hydrogen peroxide**” to yield a 3% solution. **Soak 20 minutes.**

35% food-grade hydrogen peroxide is available at [Amazon](#).

Option 3: 5% Food-Grade Distilled White Vinegar Wash

LEAST EFFECTIVE. Vinegar does not kill harmful bacteria like E. coli. Since this wash should be used at full strength, without dilution with water, a spray application may be most appropriate, as submersion may require large amounts of vinegar.

Spray to soak for 5 minutes. Because this wash is the least effective against microbes, using this wash followed by the hydrogen peroxide wash is more effective. The vinegar wash is most effective, however, in removing wax applications applied to produce like apples.

Final Rinse

After at least a minute of submersion, use utensils to remove the produce from the wash solution, letting it drain into the sink for a few seconds, and then submerge the produce into a bowl of cold tap water.

Swish (or pump) the produce around for several seconds before holding the produce near the bottom of the bowl. Consider repeating at least three more times: refill the bowl with cold tap water, swish (pump) the produce for about 30 seconds, and empty the bowl of water. When you feel confident that the produce is clean, consider a final rinse with filtered water to reduce chlorinated tap water and/or go on to the drying process.

Drying

While clean absorbent towels can be used, a salad spinner is an inexpensive time saver that can help to remove excess water. When using towels, consider spreading out the leaves and stems of the produce on a towel laid out across a counter.

Consider applying a second towel on top and pat/press dry, or leaving the produce on the bottom towel (after removing the top towel) to air dry. Afterwards, you can shred the produce with my bare (clean) hands into bite size pieces and into a salad bowl for eating.

Storage Before Consumption

Washing revives and keeps produce fresher longer by removing microbes that would otherwise break down the produce. The fresher the produce, the more vital its nutrients. Eating it sooner rather than later is typically more nutritious.

When produce must be stored, be sure to use clean (sanitized) bins and containers to avoid recontamination. Store produce at an appropriate temperature and in the right environment to prolong freshness. Consider an airtight vegetable bin in your frig for washed produce. (My refrigerator has two vegetable bins, so I designate one for unwashed produce, and one for washed produce. I clean/sanitize the bins based on usage.)

Miscellaneous Tips

- I prefer washing and rinsing produce in bowls rather than sink basins because I am more confident in my ability to sanitize bowls than entire sink basins. I also find it faster and easier to wash bowls than entire sink basins.
- While glass or Corning Ware-like bowls may be the easiest to sanitize and best for washing produce since they will not react chemically with the wash solution, they can break if dropped. While stainless steel is used in many kitchens, it is a metal that may react microscopically and chemically with the wash solution. I choose hard plastic bowls instead. They are lightweight and appear dense enough to tolerate the wash solution well.
- Using cold water rather than warm water helps to keep produce vessels closed and less open to drinking in the wash solution. In addition, cold water helps keep produce crisp and fresh.
- Wear waterproof gloves with any chemical wash. Chemical contact with the skin, eyes, etc. can be harmful. (If you experience accidental contact, rinse thoroughly with water.)
- When you prepare your produce for washing, remove any store stickers, bruised sections, browned or soft leaves, and moldy or soft berries and grapes.

- Apply a soft scrub brush to dirty produce like beets, potatoes, mushrooms, and root vegetables.
- While it may seem unnecessary to wash thick-skinned produce that you intend to peel, (i.e. bananas, avocados, oranges, pineapples, pumpkins, kiwi, carrots, potatoes, squash, potatoes, etc.) your hands and fingers can become contaminated when you handle their skins, as can the surfaces you set the produce on or in. If you do not wash this produce, then when you peel or cut them, your hands and utensils can contaminate the meat within the skin, and any surface your fingers, utensils or produce contacts. Washing also prolongs freshness.
- Soft-skinned produce, particularly berries, are more susceptible to getting soggy with chemical washes. Reduce the immersion time to avoid ruining their texture.
- I never wash garlic and onions. Their innate antimicrobial properties seem good enough! (I do not wash thick skinned produce that I eat quickly, i.e. avocados.)
- Leave fruit stems intact until consumption, i.e. grapes. Stems act as seals, keeping the outside world from getting inside, prolonging freshness.



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President, Author, Health Educator, CTT, MBA
Better Breast Health – *For Life!*™

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Part 2. Prevention – Learn the Risks

Chapter 4. Immunity Factors

Why You Need to Know Your Microbes Give You Immunity



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You likely know that your immune system is your best defense against disease. But what constitutes the immune system and how can you support it?

Approximately 80% of your immune system resides in your gut and is largely controlled by your gut microbiome.

Learn about your gut microbiome and what harms it, what helps it, and how to support it to boost your immunity, vitality and longevity.

What Constitutes Your Microbiome?

The human microbiome is made up of microbes, mostly bacteria with some yeasts, fungi and other microbes that live in and on the human body. The gut houses the vast majority of microbes, some of which are referred to as probiotics.

While there are over 10,000 different species of microbes, most of our bodies host between 100 and 1000 species. The composition of **your microbiome is unique to your body and constitutes the bulk of your immune system.**

Interestingly, your body's microbes outnumber human cells three to one, but collectively weigh only about 6 pounds. We have about 37 trillion human cells (skin cells, blood cells, bone, etc.) and **100 trillion non-human microbes**.

Why is Your Microbiome Important?

In addition to regulating the immune system, your microbiome:

- helps break down food and extract nutrients
- synthesizes vitamins
- secretes chemicals to regulate mood including dopamine and serotonin
- regulates inflammation in our bodies
- regulates the way we store fat
- regulates the way we balance levels of glucose in the blood
- regulates the way we respond to gut hormones that makes us feel hungry or full
- regulates how much energy we extract from food

Dis-ease can be a sign of microbiome imbalance.

A Balanced Microbiome is Crucial

When our microbiome is balanced, containing more healthy than unhealthy microbes, then our immunity, overall health and sense of well-being is supported. This balance eases digestion and reduces the presence of undigested food particles that can lead to chronic inflammation throughout the body.

In addition, this balance reduces the overgrowth of unhealthy microbes and their resulting toxins and acids that cause irritation and inflammation in the gut that promote malabsorption, malnourishment and intestinal disorders.

Is Your Microbiome Out of Balance?

According to [Modern Alternative Mama](#), if your gut microbiome is unbalanced or inadequate, you may experience:

- Eczema
- Food allergies/sensitivities

- Constipation (frequent)
- Diarrhea (frequent)
- Cradle cap/dermatitis
- Fatigue (frequent)
- Anxiety
- Depression
- Other hormonal imbalances
- Frequent illnesses
- Long/more severe illnesses (takes forever to 'get over' things)
- Frequent sugar cravings
- Sore joints/muscles
- Frequent headaches
- Autoimmune disease
- Weight gain/inability to lose weight
- Acne/skin breakouts

Chapter 4 Covers these Gut Microbiome Factors

- What can cause harm to your healthy, beneficial bacteria?
- What are the roles of enzymes and hydrochloric acid?
- How can you support and replenish beneficial bacteria?
- Probiotics
- Prebiotics, resistant starches, live cultures and fermented foods
- Cultivating probiotics with sporebiotics



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These Harm Beneficial Gut Bacteria



Photo by [Elena Mozhvilo](#) on [Unsplash](#)

In our series on the gut microbiome, subchapters explain what constitutes the gut microbiome, and signs of compromise. In this subchapter we discuss what harms the beneficial bacteria in the gut microbiome.

What Can Harm or Destroy Beneficial Gut Bacteria?

Sugar feeds harmful bacteria that can crowd out beneficial bacteria, suppress immunity and feed cancer cells.

- Antibiotics (including antibiotics in meat from animals in Confined Animal Feeding Operations – CAFOs)
- Any food that causes an immune or inflammatory reaction: food sensitivities
- Chemicals and many medications/prescription drugs (including NSAIDS, acid-blockers, birth control pills, steroids)
- Chlorinated water
- Chronic stress
- Dairy products
- Emotional stress
- Environmental mold exposure
- Fluoridated water
- Gluten (found in many grains and flours)

- Glyphosate (and crops treated with Round-Up)
- GMOs (genetically modified organisms)
- Lack of sufficient quality sleep
- Lectins (anti-nutrients found in grains, beans and seeds)
- Over-consumption of processed food/food additives
- Over-consumption of sugar (including alcohol)
- Pesticides on food/produce
- Pro-inflammatory vegetable/cooking oils
- Synthetic vitamins (fortified foods)
- Trans-fats (shortenings like Crisco or other hydrogenated fats)
- ... Among others

A Special Note on NSAIDS

A special note on NSAIDS, Non-Steroidal, Anti-Inflammatory Drugs, (ie. aspirin and ibuprofen): these work primarily by blocking all prostaglandins, some of which cause inflammation, but others of which are essential for gut lining healing and repair.

The digestive tract replaces itself every 3-5 days. Prolonged use of NSAIDS prevents its repair, causing the gut lining to become weak, inflamed and “leaky,” contributing to autoimmune conditions.



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Digestive Enzymes, Indigestion & Inflammation



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The phrase “you are what you eat” is only partially true. More accurately, **you are what you digest**. Additionally, **you are what you eat and don’t eliminate**, which infers the potential accumulation of toxins and waste products that your body cannot eliminate.

Digestive enzymes aren’t just beneficial – they are essential. Synthesized and secreted in different parts of the digestive tract, including the mouth, stomach and pancreas, they turn food into bioavailable compounds for nourishment and waste products for elimination from the body.

If the body is lacking specific enzymes, then malnutrition and inflammation may result and lead to degeneration, arthritis, heart disease, and cancer.

Do You Suffer Indigestion?

Simple symptoms of inadequate food digestion include:

- Gas and bloating after meals (including belching, burping and farting)
- The sensation of heaviness or food sitting in the stomach (a rock in your gut)
- Feeling full after eating a few bites of food

- Undigested food in the stool
- An “oil slick” in the toilet bowl (undigested fat)
- Not feeling good or feeling fatigue after eating

More complicated symptoms of inadequate food digestion include:

- Cravings for certain foods
- Thyroid problems
- Heartburn, indigestion or burping
- Hair that is thinning or falling out
- Dry or lackluster skin
- Trouble concentrating or brain fog
- Fatigue
- Trouble sleeping
- Arthritis or joint pain
- Muscle weakness or feeling too tired to exercise
- Mood swings, depression or irritability
- Headaches or migraines
- Worsened PMS
- And more

Antinutrients Destroy Enzymes

While Enzymes are critical for many bodily functions, antinutrients in many foods can harm/destroy enzymes. Consider subchapter, “Food Toxins & Antinutrients.”

Improper Cooking Destroys Enzymes

Cooking above 117°F typically destroys enzymes. However, some foods release their enzymes when slightly cooked. For instance, slightly cooking carrots breaks down their tough cellular wall, and makes nutrients more available to the body. Consider subchapter, “Cooking Can Decrease Toxins & Increase Nutrients.”

Nuts, Grains, Seeds, Beans and Legumes

Nuts, grains, seeds and legumes have built-in protection in the form of enzyme inhibitors. These inhibitors prevent enzymes from being activated until soaked, germinated, or sprouted. Consider subchapter, “Sprouting Activates Enzymes.”

Has Your Gall Bladder Been Removed?

Some women progressively gain weight following the removal of their gall bladder. For those who are having difficulty with fat metabolism, a Beta Plus formula with bile salts, lipase and other ingredients may be beneficial. Such a formula may be *crucial* for those who have no gall bladder. Beta Plus formulas support the liver’s production of bile to digest fats since the reservoir that stores bile, the gall bladder, is no longer present.

Do you know that those who have no gall bladder may plaque their arteries twice as fast, become obese or create fatty lipomas throughout the body if they do not adequately support their liver nutraceutically – for life?

Beta Plus formulas are available under many brand names. Your functional health professional can provide recommendations. Also, for those who have issues with “stones,” there are **alpha ortho phos** formulas that help the body to dissolve stones and unwanted calcium deposits.

Clogged Bile Ducts

Insufficient enzymes can be caused by **congested bile ducts and pancreatic enzyme ducts**. This is especially true with a diet high in processed foods, exposure to environmental toxins, or chronic stress. In some cases, ducts can be cleared.

Which Enzymes to Consider

Common enzymes include:

- Amylase – for the metabolism of carbohydrates
- Lipase – for the metabolism of fats
- Protease – for the metabolism of proteins

- Hydrochloric acid – for the metabolism of meats

Hydrochloric Acid and Acid Reflux

Meats require a substantial amount of hydrochloric acid in the stomach to be digested.

Do you know that acid reflux and heartburn are actually signs that the stomach is lacking in acidity and that taking antacids is actually counter-productive in the long run?

Frequent acid reflux suggests the need to increase stomach acidity.

Learn more here:

- [5 Steps to Naturally Heal Low Stomach Acid](#)
- [Why Stomach Acid Is Good for You: Natural Relief from Heartburn, Indigestion, Reflux and GERD](#)
- [3 Common Signs of Low Stomach Acid](#)
- [Gastric Acid](#)

When to Take Enzymes

When you take your enzymes is critical for proper metabolism. Ask your prescribing health professional for details. [See this diagram](#) explaining the digestive process and timing for digestive supplementation. For instance, it may be best to take your pancreatic enzymes 15-20 minutes before the first bite of a meal... and the hydrochloric acid formula ten minutes after the first bite, or halfway through the meal.

Do You Suffer Inflammation?

Inflammation can occur with the accumulation of toxins and waste products that are *not* being eliminated from the body. Some individuals **use enzymes on an empty stomach** before bed and/or in between meals **to help rid the body of undigested food particles** and dead/dying cells. In fact, this is recommended after events that traumatize tissue, i.e. contusion, surgery.

Undigested food particles and waste can contribute to inflammation, joint pain and arthritis, and excess weight, among other issues.

While doubling the meal dosage of a *good mealtime enzyme formula* at bedtime may work well, talk with your health professional about products. (The author has explored *Wobenzym*, *New Chapter* Ginger Force and *Designs for Health* Inflammatone, among others.)

To Learn More About Digestive Enzymes

To learn if and when you need supplementation and/or support, consider functional testing and recommendations from Functional Medical Doctors, Naturopathic Doctors, Functional Nutritionists, etc. These health professionals can help identify your unique food sensitivities, nutritional deficiencies, product recommendations, and the proper supplementation dosages for *your* body.

Learn more here:

- [Digestive Enzymes](#)
- [Digestive Enzymes – the Hidden Dangers](#)
- [Enzymes: An Easy To Understand Guide On Digestive Enzymes And The Vital Functions They Perform In Your Body](#)
- [Digestive Enzymes 101](#)
- [Digestive Enzyme](#)



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Nuts, Grains, Seeds, Beans and Legumes



Photo by [Milada Vigerova](#) on [Unsplash](#)

Nuts, grains, seeds, beans and legumes have built-in protection in the form of enzyme inhibitors. These inhibitors prevent enzymes from being activated until soaked, germinated, or sprouted.

Sprouting Activates Enzymes

According to [Dr. Axe](#), “Sprouting foods that contain antinutrients (or cooking them in the case of most vegetables) increases absorption of **beneficial vitamin B12, iron, phosphorous, magnesium and zinc**, plus it makes the food easier on digestion; decreases risk of allergic reactions; and releases more vitamins, amino acids and fiber from within the seeds.

While sprouted grains and other nutrient-blocking seeds won’t be completely free from all antinutrients after soaking and sprouting, **it’s a much better option than eating them unsoaked.**”

How to Prepare Nuts, Grains, Seeds, Beans and Legumes

In order to activate their enzymes, soak and drain beans, legumes, and lentils before preparation. Soak, rinse and sprout nuts, seeds and grains. **Sprouts** can yield up to 30 times the nutritional benefits of their unsprouted forms.

Sprouting involves soaking in water for 8 hours to 12 days.

Sprouting books and charts available on-line and at many health food stores provide specifics and make this process easier.

Learn how here:

- [Sprouting](#)
- [Sprouts: The Miracle Food: The Complete Guide to Sprouting](#)
- [Sproutman's "Turn the Dial" Sprout Chart](#)
- [Sprout Master Mini Triple](#)



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How Do You Support Beneficial Gut Bacteria?



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In our series on the gut microbiome, subchapters explain what constitutes the gut microbiome, signs of compromise, and what harms the beneficial bacteria in the gut microbiome. In this subchapter we discuss **how to support and replenish beneficial bacteria**.

Consider These Items to *Support* Beneficial Gut Bacteria:

- **Purified/filtered water, free of chlorine and fluoride**
- **Clean foods** free of agricultural chemicals. See [Clean 30, Dirty Dozen](#) lists. **Properly cooked and prepared foods** for optimal nutritional and enzyme availability. Consider subchapter, “Digestive Enzymes, Indigestion & Inflammation.”
- **Absolutely essential: Short chain fatty acids** See: [What Are Short-Chain Fatty Acids And Why Should You Care?](#)

Various fermented foods, including cheese, butter, alcoholic beverages, pickles, sauerkraut, soy sauce, and yoghurt, are high in short chain fatty acids:

- *vinegar and alcoholic beverages contain **acetate**,*
- *cheese contains **propionate** and **butyrate**, and*
 - *butter contains **butyrate***

See: [How Short-Chain Fatty Acids Affect Health and Weight](#)

High-fiber foods, such as fruits, veggies, legumes and whole grains, encourage the production of short-chain fatty acids.

- **Fiber:** 30+ grams per day (both soluble and insoluble fiber). Fiber binds with wastes, toxins, and estrogens in the intestines for elimination from the body.

Women whose diets are consistently high in fiber are expected to have less risk for breast cancer, as high fiber helps reduce estrogen levels.

You probably know that whole grains, oatmeal, beans, fruits, and vegetables provide fiber. Do you also know that quality psyllium husks and seeds can be an effective fiber supplement?

Unlike supplements, however, fiber-rich whole foods provide additional nutrients as well. Don't forget: if you supplement your diet with fiber, be sure to increase your water intake,

- **Omega 3 fats** to reduce inflammation and more. See: [12 Foods That Are Very High in Omega-3](#) and subchapter, "No Fat Diets May Cause Cancer."
- **Polyphenols** packed with antioxidants. See: [What Are Polyphenols? Types, Benefits, and Food Sources](#)

Consider Articles on How to *Replenish* Beneficial Gut Bacteria:

- Microbiotics: **Probiotics; Prebiotics, and Sporebiotics.**
- **Fermented foods** with live cultures may provide both pre- and pro-biotics, i.e. sauerkraut, kefir, kimchi, kombucha, yogurt. Be careful as the potencies can vary dramatically – and many of them have up to 35g of sugar!
- **Resistant starches** act as whole-food sources of prebiotics, fiber and carbs for beneficial gut bacteria.

Consider These Items to Support the *Healing* of a Damaged Gut Microbiome:

- Bone Broth
- Gelatin/collagen
- Zinc carnosine
- Digestive enzymes (ginger helps break down protein)
- Fiber
- Marshmallow root
- Mushroom elixirs
- Licorice extract
- Slippery elm
- Aloe Vera
- Beta glucan
- ... and more **

To Learn More

Subscribe to Dr. Axe to see: [The Human Microbiome: How It Works + a Diet for Gut Health](#)

** To learn if and when you need supplementation and/or support, consider functional testing with Functional Medical Doctors, Naturopathic Doctors, Functional Nutritionists, etc. These health professionals can help identify the unique food sensitivities, nutritional deficiencies, product recommendations, and supplementation dosages for *your* body.



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Probiotics are Essential for Life



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In our series on the gut microbiome, subchapters explain what constitutes the gut microbiome, signs of compromise, what harms the beneficial bacteria, how to support the gut microbiome and digestive enzymes, indigestion & inflammation. Among the supplements that replenish the gut microbiome are probiotics, including live cultures and fermented foods; prebiotics, including resistant starches; and sporebiotics. In this subchapter we discuss **how to replenish the gut microbiome with probiotics**.

Probiotics are Bacteria

Probiotics are living microorganisms (microbes) that comprise the beneficial bacteria in the gut microbiome. They **sustain our existence** with their impacts on digestion, immunity, inflammation and more.

Probiotics in the Gut

Examples of probiotic bacteria in the gut microbiome include:

- Lactobacillus strains, i.e. acidophilus, bulgarius, reuteri, plantarum
- Bifidobacterium strains, i.e. bifidum, lactis, longum

- Streptococcus thermophiles
- Saccharomyces boulardii
- Bacillus subtilis

Lactobacillus reside predominantly in the small intestine and upper GI tract. They metabolize carbohydrates and produce lactic acid, which may prevent harmful bacteria from colonizing the intestines. They also protect the integrity of gut lining, combating leaky gut.

Bifidobacteria reside in the large intestine or the lower bowel. They help modulate the gut microbiome, prevent inflammation, and protect from many diseases, including colorectal cancer, infections, inflammatory bowel diseases like Crohn's and ulcerative colitis, and depression. They produce antimicrobial chemicals that target harmful bacteria and pathogens. Learn more at: [The Facts on Probiotic Bifidobacteria](#)

Other probiotics in the gut microbiome may perform a variety of roles and aid in metabolizing foods, resisting pathogens and unhealthy bacteria, and boosting immunity.

Boost and Balance Your Gut Probiotics

A healthy balance of probiotics in your gut microbiome is essential for well-being. Aside from food sources, probiotics can be consumed as a supplement. Health professionals advise rotating/varying biotic intake, switching from one food source or formula to another to help diversify the gut microbiome.

Food Sources of Probiotics

Food sources like fermented foods and milks with live cultures provide beneficial probiotics. Subscribe to Dr. Axe to see [17 Great Probiotic Foods for Better Gut Health](#), including:

- Kefir
- Sauerkraut
- Kombucha
- Natto
- Yogurt

- Apple cider vinegar
- Kimchi
- Buttermilk
- Raw milk

Note: Be careful as probiotic potencies can vary dramatically – and some of them have up to 35g of sugar!

Live Strains and Active Cultures

To be beneficial, **probiotics must be live and active**, not dead. When purchasing supplements, be sure to investigate product efficacy by way of product packaging, shipping and storage requirements; survivability through the stomach with its high acidity; and the resulting bioavailability of probiotics to seed in the lining of the intestines. Ensure live, active probiotic delivery to the gut lining.

There are many biotic formulas on the market and product efficacy can vary significantly.

Is Your Gut Lining Gunked-up?

While many formulas are clinically proven to survive stomach acidity and seed their microflora into the lining of the intestinal wall, this outcome can be significantly hindered if the intestinal lining is gunked up or competing with an overabundance of harmful bacteria already there. Please do not under-estimate the importance of such (common) conditions on the viability of the formula you choose.

Supplement Exposure to Heat

While many pre/pro/spore biotics may not require refrigeration, **excess heat**, especially during storage and transit in hot summer months, **may reduce/destroy them**. Be conscientious about how they are stored and shipped to you.

Purchase Considerations

Tips from Dr. Mercola: “Factors to look for when trying to identify a high-quality probiotic supplement include the following:

- Make sure it's a reputable brand. If you trust the products made by a company, perhaps they're doing a great job making their probiotics as well.
- Look for a potency count (colony forming units or CFUs) of 50 billion or higher. That's the number of bacteria being delivered per dose.
- Declaration of shelf life, i.e. the shelf life of the CFUs. Avoid capsules that only declare the CFUs at time of manufacture.
- Food products should be in resealable packaging and stored as directed.
- Look for a product containing multiple species of bacteria, as high diversity tends to be associated with better health. That said, products containing species of Lactobacillus and Bifidobacteria are generally recommended.
- Look for non-GMO brands.
- Confirm that they're manufactured according to current Good Manufacturing Practices (cGMP).

Learn More

Subscribe to [Dr. Axe to read Probiotics: Top Benefits, Foods and Supplements](#)



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by Tirza Derflinger

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Gut Bacteria Thrive with Prebiotics



Photo by [Ava Sol](#) on [Unsplash](#)

In our series on the gut microbiome, subchapters explain what constitutes the gut microbiome, signs of compromise, what harms the beneficial bacteria, how to support the gut microbiome and digestive enzymes, indigestion & inflammation. Among the supplements that replenish the gut microbiome are probiotics, including live cultures and fermented foods; prebiotics, including resistant starches; and sporebiotics. In this subchapter we discuss **how to help healthy gut bacteria thrive with prebiotics**.

Prebiotics Fuel Good Bacteria

Prebiotics provide fiber that is a type of carbohydrate that humans cannot digest. However, **gut bacteria thrive on prebiotic fiber**, as it allows them to reproduce and enhances their ability to make various products crucial to gut functions and human health.

Food Sources of Prebiotics

Food sources of prebiotics include:

- Prebiotic-rich foods like: leek, asparagus, chicory, Jerusalem artichoke, garlic, artichoke, onion, unripe banana, oats, garlic, apple, dandelion and more.
- Fermented and home-made vegetables like: kefir, sauerkraut, kombucha, and kimchi. Subscribe to Dr. Axe to see [17 Great Probiotic Foods for Better Gut Health](#), as fermented foods and live cultures often provide both pro- and pre-biotics.
- Resistant starches act as whole-food sources of prebiotics, fiber and carbs.

Resistant Starch As a Prebiotic

From Nutritionist Lesia Atkinson, “Resistant starch shares many properties with fiber, helping food pass through the gut and generally improving digestion. Once it reaches the lower gut, **resistant starch feeds our beneficial bacteria**, which in turn produce chemicals which can help our immune systems, cardiovascular health and many other benefits.”

Resistant Starch Speeds up Digestion

Resistant starch functions like fermentable insoluble fiber in that it produces the same healthy gases and acids in the large intestine that soluble fiber does. One important difference between the two types of fibers is that soluble fiber tends to slow digestion while insoluble fiber **speeds up digestion**.

Benefits of Butyrate

Resistant starch feeds the good bacteria in the intestines **and increases** the production of short chain fatty acids (butyrate). **Butyrate is the preferred fuel of cells** that line the colon and acts as a powerful anti-inflammatory agent for the colonic cells, and functions to improve the integrity of our gut by **decreasing intestinal permeability** and therefore keeping toxins in the gut and out of the bloodstream.

Sources of Resistant Starch

Resistant starch is found in starchy plant foods and cooked, cooled and reheated starches like rice, oats, barley, potatoes and pasta.

Consider cooked and cooled potatoes, raw green bananas, plantains, yams, and other root vegetables. Raw potato starch may be convenient, but properly prepared whole foods are more beneficial. (See [The Definitive Guide to Resistant Starch](#)).

Diets for Digestive Disorders

Be aware that not everyone's gut or digestion is created equally: not everyone can break down carbohydrates (or sugars) equally. Individuals **with celiac, colitis, IBS, Crohn's or leaky gut have a compromised GI tract.**

If you suffer IBS, your body might not tolerate non-digestible carbohydrates. **Consider a low-FODMAP diet** and [FODMAP 101: A Detailed Beginner's Guide](#).

The **Gut and Psychology Syndrome Diet (GAPS)**, like the **Specific Carbohydrate Diet (SCD)**, reduces the intake of the more complex carbohydrates and sugars (disaccharides and polysaccharides) to **ease digestion and reduce the presence of undigested foods and complex sugars that feed microbes, bacteria and yeast.**

Reducing their overgrowth reduces their resulting toxins and acids that cause irritation and inflammation in the gut that perpetuates malabsorption.

Low-Oxalate Diets Protect from Leaky Gut

If you have a compromised GI tract or are missing any portion of your intestines (from surgical removal), then in addition to considering fermented veggies, live cultures and/or high-quality probiotics to increase healthy gut flora, consider limiting oxalates.

Oxalates naturally occur in plant-based foods, not animal foods, but are like tiny “glass shards” in the gut. As you can imagine, if the gut lining is weakened or permeable, these glass shards can cut through, increasing irritation, inflammation and leaky gut.

Consider [Low Oxalate Diet: Overview, Food Lists, and How It Works](#)

Learn More

[Feeding Good Bacteria Prebiotics](#)



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Cultivate Probiotics with Sporebiotics



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Probiotics Die Before Reaching the Intestines

To replenish the gut microbiome with good bacteria, we need to think beyond just adding pro- and prebiotics. We need to **think of adding sporebiotics**. Why? Because many probiotics taken orally do not survive the journey to the intestines: they are destroyed by the stomach acid and bile salts they encounter along the way.

Sporebiotics Survive the Journey to the Intestines

Sporebiotics, on the other hand, survive the journey, and are not effected by antibiotics. A sporebiotic is the spore of the biotic... the embryonic portion of

the biotic that is not yet living. Think of it as the seed that needs to be planted into the soil to then germinate and grow.

Sporebiotics Seed the Gut with Probiotics

When the spore reaches the small intestine, it settles into the gut lining, provided the lining isn't "gunked up." Within minutes, water enters the spore, breaking down its protective outer coating and **the spore germinates or becomes active and living as a probiotic.**

Probiotics Help Us Thrive

The benefits of a diverse "garden" of good bacteria, compromised mostly of active probiotics, include **better: absorption of nutrients, inflammatory response, immune function, digestion, and the gut's ability to fight invaders and bad bacteria.**

Probiotic versus Sporebiotic Formulas

So while the most popular probiotic supplements include Lactobacillus species and Bifidobacter species, these can be easily destroyed by stomach acid, bile salts and enzymes. **Consider supplementing with sporebiotics** like Bacillus subtilis, Bacillus clausii and Bacillus coagulans, among others.

Learn More

[MegaSporebiotics](#)
[Restore Sporebiotics](#)



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Part 2. Prevention – Learn the Risks

Chapter 5. Lifestyle Factors

Why You Need to Know Lifestyles Cause Cancer



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Many men and women are afraid that they are doomed to cancer if their family members have been diagnosed. For example, we are led to believe that if our parents or their siblings had breast or colon cancer, then we are more likely to be diagnosed as well. But fears are unjustified and based on myth, not fact.

[The truth is, up to 95% of all cancers are caused by lifestyle, not inherited genetics.](#) It's less about the genes we are born with, and more about how we live and impact our DNA and gene expression: epigenetics.

Up to 95% of Cancers are Caused by Lifestyle

Everyone is born with flawed or mutated DNA. However, according to the National Institutes of Health, “[Inherited genetic mutations play a role in about 5 to 10 percent of all cancers.](#)” This means that up to 95% of all cancers are caused by lifestyle induced cellular mutations.

Chapter 5 Covers these Lifestyle Factors

- Genetic vs epigenetic DNA mutations
- Age, ethnicity and fat distribution
- Smoking and alcohol consumption

- Stress and emotional trauma
- Sleep duration, quality and rhythms
- Medication and drug use
- Exercising to stimulate lymph circulation
- Bras and breast implants



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Genetic vs Epigenetic DNA Mutations



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Everyone is born with flawed or mutated DNA. However, according to the National Institutes of Health, “[Inherited genetic mutations play a role in about 5 to 10 percent of all cancers.](#)” This means that up to 95% of all cancers are caused by lifestyle induced cellular mutations: epigenetics.

Up to 95% of Cancers are Caused by Lifestyle

Do You Know Your DNA is Damaged Daily?

DNA damage occurs in our cells on a daily basis:

Each of our cells experience more than 60,000 occurrences of DNA damage each day.

With enough damage, DNA mutations can be induced, leading to propagation of flawed, mutated cells in the tissue - even cancer.

Genetic vs Lifestyle Cellular Mutations

Germline, **genetic mutations** exist in the germ cells (egg and sperm), and are passed on to offspring. The genetic mutation is present in all the cells of the

body. Genetic mutations may be silent, may cause disease, or may contribute to genetic diversity.

Somatic, lifestyle, or epigenetic mutations in a cell are neither inherited, nor passed on to offspring. They are also referred to as acquired mutations. Acquired mutations are lifestyle induced and can occur spontaneously in any cell in the body (“soma”) except germ cells.

These **mutations are limited to the descendants of the original cell** that developed the mutation and not present in other cells in the body. Somatic mutations may be silent, may cause disease and cancer, or may contribute to genetic diversity.

What Causes Lifestyle DNA Damage?

DNA damage that leads to abnormal chemical structure in DNA occurs in our cells as a result of naturally occurring cellular processes inside the cell (endogenous) and exposure to outside the cell (exogenous) agents.

When our cells are exposed to exogenous agents from things like tobacco smoke, radiation, heavy metals, microbes, toxic chemicals, etc., DNA damage occurs. DNA damage can also occur as a result of cellular metabolism and activities, as each cell hosts endogenous agents, can experience oxidative stress, and creates waste products.

How Does DNA Damage Cause Cancer?

According to [Wikipedia](#), “DNA damage and mutation have different biological consequences. While most DNA damages can undergo DNA repair, such repair is not 100% efficient. Un-repaired DNA damages accumulate in non-replicating cells, such as cells in the brains or muscles of adult mammals and can cause aging.

In replicating cells, such as cells lining the colon (and breasts), errors occur upon replication of past damages. These errors can give rise to mutations or epigenetic alterations. Both of these types of alteration can be replicated and passed on to subsequent cell generations... and possibly contribute to progression to cancer.”

We Can Repair Some DNA Damage

While unhealthy lifestyles, i.e. excessive eating, drinking, smoking, drugs, stress, etc. are common causes of DNA damage, many of us are compromised in our natural ability to repair DNA damage. While our bodies are incessantly repairing DNA damage, **our ability to repair is limited. Hence we age, a consequence of living.**

For some individuals, methylation (a process by which methyl groups are added to DNA), histone modifications (histone proteins associated with DNA), and/or important detoxifying processes are not functioning optimally and pre-dispose cells to DNA mutation and disease. **For some individuals, DNA damage is so acute that it is irreversible** and can lead to mutation, epigenetic alteration (lifestyle induced gene mutation or expression) and cancer.

How Can We Reduce DNA Damage?

While it is impossible to eliminate DNA damage completely, we can reduce it by **reducing cellular exposure to harmful exogenous and endogenous agents.** We can do this by attempting to sustain an optimal healthy environment for our cells.

As an example, consider the carrier of cells, the blood. Plasma is the fluid in the blood that suspends and bathes blood cells. This fluid is composed of about 92% water, 7% vital proteins and clotting factors and 1% mineral salts, sugars, fats, hormones and vitamins. Each red blood cell it suspends carries about one billion molecules of oxygen.

So the quality of ingredients like water, oxygen, minerals, fats, etc. effect the quality of the environment for our cells and bodily functions. But other factors affect the environment as well, like stress, in its many forms.

Genes load the gun. The environment pulls the trigger.

– Dr. Francis Collins

Control Your Environment

We have some control over some of what comes into our bodies, i.e. food, drink, supplements, skin products, sun and medical radiation, but less control over the quality of environmental air, noise, electromagnetic fields, chemical and heavy metal exposure, microbial infections, etc.

A logical strategy is to optimize those environmental factors for which we have control and hope it overcompensates for the things for which we have no/little control. To learn more, consider the chapter on “Environmental Risk Factors.”

Understanding our gene mutations also affords us the opportunity to employ lifestyle, nutraceutical and dietary modifications to compensate.

Our Best Defense

To learn more about any nutritional deficiencies, metabolic or detoxifying process compromises, or the genetic mutations that may be putting you at risk, **consider consulting with a functional genomics specialist for testing and consultation.**

These specialists can help you to implement compensatory plans. One such specialist can be found at greensandgenes.com, with TeleHealth for nationwide support and a 15 minute initial phone consultation at no charge.

Given that “**we are what we eat, assimilate and don’t eliminate**,” attempting to be optimally nourished and detoxed is crucial to minimize DNA damage and support DNA damage repair. For self-care support, consider the articles categorized under “Dietary Factors” and “The Gut Microbiome” at [Preventive Support](#).

For Those Concerned About Breast Cancer

The [National Institutes of Health](#) reports that **only 5% to 10% of all breast cancers have a genetic cause.** So 90% to 95% are lifestyle induced. Hence the importance of being nourished and detoxed, managing the risk factors that contribute to breast cancer, and proactively living a preventive lifestyle. From BreastCancer.org, “**Everyone has BRCA1 and BRCA2 genes.** The function of the BRCA genes is to repair cell damage and keep breast cells

growing normally. But when these genes contain abnormalities or mutations that are passed from generation to generation, the genes don't function normally and breast cancer risk increases... **About 2% of all people with breast cancer have an abnormal BRCA gene.**"

[PubMed](#) and [PubMed](#) report that 55% to 65% of women who inherit a BRCA1 mutation and around 45% of women who inherit a BRCA2 mutation are expected to develop breast cancer by age 70. If you have inherited either gene mutation, you may be able to improve your odds with the before-mentioned strategies.



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Hereditary Risk, Age, Ethnicity and Fat Distribution



Photo by [puhhha](#)

Have you heard of hereditary risk or genetic predisposition? You might be surprised to learn that **hereditary risk is one of the most over-estimated risk factors by women**. Studies indicate that only 5-10% of cancers are linked to inherited genes, meaning that they result directly from gene mutations passed on from a parent.

Only 5%-10% of Breast Cancers are Due to Inherited Gene Mutations

While the risk of developing breast cancer is higher in women with an inherited gene mutation in the BRCA-1 or BRCA-2 gene, the significance of this statistic is that **potentially 90-95% of breast cancers are linked to other, more controllable risk factors**.

Gene Testing Provides for Intervention and Prevention

When gene testing reveals mutations that increase an individual's risk for disease or cancer, intervention may compensate. For instance, nearly 50% of women are expected to have an MTHFR gene mutation that can result in poor estrogen metabolism and increased risk for cancer. But when these women

consume the nutraceuticals that support estrogen metabolism, then the risk may be offset.

Inherited Genetic Factors: Age, Ethnicity and Fat Distribution

While we have less control over inherited genetic factors, we can better understand them and how they contribute to our own risk for developing breast cancer.

Age and the Risk for Breast Cancer

From birth to age 40, the risk of developing breast cancer among white women is 1 in 100. But “cumulative” risk is defined as the **lifetime risk** of women who live to age 85, and this is **1 in 8 for white women**. Statistically, breast cancer is more prevalent in women over age 50 than women under age 50, and risk increases with age.

For women with no genetic risk factors, their absolute risk may be closer to 1 in 100, or 1%. For women with risk factors, absolute risk increases, or multiplies. For instance, statistics indicate that women whose mothers were diagnosed with breast cancer may be at nearly two times the risk of women whose mothers were not diagnosed.

The older the mother when diagnosed, the lower the risk for the daughter. If only a woman’s aunt or grandmother was diagnosed, then risk may increase one and a half times. If a woman’s mother and a sister have been diagnosed, then her risk can increase up to five times.

While risk factors multiply our absolute risk, they are not additive. That is, we cannot simply add the multiplying effect of each risk factor to obtain a total. It’s more complicated than that. **Each additional risk factor does increase our absolute risk, but in a compounded way rather than an additive way.**

Ethnicity and the Risk for Breast Cancer

Risk is slightly less for African-American, Hispanic, Asian/Pacific, and American Indian women. Men can get breast cancer too, but account for only about 1% of all cases. While Caucasian women are slightly more at risk for breast cancer, African-American and minority women are more likely to die of the disease, partly because of socioeconomic conditions.

Fat Distribution and the Risk for Breast Cancer

Some women over 5'6" and 154lbs are up to 3.6 times the risk of women under 5'3" and 132lbs. Body shape and fat distribution impact this.

Apple vs Pear Shapes and the Waist to Hip Ratio

You've probably heard about the apple versus pear shaped figure, and that **cancer risk is higher when we are apple shaped**. Our shape can also be measured by our waist-to- hip ratio. This ratio is determined by dividing the waist measurement by the hip measurement. If this ratio is greater than .81, risk may increase up to seven times.

Body Mass Index (BMI)

Another way of learning if you are at risk by body shape and size is with the Body Mass Index, or BMI. To determine if your BMI correlates to a higher risk of adverse effects on health, determine your body height in feet and inches and your weight in pounds. Or, divide your body weight in kilograms by your height in meters, squared:

$$\text{BMI} = \frac{\text{Body weight (kg)}}{\text{Body height (m}^2\text{)}} = \frac{\text{pounds} / 2.2}{(\text{inches} * 0.0254)^2}$$

For example, consider a 175 lb women who is 5 ft 7 in tall:

$$\begin{array}{ccccccc} \text{BMI} & = & \frac{\text{Body weight (kg)}}{\text{Body height (m}^2\text{)}} & = & \frac{175 / 2.2}{(67 * 0.0254)^2} & = & \frac{79.55}{(1.70)^2} = \frac{79.55}{2.89} \\ & = & 28 & & & & \end{array}$$

Maintaining a BMI under 25 through adulthood supports breast health.

Obesity and the Risk for Breast Cancer

Some studies indicate that **postmenopausal women 50lbs or more overweight can be 1.5 times more likely to develop breast cancer**, especially if the majority of excess weight was added in adulthood. The fat cells in postmenopausal women are very efficient at converting certain hormones from our adrenal glands into estrogens, which may increase the risk of breast cancer. Consider the subchapter, “Why You Need to Know the Link Between Estrogen and Cancer.”



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Smoking and Alcohol Consumption



Photo by [Ahmet Kağan Hançer](#) on [Unsplash](#)

It's no surprise that smoking and drinking impact our breast and overall health. But you may be surprised to learn why.

Cancer Causing Compounds

Commercial cigarettes, grown with chemical fertilizers, can contain not only organochlorines, but also two radioactive elements, lead and polonium, which can **contribute significantly to breast and lung cancers**. Combustion of chlorine-bleached cigarette paper is also cancer-causing.

Smoking and Breast Cancer

Studies suggest that **breast cancer risk increases with the number of years and the number of cigarettes smoked**, with risk increases varying from .04 times to 4 times. Active smokers typically heal more slowly following surgery, experience more side effects from chemotherapy, and are more likely to die from breast cancer than non-smoking women.

Second Hand Smoke

Sufficient second hand smoke is also known to cause cancer, but is not linked to an increased risk for breast cancer.

E-Cigarettes and Vaping

According to the Surgeon General, e-cigarettes contain ultrafine particles that can be inhaled deep into the lungs, flavorants such as diacetyl, a chemical linked to serious lung disease, volatile organic compounds, and heavy metals, such as nickel, tin, and lead. Experts believe that **exposure to inhaled vapors contribute to** chemical irritation, allergic or immune reactions and potentially worse conditions with chronic exposure.

Alcohol and the Risk for Breast Cancer

Alcohol in the blood results in less melatonin production and more cancer-promoting estrogen metabolites out of the liver, especially in premenopausal and pre-first full-term pregnancy women.

Prolonged exposure to estrogen is the greatest risk factor for developing breast cancer.

Studies vary on the increase in risk associated with varying levels of drinking, from increased risk at four alcoholic drinks a week to a 2.5 times increase at two drinks daily.

Drinking and Breast Health

For breast health, consider eliminating or limiting alcohol consumption, drinking in moderation, drinking with food to reduce the impact on blood sugar, and drinking organic wines and beers. If you do choose to drink, consider consulting with a specialist to design a liver-supporting nutritional regimen specific to your needs.

Alcohol and Overall Health

In addition to its impact on blood sugar, alcohol is acidifying to the body and typically avoided in an anti-cancer diet. **It can affect the liver's ability to**

metabolize estrogens, reduce the body’s ability to eliminate undesirable compounds, and compromise the immune system.

There are at least [23 Effects of Alcohol on Your Body](#). While “[just one drink a day can drastically increase your risk of cancer](#)”, light to moderate consumption can contribute to conditions that consumers may not recognize: agitation, anxiety, arthritis, cancer, diarrhea, dementia, disturbed sleep, feelings of stress, gut dysbiosis, memory loss, organ diseases, including heart and liver, osteoporosis, pancreatitis, skin conditions, stomach problems, sleep issues, stroke, sweating, weight gain and more.

Learn More

Learn why alcohol is much more than just “empty calories” at: [DrinkAware](#).



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How Reducing Stress Affected One Woman's Breasts



Photo by [Elisa Ventur](#) on [Unsplash](#)

Stress is a part of everyday life, and seemingly unavoidable. It goes without saying that **stress compromises our health so finding healthy ways to deal with it is important**. Let's celebrate the success of one woman who made a life change that significantly reduced her stress and her breast cancer risk.

How Stress Works

Stress is the mind's psychological response to mental, physical, and emotional pressures. The sources of stress are many, spanning from daily lifestyles to traumatic life events. **Chronic stress can draw on and drain the immune system**, leaving us vulnerable. It can affect our hormones, sleep, organ function, immunity, and more. These factors can increase our risk of breast cancer.

Managing Stress at the Source

While we all manage stress differently, *how* we handle chronic stress impacts our long-term health – for better or worse. Finding healthy ways to *reduce* it is key. Some of my clients depend on alcohol to manage stress, but this is not a healthy

way to manage stress. I recommend addressing the *sources* of stress as well as managing the *feeling* of stress.

For example, we can reduce sources of chronic stress by not taking on more than we can handle – **by being honest with ourselves about our capacities, establishing healthy boundaries**, and then respecting those boundaries. Some of my clients report employing time management techniques that balance the demands and pleasures of their lives.

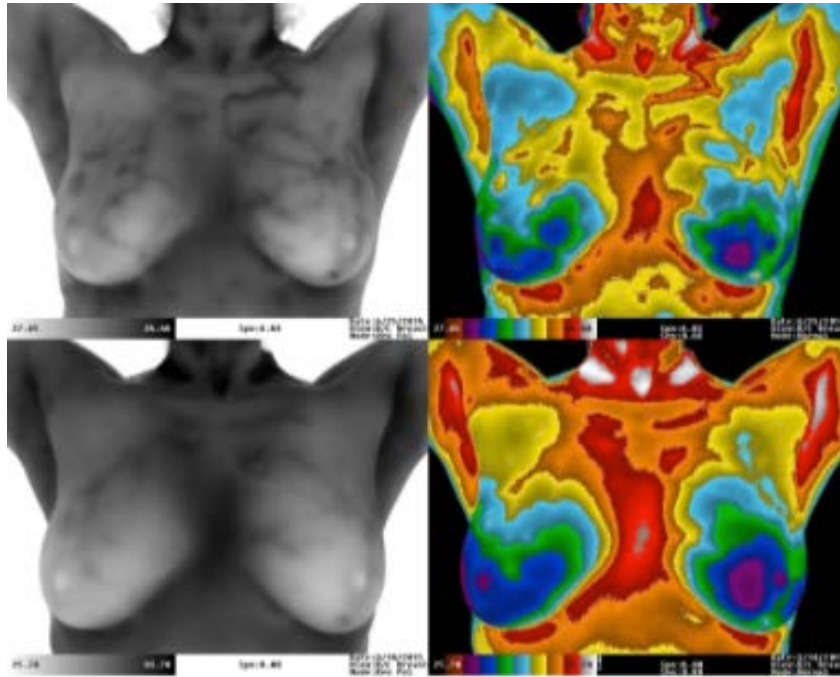
Some of my clients healthily manage the feeling of stress with exercise, meditation, counseling, breathing exercises, relaxing in their “peaceful place,” the Serenity Prayer and more. While managing the feeling of stress may seem relatively easy, reducing its sources can present challenges. Some lifestyle choices require sacrifice and drastic lifestyle changes.

Ever feel like your [fill in the blank] is killing you?

Celebrate Success

Maybe you feel your *job* is killing you? One of the clients at The Thermogram Center, Inc. was experiencing chronic stress at her job. While she knew she had to make a change, it wasn’t easy. She ultimately left it when it became practical and started her own health-related service – she became her own boss, following her passion and serving according to her own ideals.

She felt much less stress. While this was just one of the things she addressed, her thermal imaging reveals much less breast inflammation and cancer risk too! Let’s celebrate her success:



Top Row: 6/24/14

The vascularization throughout the top images is consistent with systemic lymphatic inflammation.

**Bottom Row:
3/18/15**

There is a significant reduction in inflammation, increased symmetry between breasts, and a reduction of

heat/thermal features therein. **Reduced: Stress... Inflammation... Cancer Risk... Success!**

What Will You Do to Reduce Your Sources of Stress?

Learn More with [When the Body Says No: Understanding the Stress-Disease Connection.](#)



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by Tirza Derflinger

President, Author, Health Educator, CTT, MBA

Better Breast Health – *For Life!*™

text/call 303-664-1139 • info@thermogramcenter.com

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How Emotional Trauma Triggers Cancer



Photo by [Priscilla Du Preez](#) on [Unsplash](#)

Warning from the CDC: Experiencing stress, isolation, loss, or systemic social inequities is harmful to the health of Americans. Improving emotional well-being, social connectedness, and resiliency... is critical to population health.

Emotional Trauma and Breast Cancer

For twenty years, Dr. John R.M. Day was a breast surgeon in Colorado and is co-author of the book [Better Breast Health - for Life!™](#). One common thread among all the women he encountered with breast cancer was that **each had experienced some emotional heart-felt trauma, usually in a 2 to 5 year period prior to the cancer diagnosis.**

Emotions and Energetic Chakras

Dr. Christiane Northrup, author of [Women's Bodies, Women's Wisdom and The Wisdom of Menopause](#), indicates that **there is a connection between our emotional and physical beings by way of chakras.**

Chakras are the seven energy centers in the body that, according to her, “connect our nerves, hormones, and emotions... and run parallel to the body’s neuroendocrine-immune system...”

The 4th Chakra Connects to the Breasts

Each chakra, or energy center, has been linked to specific organs of the body by Eastern cultures. The fourth chakra, located between the breasts, is the chakra linked to the breasts.

The Emotions Linked to Breast Cancer

The energy center that can store the emotions of a “broken heart”, the fourth chakra, according to Dr. Northrup, can contribute to ill health when we have issues with fully expressing and resolving **anger, hostility, joy, love, grief, and forgiveness**.

In Dr. Northrup’s book, Carolyn Myss, a renown medical intuitive notes that the major emotions behind breast cancer are “**hurt, sorrow, and unfinished emotional business generally related to nurturance.**”

Managing Emotions

It seems logical then, that developing positive, supportive emotional and spiritual relationships and maintaining appropriate, effective methods of self-expression can be helpful. Surrounding oneself with love from others, self- love, and laughter may also add to well being.

Components of Health

Optimal health means that we optimize:

- *what comes in... through diet, **emotions**, energy, etc*
- *what goes out... through elimination, sweating (exercise), **talking**, etc*
- ***what gets left behind... needs to be detoxed***

Advice: choose your company carefully and name it, claim it, let it go (therapists, support groups, loving friends may help) when it comes to processing life experiences.

Processing Life Experiences

From [The Kelly Program](#), the body is a subconscious vault of all mental, emotional and spiritual experiences. Lifetime experiences, emotions and stressors can come together to cause cancer to harbor in the “weakened” areas of the body. So, **discovering and releasing emotional influences can loosen cancer’s anchor and power in the body.**

Learn More

Learn more with [The Body Keeps the Score: Brain, Mind, and Body in the Healing of Trauma](#) and [What Happened to You?: Conversations on Trauma, Resilience, and Healing](#)



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For a Good Night's Sleep



Photo by [Kinga Cichewicz](#) on [Unsplash](#)

While adequate sleep is crucial for our health and well-being, one in three Americans are lacking. **Let's explore some of the issues and solutions for a good night's sleep.**

Sleep is Essential

Nearly every system in the body is dependent upon deep sleep for recovery and growth. Without adequate sleep, we simply cannot function.

Adults aged 18-60 require 7-9 hours of adequate sleep per night.

Even though adults aged 18-60 require 7-9 hours of adequate sleep per night, more than a third of American adults are not getting enough sleep according to the Centers for Disease Control.

Lack of Sleep Causes Many Health Issues

Sleep debt, deprivation or deficiency is defined as “the condition that occurs if you don’t get enough sleep.” It’s associated with problems including **fatigue, headaches, reduced productivity, mood and relationship issues, weight gain and higher risk for many chronic diseases: obesity, diabetes, high**

blood pressure, heart disease, stroke, depression, cancer and overall mortality.

“If you’re someone who regularly gets less than the recommended amount of sleep, you’re at a higher risk for many different health problems.” - Dr. Axe

Do You Have Sleep-Related Weight Issues?

Inadequate sleep can increase the hormone ghrelin, which is associated with **hunger and cravings**. Often, people who feel tired, crave calorie-rich foods for energy. Both these factors compound the other **and contribute to obesity**.

People who lack sleep report feeling more “cranky,” overwhelmed, angry, frustrated and worried. – Dr. Axe

What Constitutes Adequate Sleep?

Components of sleep include: sleep duration, sleep quality, and circadian rhythm.

Sleep Duration

People who sleep less than six hours per night have a higher risk of cancer and death from any cause. Insufficient sleep contributes to: greater “wear and tear” on cells, DNA damage and cancer; and immune system issues that lead to chronic inflammation and subsequent cancer risk.

Sleep Quality

While sleeping, we typically cycle through multiple sleep stages multiple times.

Sleep Stages	% of Night's Sleep	Main Characteristics of Stage	Typical Duration
Stage 1, N1		Dozing off	1-5 minutes

Stage 2, N2	~ 50%	Brain activity slows; light sleep	10-60 minutes
Stage 3, N3	~ 25%	Deep sleep/Delta waves – for recovery and growth	20-40 minutes
Stage 4, REM	~25%	Increased brain activity; sleep with rapid eye movement (REM sleep)	10-60 minutes

Source: [Sleep Foundation](#)

While we typically spend about 50% of our sleep in stage 2, it is in stage 3 where the brain experiences delta waves, delta sleep or slow-wave sleep (SWS). We spend about 25% of our sleeping in stage 3, mostly in the first half of the night.

Experts believe that this stage is critical to restorative sleep, allowing for bodily recovery and growth.

Healthy adults go through ~3-5 REM cycles per night, totaling around 90 minutes a night. It is known as the “mentally restorative” stage of sleep when the brain is very active, converting short-term memories into long-term ones. **When people are deprived of REM sleep they have trouble recollecting things.**

Failure to obtain enough of both deep sleep and REM sleep may explain some of the profound consequences on thinking, emotions, and physical health.

Circadian Rhythm

Our circadian rhythm is the body's internal clock covering each 24-hour day. Our brain sends signals throughout the body to optimize activity based on the time of day and changes in light and dark.

Darkness is an important contributor to circadian rhythm; it induces the pineal gland to produce melatonin. **Melatonin is a key sleep hormone that tells the brain when it's time to relax and head to bed.** In addition, melatonin **reduces cell proliferation and inhibits cancer growth.**

Deficient levels of melatonin can contribute to (breast) cancer. Among other things, alcohol consumption, the use of beta-blockers to treat high blood

pressure, and exposure to electromagnetic fields (EMF) negatively impact melatonin levels.

Melatonin peaks in the bloodstream between 2:00 am to 5:00 am. **Those who work the night shift or irregular shifts experience irregular melatonin levels and are at higher risk of cancer.** The Agency for Research on Cancer (IARC) has deemed shift work as “probably carcinogenic.”

Why Are We Sleeping Less?

In today’s society, generally speaking, **stress levels** are on the rise, we are spending more time with our **electronic devices** than with natural sunlight outdoors, we live increasingly **sedentary lives** and consume more **sugary processed foods and stimulants**. These factors, among others, are impacting our sleep.

In addition, people with **intense anxiety, acid reflux/GERD, insomnia, sleep apnea, restless leg syndrome, night time pain, respiratory problems, frequent need to urinate** may not properly cycle into deeper sleep stages or get enough total sleep to accumulate adequate time in each sleep stage. While these individuals may require medical evaluation and treatment, many of us can self-improve our sleep.

Solutions for a Good Night’s Rest

From Wayne Giles, M.D., director of CDC’s Division of Population Health, **“Lifestyle changes** such as going to bed at the same time each night; rising at the same time each morning; and turning off or removing televisions, computers, mobile devices from the bedroom, **can help people get the healthy sleep they need.”**

From Dr. Axe: Natural ways to prevent or treat sleep deprivation include managing your schedule and stress load, adjusting your diet and stimulant intake, exercising, spending more time outside, and creating a “nighttime routine” to help you wind down.

Since “you get what you measure,” consider **body metrics devices** like the [Oura Ring](#) to measure your sleep stages and cycles, steps walked, exercise goals, and more.

Tips for a Good Night’s Sleep

Exercise

- Regular daytime exercise, especially outdoors in natural sunlight, is one of the best ways to ensure a good night’s sleep.
- Just 30 minutes a day, or 3.5 hours a week, can make it easier to fall asleep.
- Don’t exercise close to sleeptime; it can be stimulating.

Manage light to manage melatonin

- Get sunlight or bright light exposure during the day.
- Keep it dark at night; turn off the light, television and electronics (blue light sources).

Create a physical space conducive for sleep

- Remove electronics, communication and work related devices.
- Make it comfortable: cozy bed items; quiet, dark and cool space.

Develop a sleep routine conducive to your circadian rhythm

- Try to go to sleep and wake up at consistent times.
- Avoid/minimize daytime naps.
- Set a time and method to wind down, i.e. Sleepytime tea, reading, writing, meditating, praying, bathing, deep breathing, listening to calm music/tones.

Eat and drink smart in the hours before sleeptime

- Avoid big meals within two to three hours of sleeptime.
- Avoid acidifying foods and drinks and spices as they can cause heartburn/reflux.
- Avoid alcohol, caffeine, chocolate, sugars and other stimulants that increase blood sugar levels.
- Consider a small protein snack (perhaps with fiber and fats/oils but not sugar) to stabilize and maintain level blood sugar levels into the night.
- Reduce fluid intake before sleeptime and try to urinate right before sleeptime.

Consider supplements 30-60 minutes before sleeptime, i.e.

- Melatonin
- Magnesium (ie threonate or glycinate)
- L-theanine

- Valerian root
- Chamomille
- Passionflower
- Hops
- Lemon Balm

Learn More

[Get Some Sleep! Sleep Deprivation Causes + 6 Natural Treatments](#)
[17 Tips to Sleep Better](#)



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The Prescription Paradox



Photo by [freestocks](#) on [Unsplash](#)

You likely know that **many drugs and prescription medications** come with side-effects. But do you know that using them **increase our cancer risk** when used for extended periods of time? For instance, beta-blockers that treat high blood pressure also suppress melatonin production, which contributes to (breast) cancer when in a state of deficiency.

The Drug and Prescription Paradox

Virtually all **drugs and prescription medications** work paradoxically, aiding in some ways while **depleting nutrients in the body** and potentially **compromising our immunity and increasing our cancer risk**. The list includes opiates, antidepressants, steroids, cortisones, diuretics, antihistamines, and statins, just to name a few.

About Antibiotics and NSAIDs

Chemicals, medications and drugs may not only add to the body's burdens during detoxification, but also impact our precious gut microbiome. For instance, **antibiotics can devastate the gut's precious biome that serves as our innate immune system**.

The digestive tract replaces itself every 3-5 days. Prolonged use of NSAIDS (Non-Steroidal, Anti-Inflammatory Drugs, ie. aspirin and ibuprofen) can prevent its repair, causing the gut lining to become weak, inflamed and “leaky.”

Drug-Induced Nutrient Depletion

For more information, consult the [Drug-Induced Nutrient Depletion Handbook](#).
From [Pro Health](#):

<u>Prescription Category</u>	<u>Nutrient Depletions</u>
Estrogens (Hormone Magnesium, B6 Replacement Therapy)	Calcium, Coenzyme Q10, Folic Acid,
Oral Contraceptives	Folic Acid, Magnesium, Selenium, B1, B2, B3, B6, B12, Vitamin C and Zinc
Amoxicillin, Amoxil, Trimox, B12, Penicillin	Healthy Intestinal Bacteria, B1, B2, B3, B6, Vitamin K, Folic Acid, Biotin, Inositol
Beta Blockers	Coenzyme Q10, Chromium, Melatonin

Counter Measures for Drug and Medication Use

If you are using drugs or prescription medications, consult with your healthcare provider about their contributions to increased risk and the possibility of adding nutritionally-supportive therapies. Also, consider consulting with a naturopathic doctor on natural alternatives and supportive therapies. These doctors may also seek to remedy the underlying cause of the symptoms and resolve the need for medications altogether.

Learn More

[Drug Muggers: Which Medications Are Robbing Your Body of Essential Nutrients--and Natural Ways to Restore Them](#)

[Supplement Your Prescription: What Your Doctor Doesn't Know about Nutrition](#)



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Stimulate Lymph Circulation with Exercise



Photo by [Kaylee Garrett](#) on [Unsplash](#)

The by-product of exercise, sweating, enables toxins and waste products to leave the body through the sweat glands. In addition, **exercise helps to move and clear the lymphatic system**. Unlike the circulation system which has its own pump called the heart, the lymphatic system has no pump. **The body must move to stimulate the circulation of lymph fluid.**

Stimulating Lymph Circulation

Muscular contraction/release, even that of the heart and breathing, pumps lymph fluid. Deep breathing, lymph massage, manual lymph pumping techniques, certain herbs and formulas, and dry brushing followed by a hot shower in which the last two minutes is in cold water are other common ways of stimulating lymphatic system circulation.

The Best Exercise

One of the best exercises to stimulate lymph fluid circulation **involves an up and down motion**, like that obtained while riding a horse, jumping on a mini-trampoline, or bouncing while sitting on a fitness ball.

The Health Benefits of Exercise

As you probably know, **exercise supports good health in many ways**. Aerobic, range-of-motion, and/or strengthening exercise can: improve digestion and elimination; increase endurance and energy levels; deliver oxygen to the blood and tissues; promote lean body mass while burning fat; improve cholesterol levels; reduce blood pressure, stress and anxiety; increase perspiration; promote restful sleep; and elevate mood and the sense of well-being!

Regular and moderate exercise can be very healthful for women, decreasing estrogen production and enhancing estrogen metabolism.

How Much Exercise is Enough?

The American Cancer Society reports that as little as 1¼ to 2½ hours per week of brisk walking may reduce breast cancer risk by 18%. Walking 10 hours a week may reduce the risk a little more. Some studies indicate that by exercising at least 4 hours a week, young women may reduce their risk 37-60%. The highest reductions are found among pre-menopausal women rather than post-menopausal women.

Consider 30 minutes of exercise a day... that's just 3.5 hours a week.

Exercise can include yoga, dance, weight lifting, walking, just to name a few. Please note: over-exercise can become a stress on the body with negative impacts like amenorrhea, the absence of menstrual bleeding.

Clearing Lymph and Body Systems

The lymphatic system filters wastes and toxins from the tissues and extracellular fluids. Resulting filtrates are carried through the bloodstream to the spleen and the liver, which processes them into fat soluble and water soluble components. These are components that dissolve in fat, and components that dissolve in water, respectively.

The water soluble components re-enter the bloodstream and are filtered by the kidneys for elimination from the body through the urine. The fat soluble components are passed from the liver to the colon through bile secretion.

Learn more with our 3 Part Series with subchapters: “The Lymphatic System,” “How to Reduce Inflammation” and “How to Improve Lymph Flow.”

Essentials for Evacuating Waste

When the colon has sufficient fiber, adequate levels of friendly bacteria and is not congested or dehydrated, then elimination of wastes and toxins is facilitated. But if insufficient fiber, inadequate or imbalanced bacteria levels, or dehydration exists in the colon, the components can be reabsorbed into the blood stream.

It is possible that the entire process can back up and lead to inflammation, toxicity, and auto-immune disorders. **Do you have as many bowel movements in a day as you have meals in a day?** If not, there may be an opportunity for clearing and improving bowel health.

Compromised Immune System

In addition to stress, factors like prolonged alcohol, drug and marijuana use, chemotherapy, toxic metals, negative emotions, an underactive thyroid, and inadequate nutrition can also effect the liver’s ability to metabolize estrogens, reduce the body’s ability to eliminate undesirable components, and compromise the immune system.

Signs of a compromised immune system include chronic or frequent infections or colds, asthma, rheumatoid arthritis, allergies, chronic fatigue and fibromyalgia. These signs can **also suggest chronic levels of inflammation.**

Chronic Inflammation

Chronic inflammation arises when the immune system is constantly “on”. That is, inflammation is a normal response to health issues like infections, but when the immune system doesn’t turn off, it can remain hyper-active and contribute to chronic levels of inflammation and increased risk for breast cancer.

Learn More

[The Lymphatic System](#)

[Exercise: 7 Benefits of Regular Physical Activity](#)

[11 Benefits of Exercise](#)

[Live Strong](#)

[Why Our Neglected Lymph System Is A Key To Optimal Health](#)



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The Lymphatic System

Part 1 of 3 in the Series on Lymphatic Inflammation

Part 1. What is the Lymphatic System?

The **lymphatic system** is an amazing network of organs, fluids, nodules and nodes, glands, vessels and ducts that help rid the body of toxins, waste and other unwanted materials. Think of it as the **highway system for the trash trucks** where trash trucks exit into the toilet.

The lymphatic system collects waste from the tissue, with much of it passing through an underarm while in route to the heart, spleen, liver and kidneys for filtering and processing out of the body by pooping and peeing.

When the trash trucks don't exit, they create congestion on the highway system.

This is often referred to as systemic lymphatic inflammation - a pre-cursor to potential disease.

Sometimes, the trucks dump their loads along the highway system, creating piles of localized trash or congestion, contributing to masses, cysts and fibroids, particularly in the female reproductive organs. (When things spill over from there, they may contribute to endometriosis.)

You can monitor potential sources and levels of inflammation with Risk Assessing Thermal Imaging at [The Thermogram Center, Inc.](http://TheThermogramCenter.com)

Consider these examples of varying levels/intensities of lymphatic inflammation:

One Layer of
Lymph System



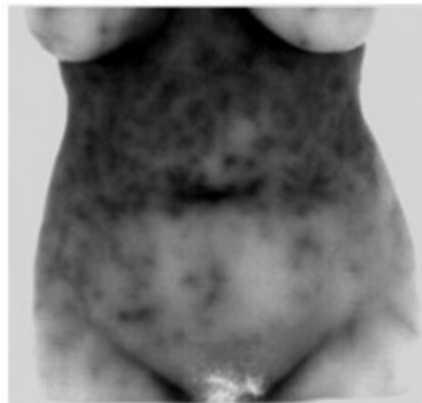
Source: [Annals of
Surgical Oncology](http://AnnalsOfSurgicalOncology.com)

Risk Assessing Thermal Images and Lymphatic Inflammation

few trash trucks:



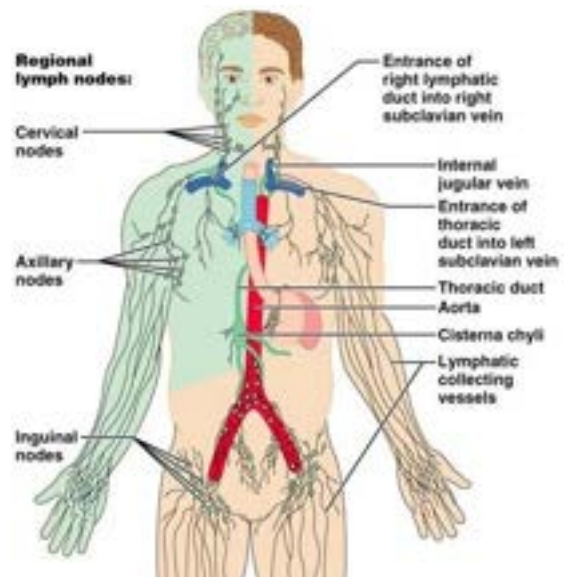
many trash trucks:



The majority of breast cancers occur in the left breast.

As indicated by the diagram at right, most of the body's lymphatics drain through the left upper chest and underarm. Perhaps this is why the majority of breast cancers occur in the left breast.

However, while this diagram infers that the head drains 50/50, Risk Assessing Thermal Imaging has revealed that **many peoples' heads drain more to the right** chest and underarm.



The below diagram indicates lymphatic fluid flows from the head, approaches the collar bone area, and then may flow to the left or the right chest and underarm.



A free-flowing lymphatic system is essential to a healthy body.

We have approximately twice as much lymph fluid as blood, about 187,000 miles of lymphatic vessels, and about 600 lymph nodes. **The network acts as the body's sewer system**, ridding the body of toxins, waste, and other unwanted materials. Another function of the lymphatic system is to transport the lymph fluid's white blood cells to fight infections in the body.

Chronic inflammation, the precursor to autoimmune conditions, illness and disease, means that the body is carrying trash rather than eliminating it: the highway system is backed up with trash trucks and sewage.

Learn More

Consider Parts 2 and 3 on The Lymphatic System to address sources of inflammation and how to move it out of the body.



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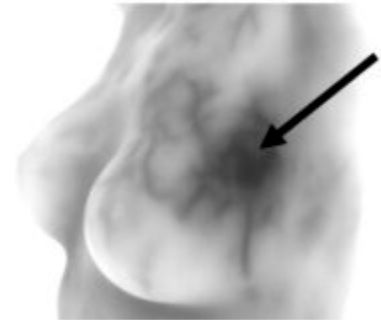
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The Lymphatic System

Part 2 of 3 in the Series on Lymphatic Inflammation

Part 2. How To Reduce Inflammation

The accumulation of toxins and waste products may not only create lymphatic inflammation throughout the body, but also contribute to localized congestion or blockages in the system. Less than optimal free-flowing lymphatics can burden our immune system, weaken us, and make us more vulnerable to disease and cancer.



Example of Localized Congestion at [The Thermogram Center](#)

To reduce the toxic load being carried in the body:

Address the sources of toxins being introduced into the body from *external* sources:

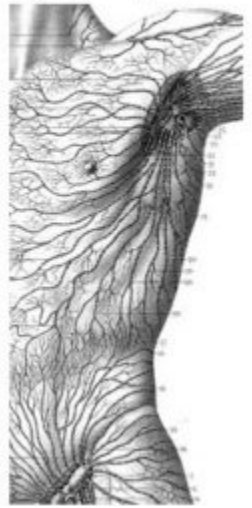
- **Is what I am about to put in my mouth for nourishment or some other purpose?** Generally speaking, the number one way to reduce the toxic load and inflammation in the body is to eat almost exclusively for healthy nourishment, avoiding food sensitivities and eating/drinking much for comfort and pleasure.
- **How much chronic stress do I experience?** Stress puts a burden on the immune system and can cause significant inflammation.
- **Am I being exposed to environmental toxins at home or at work?**
Think about chemicals, EMF radiation, endocrine disruptors, etc.

Address the sources of toxins and waste being created *inside the body*:

Is our stomach, gall bladder, pancreas, and liver adequately metabolizing/breaking down food or leaving us with undigested food particles and waste?

- **Functional and genetics testing** and consultation with qualified health professionals, i.e. Functional Medical Doctors, Naturopaths and Nutritionists, **may reveal less-than optimal functioning of bodily processes that need support.**
- **Genetic variations that impact bodily functioning is commonplace.** Consider the MTHFR gene mutation, which occurs in 10% to 50% of the population depending on ethnicity and other factors. This mutation affects the liver's ability to break down chemicals and hormones. Without treatment, there may be an increased toxic load and risk for disease and cancer in the body.

One Layer of
Lymph System



Source: [Annals of Surgical Oncology](#)

- **Certain lifestyle patterns can effectively damage our DNA** and preclude optimal bodily functioning. Without lifestyle modification and restoration of healthy DNA, there may be an increased toxic load and risk for disease and cancer in the body.
- **Am I eliminating optimally?** Our bodies are designed to eliminate shortly after each meal, experiencing as many bowel movements in a day as we have meals (not the meal we just ate, but meals from the day before) so that we have less than a 24 hour transit time from mouth to toilet.
- **Am I optimally hydrated?** Ideally, we need to drink half our body weight in ounces each day. (Cracked or chapped lips may be a sign of less-than-optimal hydration.)
- **Is my gut microbiome balanced?** When the colon has sufficient fiber, adequate levels of friendly bacteria, and is not congested or dehydrated, then elimination of wastes and toxins is facilitated. But if insufficient fiber, inadequate bacteria levels, or dehydration exists in the colon, the components can be reabsorbed into the blood stream.

While some people think the answer to addressing lymphatic inflammation and congestion is to do massage, rebounding, exercise, etc, these techniques

address the symptoms, not the sources, of inflammation. We do have to move our bodies to move lymph fluid and the bowels, but:

***When we stimulate lymph flow we are “stirring the pot.”
When we address the underlying sources of
inflammation, we are “emptying the pot.”
Learn More***

Consider Part 3 on The Lymphatic System on how to move it out of the body.



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The Lymphatic System

Part 3 of 3 in the Series on Lymphatic Inflammation

Part 3. How to Improve Lymph Flow

Move your body to move your lymph!

Unlike the circulatory system, which has the heart to pump blood, the lymphatic system has no pump. The flowing of our blood and the raising/lowering of our diaphragm as we breathe helps stimulate lymph flow, but muscular contraction and body movement are the primary methods of moving lymphatic fluid.

A sedentary lifestyle decreases lymph flow by a staggering 94%.



Sitting is the New Smoking .Source lipotheapeia

The accumulation of toxins and waste products may not only create lymphatic inflammation throughout the body, but also burden our immune system, weaken us, and make us more vulnerable to disease and cancer. **Move your body to move your lymph and your bowels!**

Consider Part 1. The Lymphatic System and Part 2. How to Reduce Inflammation and:

Factors that increase lymphatic stagnation:

- Lack of body movement, prolonged sitting, chronic stillness

- Constipation, inadequate elimination
- Dehydration, which increases constipation too
- [Consuming processed foods, junk food, fast foods, sugary drinks, unhealthy fats, refined flour and sugar can cause inflammation and create lymphatic system congestion.](#)
- Among others

Ways to stimulate lymphatic flow:



Deep breathing and muscular contraction stimulate lymph flow. Source [healthline](#)

- [Move the body](#) and move the bowels
- Adequately hydrate (considering subchapter, “Why the Quality and Quantity of Your Water is Vital to Your Health”)
- Breathe more deeply, less shallowly
- Exercise (brisk walking, gentle rebounding, yoga)
- Lymphatic massage, self-tapping, dry skin brushing, etc (considering subchapter, “Two Ways Our Bras Affect Breast Health - Details”)
- Herbs and herbal teas that promote lymph flow
- Hot/cold therapy, infrared sauna and acupuncture
- Among others

Learn More

[16 Ways to Activate Your Lymphatic System](#)

[Ten Ways to Improve Lymphatic System Function](#)



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President, Author, Health Educator, CTT, MBA

Better Breast Health – *For Life!*™

text/call 303-664-1139 • info@thermogramcenter.com

[The Thermogram Center, Inc.](#)

Advanced Thermography & Preventive Education Since 2002

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Two Ways Our Bras Affect Breast Health - Overview



Photo by [Womanizer Toys](#) on [Unsplash](#)

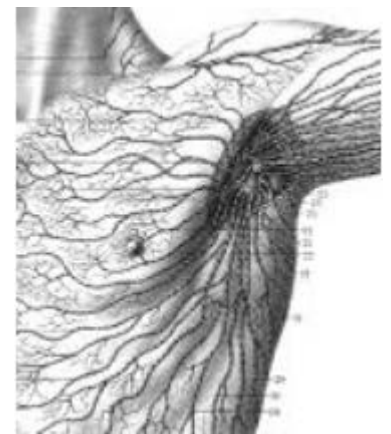
Although it may come as a surprise to many women, **underwire bras may increase the risk of developing breast cancer**. While bras can hinder optimal breast health **by restricting lymph flow and attracting electrical pollution**, we can easily manage the risk with a few simple tips. While you may already understand the risk and tips, many of your family members, friends, and colleagues may not. Please share this information with women you care about.

The Lymphatic System Detoxifies the Breasts

The lymphatic system helps to detoxify the body by removing toxins and waste products. **With over 100,000 miles of lymph vessels, it is an intricate and delicate system.**

While we rely on the lymph system to collect and remove toxins and waste products from breast tissue, we can hinder its effectiveness.

Too much pressure applied against breast tissue can restrict lymph flow, leading to the accumulation of fluid



Left Chest Lymphatics. Source: [Annals of Surgical Oncology](#).

and harmful products, potentially **contributing to pain, tender lumps, cysts or cancer.**

Underwires Can Cause Lymphatic Restriction

While women typically think nothing about the potential effects that their bra has on their breast health, consider this Thermogram Center, Inc. client who wore underwire bras for 50 years. Her thermal images indicate bilateral lymphatic inflammation.



Lymphatic Inflammation from Underwire Bras. Source: The Thermogram Center, Inc.

With diagrams and details, “Two Ways Our Bras Affect Breast Health – Details” explains the inner workings of the lymphatic system in an easy-to-understand manner, with information on how we either hinder or help it flow, and this client’s story and reaction to her imaging.

Electrical Pollution is Harmful to Breast Tissue

There are growing concerns over the accumulative effects of electrical pollution, some of which have been classified as cancer-causing toxins. **The underwires in our bras may act as antennae for “dirty electricity”.**

Of course all metals on or in our body act like an antenna for electrical pollution, including dental amalgam fillings, gold crowns, metal joint replacements, metal glass frames and jewelry, including metal watches, and more.

While all of us receive electrical pollution, some of us will become electrically sensitive, some of us will manifest physical symptoms and illnesses, and some of us will develop cancer as a result.

For women with breast cancer or in treatment for it, malignant breast tissue can absorb up to 577% more EMF radiation than normal breast tissue, potentially accelerating cancer growth.

“Two Ways Our Bras Affect Breast Health – Details” defines and explores sources of EMF and electrical pollution, how to reduce exposure, and provides a video demonstrating how underwires can act as antenna.

Bras and Breast Cancer

While there are very few studies linking bras to breast cancer, some bra wearing can put us at risk.

“Two Ways Our Bras Affect Breast Health – Details” explores findings correlating bra habits of women to fibrocystic breasts and breast cancer risk.

Manage Your Risk

Here are some simple tips to manage the risks associated with wearing bras:

- Consider going braless, resorting to undershirts or tank-tops (with built in shelf support).
- Consider purchasing [wireless bras](#)
- Consider removing the underwires from your bras, or if plastic, their vertical portions.
- Never put your cellphone in your bra. Keep cell phones away from the body.
- Consider reducing the amount of time you wear a bra.
- Consider “pumping your pecs” to stimulate lymph flow out of the breasts.
- Consider dry brushing, self-tapping or gentle lymph massage techniques.
- Consider certified lymphatic drainage/massage therapy.
- Consider detoxifying your body and lymphatic system to reduce the toxins and waste products in the breast tissue. (Learn How.)

Learn More

If you're interested in learning more, consider "Two Ways Our Bras Affect Breast Health – Details".



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Two Ways Our Bras Affect Breast Health - Details



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Although it may come as a surprise to many women, **underwire bras may increase the risk of developing breast cancer**. While bras can hinder optimal breast health **by restricting lymph flow and attracting electrical pollution**, we can easily manage the risk with a few simple tips. While you may already understand the risk and tips, many of your family members, friends, and colleagues may not. Please share this information with women you care about.

The Body's Lymphatic System

Our lymphatic system helps to detoxify the body. Consisting of between 600 - 700 lymph nodes and over 100,000 miles of lymph vessels, it **can circumvent the globe over four times**. This extensive system carries more than twice the volume of the circulation system in the form of lymph fluid rather than blood. It is critical to our survival and health in that it **removes unwanted toxins and waste products from our tissue**.

While intricate and magnificent in its design, **it is also delicate**. Unlike the circulatory system, which has a pump in the form of a heart, **the lymphatic system has**

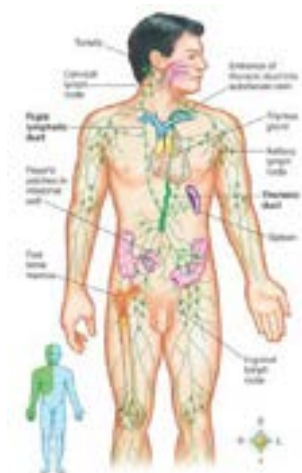


Fig. 1 The Lymphatic System
Source: [Natural Care](#)

no pump. Internal check-valves and muscular contraction, skeletal movement, and breathing all contribute to unidirectional flow from the system to the base of the neck where fluid dumps into veins that enter the heart. As such, manual lymph drainage therapists apply less than 9 ounces per square inch in rhythmic circular movements to stimulate lymph flow. **Excess pressure and incorrect movements are counterproductive to flow.**

The Lymphatic System Detoxifies the Breasts

While we rely on our lymphatics to collect and remove toxins and waste products from breast tissue, we can help or hinder its effectiveness. **Too much pressure chronically applied against breast tissue can restrict lymph flow, leading to the accumulation of fluid, toxins and waste products.** Hence, tight bras, elastic and underwires can affect our breast health - **potentially contributing to pain, tender lumps, cysts or cancer.**

Consider Figure 2. Observe the density of the lymphatics and how the vessels are flowing towards the underarm. Now imagine how the underwires in a bra can restrict the flow of fluid out of the breast, as shown in Figures 3 and 4.



Fig. 2 Left Chest Lymphatics
Source: [Annals of Surgical Oncology](#)

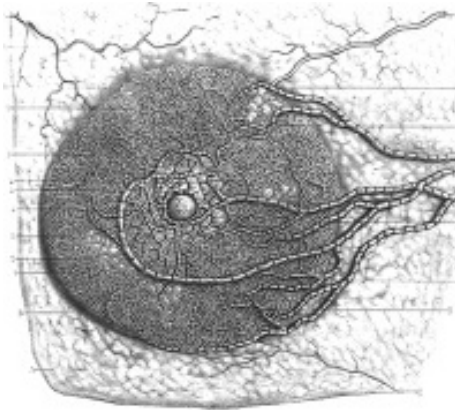


Fig. 3 Left Breast Stroma and Lymph Vessels
Source: [Annals of Surgical Oncology](#)



Fig. 4 An Underwire
Source: [Wikipedia](#)

Underwires Can Cause Lymphatic Restriction

While women typically think nothing about the potential effects that their bra has on their breast health, consider Figure 5. This Thermogram Center, Inc. client

reported wearing underwire bras for 50 years. Her thermal images indicate bilateral lymphatic inflammation.



Fig. 5 Lymphatic Inflammation from Underwire Bras. Source: [The Thermogram Center, Inc.](http://TheThermogramCenter.com)

When this client saw her thermal images, **she committed to going wireless as a way of proactively addressing a risk factor unknown to her** prior to her thermography session at The Thermogram Center, Inc..

(Please choose thermographers that provide you with high-resolution B&W images in order to observe the earliest possible warning signs of risk. Be discerning as many thermographers provide only colored images. Without detailed B&W images, this client would neither have observed nor been called to act on this risk factor.)

Electrical Pollution is Harmful to Breast Tissue

There are growing concerns over the accumulative effects of electrical pollution. **Electrical pollution, or dirty electricity, occurs as high frequency signals penetrate our indoor and outdoor environments** and distort clean 60 Hz electricity, i.e. when DC is converted to AC.

While clean 60-cycle electricity is transmitted to our homes, workplaces, schools, and the businesses we frequent, high frequency signals propagate wherever there are electronic and electrical devices, i.e. computers, fluorescent lights, dimmer switches, cell phones, wi-fi internet connections, wireless towers, automobile dashboards (when powered), audio-visual and TV-related equipment, many household appliances, and more.

The World Health Organization (WHO) classifies the radiation which cellphones and other wireless devices emit as a Class 2B cancer-causing toxin, which is the same category as DDT and lead.

So while electromagnetic fields (EMF), radio waves and microwaves are “invisible, silent, odorless, and tasteless... **Most people, even when exposed to levels and wavelengths that are literally killing them, never notice a thing.**”ⁱ

While all of us are receivers or antennas of electrical pollution, some of us will become electrically sensitive, some of us will manifest physical symptoms and illnesses, and some of us will develop cancer as a result.

Underwires Attract Electric Pollution

If our bras contain metal **underwires**, they **may be attracting electrical pollution to our sensitive breast tissue**. This may be most important to women with breast cancer or in treatment for it, as **malignant breast tissue can absorb up to 577% more EMF radiation than normal breast tissue**, potentially accelerating cancer growth.ⁱⁱ

Of course all metal on or in our body acts like an antenna for electrical pollution, including dental amalgam fillings, gold crowns and metal implants, metal joint/bone replacements, metal glass frames and jewelry, including metal watches, among others.

Click [here](#) for a YouTube video on how bra underwires act like antenna.

Bras and Breast Cancer

While there are very few studies linking bras to breast cancer, a 1995 (uncontrolled) study of 4,000 women by Singer and Grismaijer found that the chance of developing breast cancer for women who wore their bras 24 hours per day was 125 times greater than women who did not wear bras at all.ⁱⁱⁱ

- Women who wore their bras 24 hours per day had a 3 out of 4 chance of developing breast cancer.

- Women who wore bras more than 12 hour per day, but not to bed, had a 1 out of 7 chance of developing breast cancer.
- Women who wore their bras less than 12 hours per day had a 1 out of 52 chance of developing breast cancer.
- Women who wore bras rarely or never had a 1 out of 168 chance of chance of developing breast cancer.

(The study also found that about 90% of women with fibrocystic breasts experienced improvement when they stopped wearing bras.)

The study is the focus of the book, [Dressed to Kill](#). Also consider [Ladies, Ditch the Bra](#).

Manage Your Risk

Here are some simple tips to manage the risks associated with wearing bras:

- Consider going braless, resorting to undershirts or tank-tops (with built in shelf support).
- Consider purchasing [wireless bras](#)
- Consider removing the underwires from your bras, or if plastic, their vertical portions.
- Never put your cellphone in your bra (or in a pocket, holster, etc.) Keep cell phones away from the body.
- Consider reducing the amount of time you wear a bra.
- Consider the video [Pumping Your Pecs](#) to stimulate lymph flow out of the breasts.
- Consider the video [Dry Brushing and Self Tapping](#) or gentle lymph massage techniques.
- Consider certified lymphatic drainage/massage therapy, perhaps with essential oils that stimulate lymphatic flow. Keep in mind, however, that if your entire lymph system is somewhat inflamed, that massaging the breast lymphatics may simply stir the pot and result in fluid re-depositing in the breasts later.
- Consider detoxifying your body and lymphatic system to reduce the toxins and waste products in the body and breast tissue. Dump your lymphatic system into the pot (toilet).



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ⁱ http://www.mnwelldir.org/docs/misc/electrical_pollution.htm

ⁱⁱ Joines W.T., Zhang Y., Chenxing L., Jirtle R.L. The measured electrical properties of normal and malignant human tissues from 50 to 900 MHz Medical physics, Vol. 21, April 1994, p.547-550.

ⁱⁱⁱ Grismaijer D. Dressed to kill: the link between breast cancer and bras, 1995.

Breast Implant Illness



Photo by [philippe spitalier](#) on [Unsplash](#)

Please Be Aware and Share: **"there is no such thing as a safe (breast) implant."** From Susan E. Kolb MD, author of the book ["The Naked Truth About Breast Implants: From Harm to Healing."](#)

There are many significant health consequences associated with breast implants - from fatigue to anxiety and panic attacks, joint and muscle pain, recurring infections, rashes, fibromyalgia, heart palpitations, cancer and more.

If you have implants, or know anyone who does, please read on and share.
From [Breast Implant Illness](#), breast implants:

1. stimulate a chronic foreign body inflammatory response,
2. have a slow leakage of silicone/heavy metals/chemicals termed as "gel bleed,"
3. commonly develop biofilm/bacteria on their surfaces, and
4. oxidize in the body and contribute to degradative oxidative stress.

All implant shells are made of silicone and are semi-permeable. Upon implantation **they release heavy metals, silicone, and chemicals that can cause havoc on the immune system and the body.**

In addition, **saline implants** include valves that are permeable and **allow the colonization of microorganisms inside the implant**, creating biotoxins that exit the implants and infect the body.

For an overview and understanding of Breast Implant Illness, subscribe to Dr. Axe so you can view [Breast Implant Illness](#).

About Breast Implants

The FDA has issued a warning: breast implants cause BIA-ALCL, Breast Implant Associated Lymphoma, a cancer of the immune system.

Be Aware and Share:

[Breast Implants: The Ticking Time Bomb in Millions of Women's Bodies](#),
including The Shocking Ingredients Found in Dow Silicone Implants
[What You Need to Know About Breast Implants](#)
[FDA.gov/breast implants](https://www.fda.gov/breast-implants)

Are Saline Breast Implants Safer?

Are saline breast implants safer? Actually, they include valves which allow the colonization of microorganisms inside the implant, which can not only exit through the valve and infect the body, but also produce metabolites which are toxic to the body.

Learn More

Dr. Ed Melmed on: [Know The Cause - Breast Implants & Health Problems](#)

Dr. Susan Kolb on: [Breast Implants - How They Can Affect Your Health](#)

"I lost my health and nearly died from my breast implants."

- client at The Thermogram Center

Please be aware and share or chat with 50,000 women who have been through symptoms, finding a surgeon, surgery, recovery, detoxification and healing of breast implant illness at [facebook's-healingbreastimplantillness](#) and/or [Healing Breast Implant Illness](#).

The Bottom Line

One way to **augment the breasts** without introducing foreign matter is by implanting **one's own buttock and/or belly fat/tissue** into the breasts.

There is no such thing as a safe implant. Breast implant illness may start upon insertion with symptoms of varying degrees developing over time that are not understood to be caused by the implants.

"Another little-known but very serious problem associated with **breast implants** is that they [can grow mold and bacteria](#), which can wreak utter havoc on the immune system."

For women seeking to remove their implants (with the entire biofilm and capsule) safely, **finding an experienced and skilled explantation surgeon is key**, like Denver's **Linda Huang, MD** at (303) 831-8400. Learn more here: [Removal Process: Difficult, Risky, and Surgeons Often Have Not Done Many Correctly](#).



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Part 2. Prevention – Learn the Risks

Chapter 6. Dental Factors

Why You Need to Know that Dental Care Affects Your Health



Photo by [Caroline LM](#) on [Unsplash](#)

Do you know that there is a **link between our teeth and our health** beyond heart disease? Dental issues, whether known or unknown to the individual, impact the functioning of organs and systems, including the breasts and immune system.

While most individuals blame their complaints of joint pain, high inflammation markers, autoimmunity, or organ dysfunction, among others, on aging, they may be surprised to learn that **some symptoms may actually be due to an underlying dental issue.**

While such issues compromise the immune system and contribute to chronic inflammation, they become “silent killers” when resulting disease, cancers or heart attacks cause death.

Silent Killers

Because we cannot typically feel potentially life threatening conditions under the gum line and since they are invisible to typical dentists, they are referred to as “Silent Killers.” I hypothesize that **millions of Americans are dying a slow**

death from them: with less than 10% blood supply under the gum line and a more anaerobic environment, disease develops very slowly.

While many individuals undergo wisdom tooth extractions around age 20, they may not suffer fatal conditions (ie heart attacks) for decades (ie age 60) or ever.

However, **conditions may range from compromised immunity and vitality to autoimmunity, organ dysfunction, cancer, heart attack and death.** Often times, these conditions are not understood to be caused by dental care.

Not many Americans connect their health conditions (or death) to dental care provided decades earlier.

Dental Related Issues Cause Most Human Disease

Dr. George Meinig, one of America's leading endodontists, Weston Price, one of America's greatest dentists, and Hal Huggins, a Colorado pioneer in biological dentistry have professed that **our teeth cause the largest number of diseases ever traced to a single source.**

Chronic dental infections' "[highly toxic bacteria can cause osteonecrosis, weaken overall health and contribute to health problems often without any obvious pain in the jaw area.](#)"

Chapter 6 Covers these Dental Factors

Part 1:

- Teeth issues lead to organ and system disease
- Cavities lead to abscesses
- Extractions lead to cavitations
- Root canals lead to disease
- Thermal imaging reveals dental issues

Part 2:

- Amalgam fillings, implants and mercury
- Clenching, grinding and bite guards
- Oil pulling, oral rinsing, brushing, flossing, toothpastes and fluoride

- How to Use a Neti Pot



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How Teeth & Dental Care Affect Our Health

Part 1 of 2



Photo by [Jonathan Borba](#) on [Unsplash](#)

According to Chinese medicine and acupuncture, our bodies contain meridians, the invisible channels through which chi, a form of life-force energy, circulate throughout the body.

While the [Tooth-Organ Acumeridian Chart](#) generalizes relationships between teeth and organs, underlying dental issues may travel by way of connecting tissue, nerve roots and blood vessels from one area to others. This means that some **underlying dental issues may be impacting more organs than those indicated** in the generalized chart.

#1 Life Threatening Finding at The Thermogram Center

Does it surprise you that **the most commonly observed potentially life-threatening finding observed at [The Thermogram Center, Inc.](#) is not cancer, but rather issues under the gum line?**

In fact, since COVID, we are experiencing an alarming amount of clients with acute findings under the gum line. Incidence has doubled, if not tripled, with

no less than 1 in 3 clients learning of significant issues under the gum line through our risk assessing thermal imaging.

Why More Cases Since COVID/Vaccine?

When coronavirus infects the body, it latches onto the ACE2 receptors of our cells. These receptors are rich in certain areas of the body, including the gums and teeth. It is thought that the blood vessels in the gums become infected and obstructed, leading to necrosis and spontaneous tooth loss without blood, especially amongst long-haulers. (This happened to one of my close friends.)

So if COVID and the vaccine leverage our weakened areas (ie heart, lungs, kidneys, under the gum line) and increase inflammation, it's no wonder we are seeing so many acute findings under the gum line.

Many clients' underlying dental issues are more inflamed than ever and more detectable than ever by risk assessing thermal imaging. So while these clients typically feel nothing under the gum line, they are not symptom free in their bodies. Following subsequent diagnostic evaluation and treatment, many clients report that they "feel like a new person" with symptoms having left their bodies. One client reports:

"I've had chest pain over the last couple years that is completely gone along with the severe right hip pain I've have for seven years. No more brain fog, and I'm sleeping better than I have in 15 years. It's miraculous."

It's No Surprise

It's no surprise given the state of standard of care dentistry:

- When a typical dentist says, "I see a cavity/decay," that means that microbes have infected the tooth and are eating it away from inside out. **He/she scrapes off what he can see above the gum line and entombs any microbes living below with a cap, crown or filling.** If there are a sufficient number of microbes under the gum line, they may continue proliferating and further decay may lead to an abscess, which most people can't feel but can cause havoc on the body and health.

- When a typical dentist pulls a tooth, he/she doesn't pull the periodontal ligament holding the tooth so the brain thinks the tooth is still present and doesn't signal the body to send in resources to heal the void. **If one's immune system and healing abilities aren't adequate and the void doesn't heal** (fill with bone cells) **then opportunistic microbes may move into the void** contributing to necrosis/ischemic bone disease/cavitation. While people can't feel this process, it too can cause havoc on the body and health.
- Typical dentists routinely provide two dimensional x-ray, which sees one vertical plane and **cannot see through the bone and teeth to assess densities or pockets of infection**. That would require three dimensional x-ray in the form of Cone Beam Tomography, which isn't standard of care (because the American Dental Association and typical dentists aren't willing to admit that they cause such conditions). Can you imagine a dentist saying:

*You know that tooth I (filled) pulled for you five years ago?
Well, it's in a state of (abscess) cavitation which may kill you.*



Sorry.

Silent Killers

Because we cannot typically feel potentially life threatening conditions under the gum line and since they are invisible to typical dentists, they are referred to as “Silent Killers.” I hypothesize that **millions of Americans are dying a slow death** from them: with less than 10% blood supply under the gum line and a more anaerobic environment, disease develops very slowly.

While many individuals undergo wisdom tooth extractions around age 20, they may not suffer fatal conditions (ie heart attacks) for decades (ie age 60) or ever.

However, **conditions may range from compromised immunity and vitality to autoimmunity, organ dysfunction, cancer, heart attack and death**. Often times, these conditions are not understood to be caused by dental care.

Not many Americans connect their health conditions (or death) to dental care provided decades earlier.

The Thermogram Center, Inc. recommends the **Abdomen, Back and Face Series for all men and women every 3-5 years** (not annually like breasts), because issues take time to develop under the gum line. This imaging is the #1 way we support prevention. Take this case, for example:

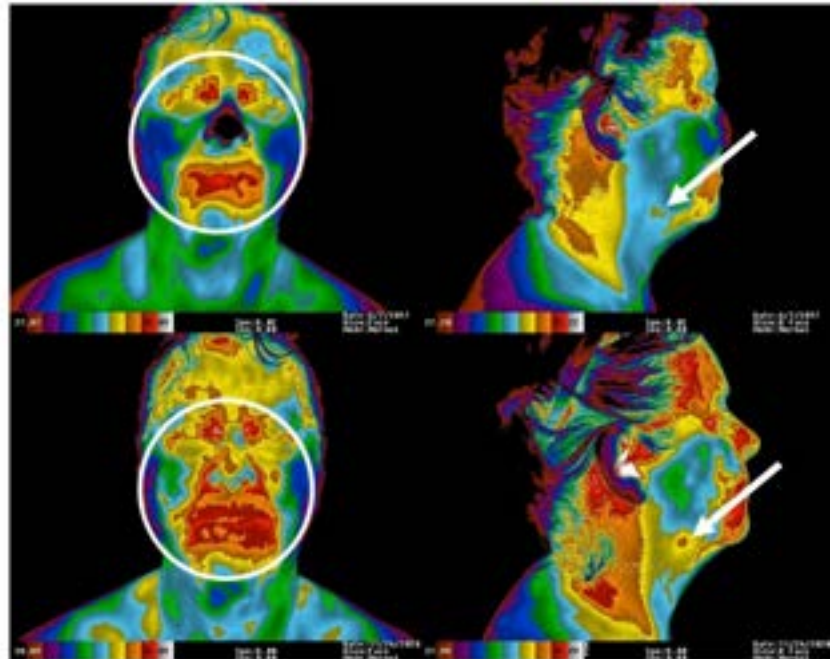
TOP ROW: 2017

Notice the normal, cold nose and cool sinus regions in the left image; and warm finding under the gum line of the lower right mid-to-back teeth in the right image.

BOTTOM ROW: 2020

Notice that the nose and sinus regions are warming in the left image, and that the finding under the gum line of the lower right mid-to-back teeth is also worsening.

3D Cone Beam Tomography at Dynamic Dental Solutions in Denver diagnosed abscess of tooth #31.



Testimonials

A common theme we hear from many clients is that they “**feel like a new person after surgery.**” And nearly all of them report a boost in energy. While each person’s pre-surgery symptoms/complaints are unique to them and range from **chronic fatigue, autoimmune conditions, unexplained hip pain, and heart/cardiac concerns**, several state their recoveries are “miraculous.”

[Click here](#) to hear how this client's un-erupted wisdom teeth were killing her.

[Click here](#) for my “Correlations between Thermal Imaging, 2D X-ray and 3D Cone Beam Tomography with Symptomatic Relief After Surgery.”

Are You at Risk?

If ever you've had:

... a cavity, then there is a chance for abscess.

... a wisdom or tooth extraction, or unerupted wisdom teeth, then there is a chance for cavitation.

... a root canal, then there is a chance for disease.

... a heart attack or (breast) cancer, then there is a chance that an underlying dental issue exists. [Click here](#) to see examples of dental issues draining into the breasts.

How to Protect Yourself

- Consider thermal imaging at [The Thermogram Center, Inc.](#), to **look for warning signs of inflammation under the gum line** and potential relationships to remote organ function. While inflammation can be caused by many conditions, subsequent 3D CBT can help distinguish between abscess, cavitation, and other conditions.
- **Consider holistic biological dentists** at [iaomt.org](#). To understand why, and to compare such dental care to that of your current dentist, consider [these services](#) and [these protocols](#).
- Some holistic biological dentists provide [proper dental extractions](#), [3D CBT to diagnose disease, and surgery to remove necrotic tissue](#). Among other things, they sterilize with ozone, apply laser, inject patient platelet fibrin in the space, recommend two to four weeks of pre-op and four to eight weeks of post-op protocols involving diet, anti-inflammatory, immunity and healing support.
- While I have personally vetted about twelve such dentists along Colorado's Front Range and have had procedures done by about five of them over the last twenty years, **here are those to whom I entrust my life:**
 - Boulder's Family Holistic Dentistry at [drcarmenburke.com](#)
 - Denver's Dynamic Dental Solutions at [sharondickersondds.com](#)

- On the Western Slope:
 - Aspen's Elevate Dental Wellness at elevatewillits.com
- Outside of Colorado, I have heard many positive remarks about:
 - Utah's Dr. Judson Wall, DDS at tmjdental.com
 - Switzerland's Swiss Bioheath at swiss-biohealth.com

Wherever you go, **be sure to obtain the latest generation of 3D CBT technology, ie 2018 or newer**, for sensitivity that is not likely to miss underlying issues.

Learn More

Consider bitchute.com and in the search bar type: Root Cause Documentary 2018

Consider Google: Risks of Root Canals, or Root Canals and Breast Cancer, or Alternatives to Root Canals

Consider HugginsAppliedHealing.com which offers many educational materials, including a Dental Glossary explaining cavitations, root canals, implants; removable bridges, composite fillings, braces, ceramic crowns, children's chrome crowns, gold crowns; LP composite crowns; dentures; mercury fillings and mercury toxicity.

Consider Part 2 of our two part series on dental factors with information on: amalgam fillings, implants and mercury; oral care including brushing, flossing, rinsing, oil pulling, and fluoride; and clenching/grinding.



Our mission at The Thermogram Center is, in part, to empower clients with preventive education. Many underlying causes of cancer are manageable. We hope to be a part of your efforts to secure a healthier tomorrow. Learn the mitigation techniques to help you and your loved ones, pets included, to reduce the risk of cancer. Be the Cure. Support Prevention.

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How Teeth & Dental Care Affect Our Health

Part 2 of 2



Photo by [Mehran Hadad](#) on [Unsplash](#)

While part 1 of our 2 part series on dental risk factors explores cavitations, abscesses, and root canals, **part 2 explores amalgam fillings, mercury, metal implants, clenching/grinding and oral care including oil pulling, rinsing, brushing, flossing, and fluoride.**

Amalgam Fillings

Heavy metals and silver amalgam dental fillings are linked to a weakened immune system. **Amalgam fillings are comprised of approximately 50% mercury**, which can slowly bleed out of the fillings, concentrating in the liver, kidneys, brain, and other glands and detrimentally impacting our health and well being.

Roughly 25% of the mercury in amalgam fillings can bleed out in the first five years, and the mercury vapor level in a mouth with amalgams can be 54 times higher than that in a mouth without amalgams. **Mercury is considered second only to radioactive plutonium on the toxic scale of heavy metals.**

One of The Thermogram Center, Inc. clients reports that while her husband had suffered significantly worsening healing loss for many

years, his hearing returned after his amalgam fillings were removed.

They had no idea that amalgam fillings could have contributed to hearing loss.

Sources of Mercury

There are many other **sources of mercury** besides amalgam fillings. Did you know that fish are often high in mercury? They're actually a controlled substance in grade schools, which are required to limit the number of servings of tuna due to its high mercury levels.

According to the U.S. Food and Drug Administration and the Environmental Protection Agency, **the risk from mercury by eating fish and shellfish is not a health concern for most people**. However they advise women who may be pregnant, pregnant women, and young children to avoid some types of fish and to eat fish and shellfish that are lower in mercury:

- Do not eat shark, swordfish, king mackerel, or tilefish, which contain high levels of mercury.
- Eat no more than 12 ounces per week of fish and shellfish that are lower in mercury: shrimp, canned light tuna (not albacore tuna), salmon, pollock, and catfish.
- Consult local authorities or the [Environmental Protection Agency](#) for advisories on contaminated or polluted fishing areas and about the safety of fish from local lakes, rivers, and coastal areas.

For more information on mercury, consider the [Environmental Working Group](#), and the [Audobon Society](#).

Chelating Mercury

While the herb cilantro helps the body to eliminate mercury, some natural health professionals prescribe cilantro oil protocols while some may prescribe **oral and intravenous chelating protocols**, ie DMSA or EDTA and binding agents. (Consider Google for more information.)

Chelating refers to a substance that binds with, say a heavy metal, to neutralize its bad effect on the body and to facilitate the body's ability to eliminate it. Since not everyone with amalgam fillings has unstable mercury in their fillings or mercury that needs to be chelated, and since ingesting too much cilantro can cause digestive symptoms, please consult with a qualified healthcare provider when considering the need for chelation and the technique that is right for you.

Metals and Dental Implants

Metal in the mouth can act like an antennae for electromagnetic and radio frequency radiation, triggering a defense response from the body and altering your own electro/galvanic currents, especially when there is more than one kind of metal, i.e. gold crown and amalgam fillings. Consider [Cell Phones and Metal Implants Don't Mix](#).

As an alternative, **consider fillings made of bio-compatible composites** (made of plastics, ceramics and resins). Some holistic biological dentists provide [safe amalgam removal](#) and [material biocompatibility testing](#) to learn what material(s) is/(are) most compatible with your body.

Also, consider non-metallic zirconia: crowns and [implants](#). Some people consider [removable dentures, partial dentures and flippers](#) to replace missing teeth.

For mercury-free, holistic, biological dentists, consider [IAOMT BioDentists](#); some [in Colorado](#); particularly [Dr. Carmen Burke](#) (\$\$) and [Dr. Sharon Dickerson](#) (\$\$\$\$). Alternatively, consider [Holistic Dentists](#), [Biological Dentists](#), and [Mercury-Free Dentists](#).

Clenching & Grinding

Chronic clenching, grinding and excessive bite pressure may not only contribute to tooth degradation, muscular-skeletal issues, pain, and headaches, but also fractures in the roots of teeth, particularly those with fillings or crowns. This **can lead to necrosis, the death of the tooth and the slow death of the individual**.

Our upper and lower jaws are inherently designed to not be in contact except when chewing.

Do you clench/grind while sleeping? As an alternative, consider making an effort to keep your tongue in the roof of the mouth and relax your jaws such that there is a natural gap between your upper and lower teeth while your lips are still sealed.

If this attempt is unsuccessful, consider using either (1) self massage at [YouTube](#) or (2) myofunctional/myofascial therapies, i.e. [SandraCoulson.com](#) or (3) chiropractors or (4) [My Sleep Guard](#) for a sleep guard that retrains you with biofeedback to not clench or [Nite Bite](#), which is not BPA free, or (5) a [dentist-installed, BPA-free guard](#). Many dentists provide anti-clenching devices, i.e. full guards, frontal guards, flat plane splints, etc. and anti-snoring techniques.

Bite Guards and Inflammation

Be aware that some Thermogram Center, Inc. clients who wear a full front-to-back mouth/bite guard at night still have inflammation in all four back quadrants of the jaws because they still have something to bite down on. And some clients have bitten through their full guards and cracked their teeth.

If appropriate, consider a frontal guard that creates vertical dimension/air space between the side and back teeth, where we apply the most forces when clenching. (This is contingent on you being a good candidate for such a guard.)

Bite Guard Relief

When fitted and installed correctly – with TMJ examination and consideration, a good anti-clenching device should not only keep us from cracking our own teeth, but also reduce muscular tension, inflammation, trigger points, muscle and headache pain, and jaw misalignment.

But it must be fitted to each individual mouth and installed properly or like any device, it can alter the bite... for the worse. Such devices are often made in the dentist's office, no wider than two finger tips, and span some front upper or lower teeth, depending on your anatomy and physiology.

Expect a TMJ-certified dentist to do a palpation exam of muscles, documenting clinical notes at the fitting and then calling you back in for a repeat exam a week or two later to ensure the device is relaxing everything and no muscle is tighter /

no teeth are moving. If movement or added tension is present, then an adjustment to the fitting may be needed. Keep in mind: teeth – TMJ – vertebrae – musculature – jawbone... they're all connected/one system.

Oral Care

Consider oral care that includes techniques like: oil pulling, rinsing, flossing, water picks and brushing with a rotary brush (i.e. Braun, Oral B) multiple times a day.

Oil Pulling

Are you a candidate for oil pulling to reduce bacteria on your teeth and gums? Learn the [many benefits of oil pulling](#).

Oral Rinsing

Consider **non-alcohol mouth rinses with essential oils** for their anti-microbial and breathe freshening attributes like *Essential Oxygen's*: BR Organic Brushing Rinse. (They also offer 3% Food Grade Hydrogen Peroxide, Toothpaste and Tooth Polish.)

Another healthy oral rinse is: Dental Herb Company's Tooth & Gums Tonic. There are many such rinses and oral care items at Amazon, including OraMD... and some clients make their own with oils like cinnamon, clove, tea tree, peppermint, etc. Consider the subchapter, "How to Use Essential Oils in a Neti Pot."

According to Young Living **Essential Oils**: "Essential Oils make excellent oral antiseptics, analgesics and anti-inflammatories. Clove essential oils have been used in mainstream dentistry for decades to numb the gums and help prevent infections.

Similarly menthol (found in peppermint oil), Menthyl salicylate (found in wintergreen oil), thymol (found in thyme essential oil), and eucalyptol (found in eucalyptus and rosemary), essential oils are approved OTC drug products for combating gingivitis and periodontal disease."

Young Living Products for oral care include: (Thieves essential oil), Thieves Dentarome Ultra toothpaste, Thieves Lozenges, Thieves Spray, Thieves Fresh Essence Plus mouthwash, Thieves dental floss. You can find **Young Living and dōTerra** lines of oils via Amazon or local distributors via Google.

Toothpastes

Consider natural toothpastes over the commercialized brands. Look for natural ingredients with microscrubbing and antimicrobial properties without chemicals and artificial colors, flavors and preservatives. It's buyer beware! Or, make your own. Dr. Axe recommends Coconut oil+Baking soda+Essential oils+Erythritol, xylitol, or stevia(optional)+Salt+Bentonite clay. Subscribe to Dr. Axe to see [the recipe](#) here or his [natural remineralizing toothpaste recipe](#).

Brushing and Flossing

It goes without saying that **proper brushing and flossing are crucial for oral care**. Consider brushing and flossing after each meal, or at least morning and night. The added benefits of water pik flossers and rotary tooth brushes are that they not only clean well in-between teeth and at the gum line, but also clean, massage and toughen-up the gums.

Tough gums that never bleed create a barrier against the microbes of the outside world. (Be aware: frequent toothpicking and brushing too hard can contribute to receding gums.) Consult with a dental professional to learn more.

Fluoride

While I am all for the application of fluoride directly to the teeth via dental procedures and toothpastes, I do not support the ingestion of fluoride in the water supply. Subscribe to Dr. Axe to [Learn Why Fluoride is Bad for You](#).



Our mission at The Thermogram Center is, in part, to empower clients with preventive education. Many underlying causes of cancer are manageable. We hope to be a part of your efforts to secure a healthier tomorrow. Learn the mitigation techniques to help you and your loved ones, pets included, to reduce the risk of cancer. Be the Cure. Support Prevention.

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How to Use Essential Oils in a Neti Pot



Photo by [WebMD](#)

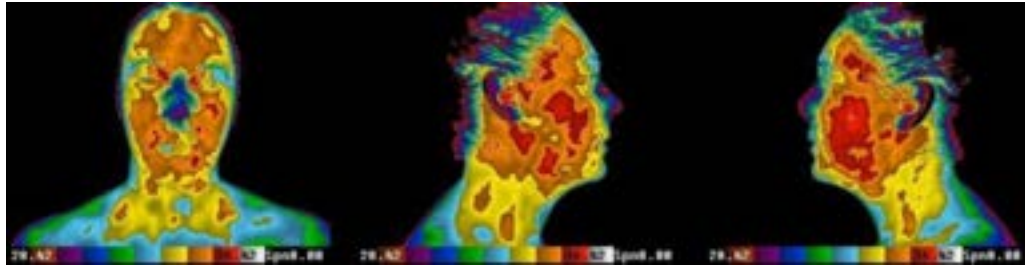
When mold, mildew, fungus, yeast, candida, parasites, bacteria, virus and other unfriendly microbes live in excess in our gut, they can live in our sinuses without us knowing it... until the possibility is revealed by our thermal imaging. But some sinus infections can be treated on contact by rotating essential oils in neti pot applications. Let's explore the most potent essential oils for neti pot use.

What Are Microbial Infections?

A microbe is defined as a microorganism (a microscopic living organism) and includes bacteria, mold, fungi, protozoa, and algae, among others. (Viruses are regarded as not living but still fall in the realm of microbiology.)

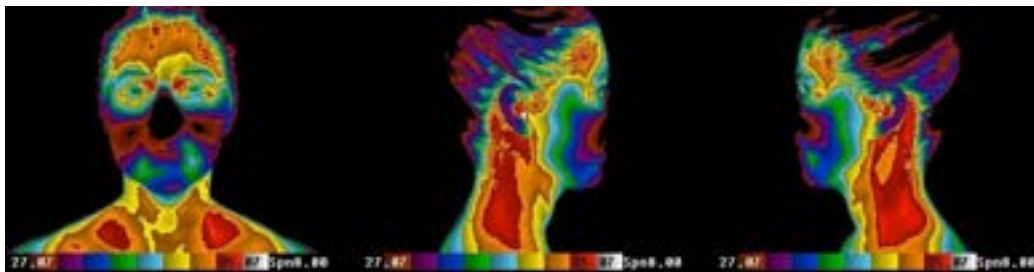
Because the gut and sinus are one system, **microbial infections of the gut may be found in the sinuses**. While many of my clients report no symptoms or sensations in the sinuses, thermal imaging can help reveal the presence of sinus infection.

Take this client for example. She had no idea at the time, but she had significant inflammation suggesting sinus infection. Follow-up testing with her health team diagnosed it as candida.



The Thermogram Center, Inc. Images - Extreme Case of Sinus (Candida) Infection

Compare her images to normal client face images without signs of infection:



The Thermogram Center, Inc. Images Without Signs of Infection

While her infection originated in the gut (intestines), it is clearly systemic and thriving in her sinuses too. Yet, she felt nothing. She subsequently adopted an anti-candida diet and nutraceuticals to combat the infection.

Many Essential Oils Kill Microbes

Essential oils are aromatic oily liquids obtained from plant materials (flowers, buds, seeds, leaves, twigs, bark, herbs, wood, fruits and roots). An estimated 3,000 essential oils are known.

They have been used for centuries as **natural medicines to combat a multitude of microbes**, including bacteria, fungi, and viruses. In recent years more than 500 reports have investigated a large number of essential oils for their antimicrobial properties.

Cinnamon, clove and rosemary oils have shown antibacterial and antifungal activity; **Tea tree** (melaleuca) oil has shown antiseptic and antimicrobial, antifungal, antiviral, and antiprotozoal properties; **Lemon and rosemary** oils possess antioxidant properties; **Citronella** oil has shown inhibitory effect on biodegrading and storage-contaminating fungi; **Lavender** oil has shown

antibacterial and antifungal activity and found to be effective to treat burns and insect bites. Several studies have shown that cinnamon, clove and rosemary oils have strong and consistent inhibitory effects against various pathogens. And, combining certain oils can provide an additive or synergistic effect.

How to Treat a Sinus Infection with A Neti Pot

Add a few drops of essential oil in warm water in your neti pot. (Too much essential oil can burn/irritate your sinus passageways!) If you use sea salt, use ½ to 1 tsp of sea salt per two cups of warm water. With your head over a sink or in the shower, lean forward slightly so your head is nearly horizontal, turning your head to one side.

Insert the neti pot spout snugly into the upper nostril allowing its solution to flow through your sinuses and out the lower nostril. Be sure to keep your mouth open and breathe through your mouth: relax. Use half the solution in the first nostril and the remainder in the second.

In between and/or after each flush, you can gently blow your nose to clear the solution. I put a fingertip on one nostril and gently blow into the sink, and then repeat for the other nostril.

Apply once or twice a day, perhaps morning and night, and after any excess exposure to allergens or foreign materials, i.e. after mowing the lawn. Consider rotating the essential oils from day to day to order to gain a broader spectrum of antimicrobial effect, and including sea salt in the rotation.

Thieves Essential Oil Blend

Have you heard of Young Living Essential oils? **The Thieves Blend includes Clove bud oil, Lemon peel oil, Cinnamon bark oil, Eucalyptus leaf oil, and Rosemary leaf oil.** To find a provider in your area, you can Google: “young living products near [your city, state]” and distributors will be listed for you.

Table of Essential Oil Antimicrobial Properties

ESSENTIAL OIL	ANTIMICROBIAL PROPERTIES INCLUDE:
(Cassia) Cinnamon	Antibacterial, anti-infection, antiseptic, antifungal, anti-yeast
Clove	Potent antiviral, strong antiseptic, antifungal, disinfectant
Thyme	Highly antibacterial and antiviral, antimicrobial, antiseptic
Tea Tree (Melaleuca)	Excellent antiviral, antifungal, antibacterial, anti-infection, <u>antiparasite</u>
Bay	Antibacterial, antifungal
Rosemary	Antibacterial, antifungal
Oregano	Strong antifungal, antiviral
Peppermint	Antiviral, antibacterial, antiseptic
Eucalyptus	Insecticide, antibacterial
Garlic	Antimicrobial
Lemon	Antibacterial, antioxidant, antiseptic
Lavender	Antibacterial
Neem	Antibacterial
Black Cumin	Antibacterial
Onion	Antimicrobial
Sandalwood	Antibacterial
... among others	



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the mitigation techniques to help you and your loved ones, pets included, to reduce the risk of cancer. Be the Cure. Support Prevention.

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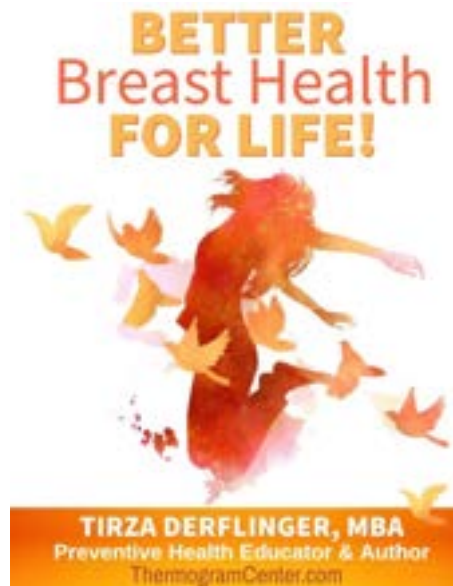
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Part 3. Manage Your Risk

Managing Your Risk Reduction Efforts



Cover by Suzy Cohen, RPH

Now that you have a better understanding of how the environment, hormones, diet, lifestyle and dental care can impact your (breast) health, you may be ready to address multiple risk factors in your life.

However, at this point you may be thinking that there are so many factors that impact (breast) health that you are not sure where to begin.

But if you have completed your Risk Factors worksheet, then you have identified which risk factors apply to you and the relative significance of each.

Now you may benefit from a worksheet that helps track your efforts and the commitments you are making to improve your (breast) health and reduce your risk.

Commit to Action Steps

While there are many actions we can take to improve our vitality and longevity while reducing our risk of cancer, it may not be realistic to implement all of them. Our time, energy, resources and capacities are limited.

To encourage and sustain your efforts towards success, consider directing your efforts to the priorities you identified on your Risk Factors worksheet. **Commit to action steps you deem to be realistic and doable with the following Actions Checklist worksheet.**

Prioritize your risk factors. Commit to realistic, doable action steps.

Actions Checklist Worksheet

Recall that the goal is to enable you to reduce the risk factors for which you have some control to make up for those for which you have no control.

If “you get what you measure,” then consider completing the following Actions Checklist and reviewing it from time to time to help keep your preventive efforts on track.

The journey to better (breast) health is life-long. By reminding yourself from time to time of the realistic action steps to which you have committed, you are more likely to stay on track, remaining encouraged and empowered on your journey to Better Breast Health – *for Life.*™

Be The Cure. Support Prevention.

Print to Complete the Following Worksheet

Actions Checklist - check the box that corresponds to your intended action steps.

To Begin	<input type="checkbox"/>	complete the Better Breast Health - <i>for Life!</i> ™ Risk Factors Worksheet
	<input type="checkbox"/>	acquire initial thermal imaging risk assessment
Environment	<input type="checkbox"/>	obtain qualified health provider(s) for consultation
	<input type="checkbox"/>	reduce/limit toxin or carcinogen exposure, i.e agricultural and petro-chemicals
	<input type="checkbox"/>	focus on hormone-free, chemical-free organic meats, dairy, and produce
	<input type="checkbox"/>	drink 1/2 to 1 ounce of <i>pure</i> water per pound of body weight each day
	<input type="checkbox"/>	reduce/limit pollutant or chemical exposure, i.e. non-natural personal products
	<input type="checkbox"/>	use proper plastics when glass, ceramics, or stainless steel aren't an option
	<input type="checkbox"/>	avoid radiation exposure to breasts if age 8-20 years old
	<input type="checkbox"/>	reduce/limit high-powered EMF (electromagnetic frequency) exposure
	<input type="checkbox"/>	reduce exposure to household EMF by staying 28" away from electric sources
Hormonal & Genetic	<input type="checkbox"/>	obtain qualified health provider(s) for consultation
	<input type="checkbox"/>	reshape body to approach a waist to hip ratio less than .81
	<input type="checkbox"/>	lose weight to approach a Body Mass Index under 25
	<input type="checkbox"/>	maintain hormones in proper balance
	<input type="checkbox"/>	maintain healthy estrogen metabolism
Diet	<input type="checkbox"/>	obtain qualified health provider(s) for consultation
	<input type="checkbox"/>	focus on hormone-free, chemical-free organic meats, dairy, and produce
	<input type="checkbox"/>	maintain healthy alkaline and acidic food proportions
	<input type="checkbox"/>	increase keto-friendly foods and decrease sugar intake, including sugary fruits
	<input type="checkbox"/>	increase daily servings of fresh fruits and vegetables, approaching 9 servings
	<input type="checkbox"/>	focus on eating more raw and/or gently cooked foods for their enzyme value
	<input type="checkbox"/>	eat more sprouted nuts, grains, and seeds
	<input type="checkbox"/>	eat only high-quality, organic and natural whole-food sources of soy
	<input type="checkbox"/>	maintain adequate levels of friendly bacteria in the intestines
	<input type="checkbox"/>	maintain adequate fiber intake, near 30g per day
	<input type="checkbox"/>	focus on eating more organic, monounsaturated fats than any other forms of fats
	<input type="checkbox"/>	approach an Omega 6:Omega 3 ratio towards 1:1
	<input type="checkbox"/>	maintain a diet of healthy glycemic values and loads
	<input type="checkbox"/>	maintain adequate daily nutritional supplementation
	<input type="checkbox"/>	maintain a healthy, balanced gut microbiome
	<input type="checkbox"/>	employ optimal cooking methods
Health & Lifestyle	<input type="checkbox"/>	obtain qualified health provider(s) for consultation
	<input type="checkbox"/>	maintain regular sleep patterns and proper melatonin levels
	<input type="checkbox"/>	reduce smoking of tobacco
	<input type="checkbox"/>	reduce alcohol consumption and/or support it with a liver-supporting regimen
	<input type="checkbox"/>	drink 1/2 to 1 ounce of <i>pure</i> water per pound of body weight each day
	<input type="checkbox"/>	acquire sufficient sunlight and maintain proper vitamin D levels
	<input type="checkbox"/>	resolve deep, long-lasting emotional trauma/stress and grief
	<input type="checkbox"/>	reduce/resolve daily stress levels
	<input type="checkbox"/>	wear wireless bras; less than 12 hours a day
	<input type="checkbox"/>	support lymph fluid circulation
	<input type="checkbox"/>	maintain moderate exercise levels
	<input type="checkbox"/>	cleanse bodily systems, i.e. colon, liver, lymph
	<input type="checkbox"/>	reduce chronic inflammation
	<input type="checkbox"/>	address opportunities to reduce or complement medication or drug use
	<input type="checkbox"/>	maintain proper iodine levels and thyroid function
Dental	<input type="checkbox"/>	consult with a holistic biological dentist (iaomt.org)
	<input type="checkbox"/>	obtain 2018 or newer 3D CBT to look for abscesses and cavitations
	<input type="checkbox"/>	address issues and remove mercury and metals
	<input type="checkbox"/>	commit to quality oral care at home: brushing, flossing, rinsing, etc.
Monitor Your Results	<input type="checkbox"/>	monitor the effects of your actions with sequential thermal imaging
	<input type="checkbox"/>	consult and strategize with your qualified healthcare provider(s) regarding additional opportunities to support Better Breast Health - <i>for Life!</i> ™



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Part 4. Measure, Monitor & Adjust

Measure, Monitor & Adjust Your Efforts



Photo by Suzy Cohen, RPH

Now that you have prioritized the risk factors in your life and committed to action steps you deem realistic and doable, you may be wondering:

What is the collective effect of all these factors on my (breast) health?

Knowing the answer to this question is another important step in a proactive prevention process.

For example, if a woman/man learns that the collective effect of all these risk factors on her/his health is favorable, then she/he will have less concern or motivation for change.

However, if a woman/man learns that her/his collective effect is not favorable, then she/he is more likely to be motivated to address more of these risk factors.

While a favorable outcome may be encouraging, a less than favorable outcome may motivate a woman/man to take proactive steps that may prevent cancer in the future.

A Test for Men and Women

There is a test available to answer this question. The test involves thermal imaging. You may know it as thermography, but only its advanced technology has the capability to more accurately assess the effects of these risk factors by way of observing lymphatic **inflammation** – a primary precursor to disease and health issues.

Thermography for Risk Assessment

To understand advanced thermography in the form of Risk Assessing Thermal Imaging, how it observes inflammation, and how it tracks a woman's/man's preventive efforts, consider the following sections:

- the genesis of active cancers, particularly in the breasts,
- how basic and advanced thermography supports early breast cancer detection,
- how the breasts serve as a window into the body,
- how advanced thermography observes inflammation,
- how advanced thermography assesses the collective effect of all risk factors on the breasts and body and,
- how Risk Assessing Thermal Imaging supports prevention for men and women.

The Genesis of Active Cancer

Unlike in-situ/pre-cancers, which are benign, active cancer cells seek their own blood supply for nourishment. They support their own growth by secreting a chemical called nitric oxide into the surrounding tissue in order to dilate, or expand, the blood vessels that are delivering blood supply to the area. This process is referred to as **vasodilation**.

They also create new blood vessels to route blood from our circulation system directly to themselves. This process is referred to as **neoangiogenesis**. These newly formed blood vessels typically form dilated looping patterns around the active cancer.

At this point the active cancer cells have a continuous supply of blood and nutrients and can multiply and grow more quickly. At this stage, **the cancer is considered metabolically active**.

Anatomy vs Physiology

While the cancer is now deemed physiologically active, functioning as an active cancer, it is not typically anatomically sizeable.

The average active cancer typically doubles in size every three months, while the aggressive active cancer typically doubles in size every 6-8 weeks. The most aggressive cancers can double in size in as few as 8 days. (Typically, the more aggressive the cancer, the more capability it has for vasodilation and neoangiogenesis.)

Mammography Studies Anatomy

While mammography studies anatomy and is size dependent, it may enable detection of smaller cancers than those felt by palpation. Typical cancers detectable by mammography have grown for 3 to 10 years before diagnosis.

**This is why someone exposed to a risk factor may not know
that cancer has initiated –
because it can take up to 10 years for the cancer to be large
enough to be detected by standard of care.**

Research suggests that when active cancer cells occupy a space as small as 1/5 of 1mm, or about the size of the tip of a ball point pen, they begin to develop their own blood supply.

Thermography Studies Physiology

While this is too small for detection by palpation or mammography, it is the subject of thermography, whether basic or advanced.

Basic thermography looks for signs of the blood supply associated with active cancer cells. Advanced thermography does too, but often with greater sensitivity to support even earlier detection.

Risk Assessing Thermal Imaging, RATI, an advanced form of thermography, also assesses the risk of developing breast cancer with risk ratings and (estrogen) hormonal grades.

Not Standard of Care

While neither a diagnostic test, nor standard of care, RATI provides thermobiological risk ratings, like the BIRAD ratings used in mammography, which is not diagnostic but is standard of care.

Like ultrasounds and MRIs, thermography is approved by the U.S. Food and Drug Administration (FDA) as an adjunctive, or complementary test to mammography.

Misconceptions

Some thermographers provide no risk ratings with their service and may be perceived as providing a diagnostic service. Unfortunately, this is misconception puts thermography at odds with the FDA.

The Thermogram Center, Inc. has gone to great lengths to separate itself from standard of care.

Standard of Care	The Thermogram Center, Inc.
Diagnosis	Risk Assessment
Treatment	Self-Empowerment
Detection	Prevention

While most people prefer prevention over detection, prevention is not standard of care, but rather a niche service.

For more information on mammography vs thermography, click [here](#).

Buyer Beware

Since thermal imaging is a not a regulated industry, quality and output across providers can vary greatly. When looking for a service provider near you, consider whether or not the service includes:

- thermobiological (TH) risk ratings,
- estrogen stimulation (HG) hormonal grades, and

- images in color *and* black and white. (Most basic thermographers lack highly sensitive cameras and provide only color images.)

Consider providers listed at [IACT](#), [EIOCT](#) and [The Thermogram Center, Inc.](#), for example.

Of Interest to Women

Like other providers listed in the before-mentioned weblinks, The Thermogram Center, Inc. uses thermobiological risk ratings, on a scale of 1 to 5, to assess the risk of developing breast cancer in each breast and indicate an appropriate level of warranted response.

A Breast Test

While these risk ratings were established decades ago by researchers of thermography, subsequent studies continue to support their validity as a risk indicator.

A study conducted at Northwestern University's Dept. of OBGYN reports that abnormal thermal exams are ten times as significant a risk factor as is family history.

So, while a TH 2 may indicate low risk and suggest that a women “live a healthy lifestyle,” a TH 5 may indicate highest risk and warrant further evaluation (i.e. ultrasound) and action steps to reduce the impacts of known risk factors. Consider each rating as a simple number you can use to monitor your thermobiological level of risk over time. If you are uncomfortable with your level or risk... or it is increasing over time...

At The Thermogram Center, Inc. we discuss potential risk factors indicated in your images, educate you on likely causes, and provide action steps, self-care education, and local health resources... for a healthier tomorrow.

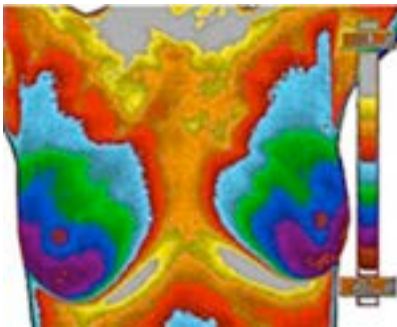
While 7 to 9 views of the breasts are captured at [The Thermogram Center, Inc.](#) and provided to clients in black and white and in color, the following full-chest

views are shown as examples to explain the thermobiological risk rating system. Each breast is assessed a TH rating on the following scale:

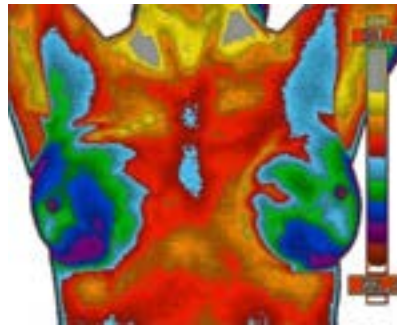
The Thermobiological Risk Rating Scale is on the Following Page

Thermobiological Risk Ratings

TH 1 - Lowest Risk



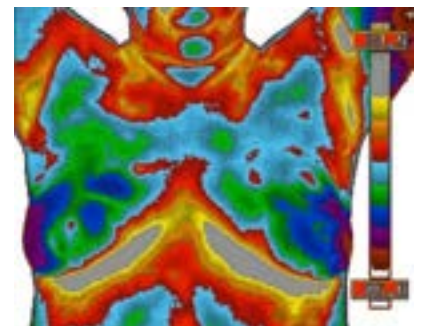
TH 2 - Low Risk



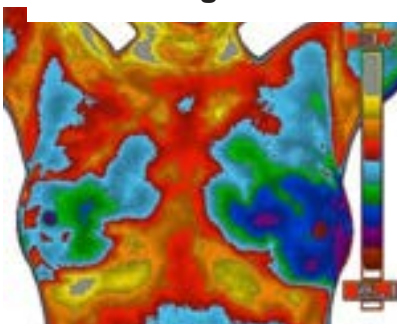
- Classified as normal with lowest and low thermobiological risk of developing cancer.
- 12 month thermal imaging follow-up exam.
- Consider doctor's recommended breast screening and maintain a healthy lifestyle.

- Classified between normal and abnormal with medium thermobiological risk of developing cancer.
- Early thermal imaging follow-up exam to monitor signs of stability and/or change, typically at 6 months. When subsequent imaging indicates stability, 12-months.
- Consider doctor's recommended breast evaluation, maintain healthy lifestyles, and consider opportunities to reduce risk factors.

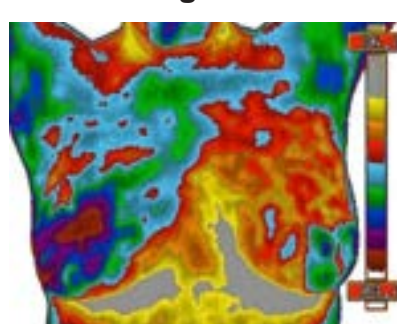
TH 3 - Medium Risk



TH 3 - High Risk



TH 4 - Highest Risk



- Classified as abnormal with high and highest thermobiological risk of developing cancer.
- 3 - 6 months thermal imaging follow-up exam to discern transient and benign conditions.
- Consider doctor's further evaluation. When anatomical examinations are normal, consider reducing risk factors and proactive efforts/treatments under the guidance of qualified health providers.

Learn more about Thermobiological Risk Ratings [here](#).

Supporting Detection & Prevention

If active cancer is diagnosed after further evaluation and biopsy, then thermal imaging has supported early detection. If not, then the patient can address those risk factors for which she has some control to impact the situation – potentially preventing active cancers from forming.

Thermal imaging can also be used to monitor the effects of prevention or treatment on breast cancer risk over time – to see if the steps being taken are working to reduce risk.

Example of Prevention

For example, following extraction of abscessed tooth #14, in the upper left jaw, this The Thermogram Center, Inc. client's thermobiological risk in the right breast decreased from high risk (4) to lowest risk (1) suggesting the left upper tooth may have been draining lymphatically into the right breast. Prevention was supported. Of what, we'll never know...

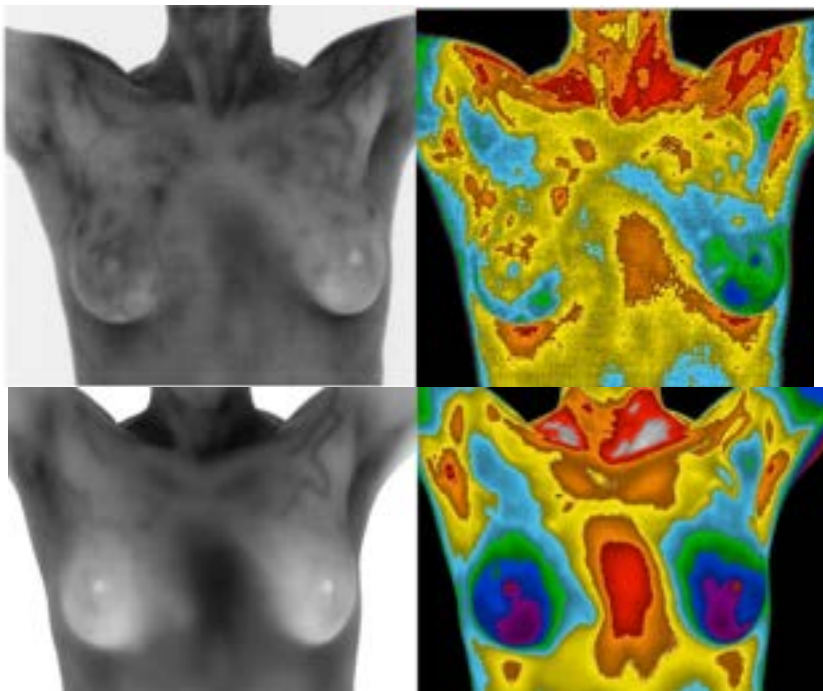
R – TH 4, L – TH 2

Note the lymph flow from the neck into the chest and breasts, particularly the right breast.

R – TH 1, L – TH 1

Note the significant reduction in chest inflammation, the increased symmetry between breasts, and the lack of heat/thermal features therein.

See more before and after thermal images [here](#).



A Call for Action

In the following example, this 31 year old client had a biopsy that diagnosed cancer before her initial thermal imaging (in the top row of images) at The Thermogram Center, Inc.

She opted for non-surgical treatment and chose to monitor its effectiveness via thermal imaging after 6 weeks (in the middle row of images).

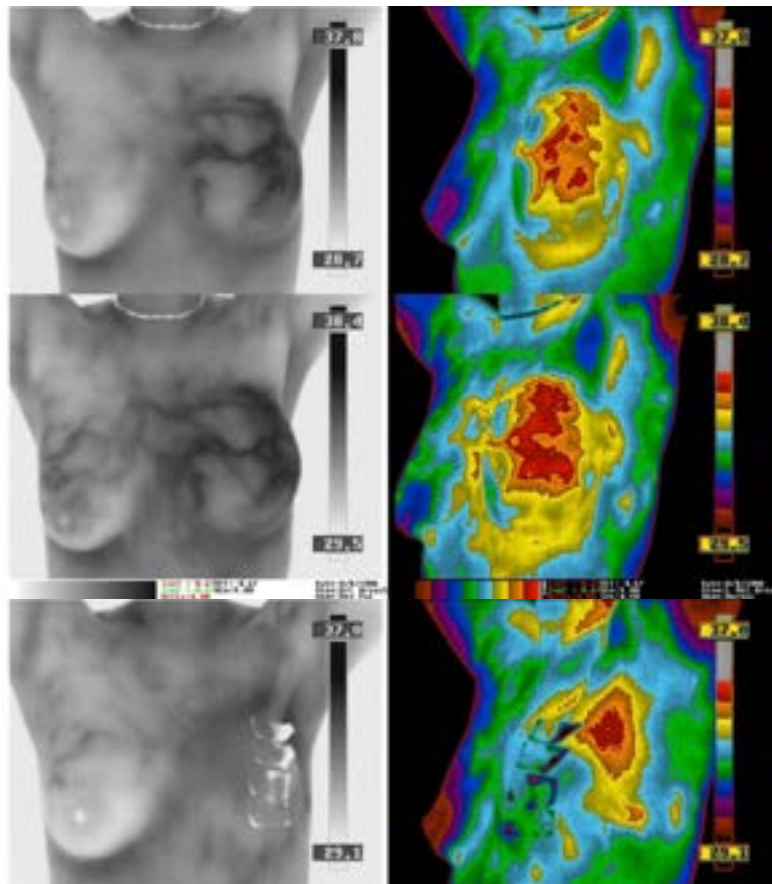
Because the client suspected the tumor was growing and because of the obvious increase in blood supply via thermal imaging, she decided to follow the advice of her breast doctor and obtain a mastectomy (in the bottom row of images).

R – TH 1, L – TH 5

The top images are indicative a blood supply supporting cancer.

The middle images suggest increasing blood supply supporting the cancer just 6 weeks later.

After mastectomy, the blood supply appears to have left with the active cancer.



See more breast cancer thermal images [here](#).

Estrogen Stimulation

Prolonged exposure to excess estrogen is a leading cause of breast cancer and perhaps its most significant risk factor (whether it be from chronic exposure to synthetic chemicals, xenoestrogens, estrogens or their metabolites).

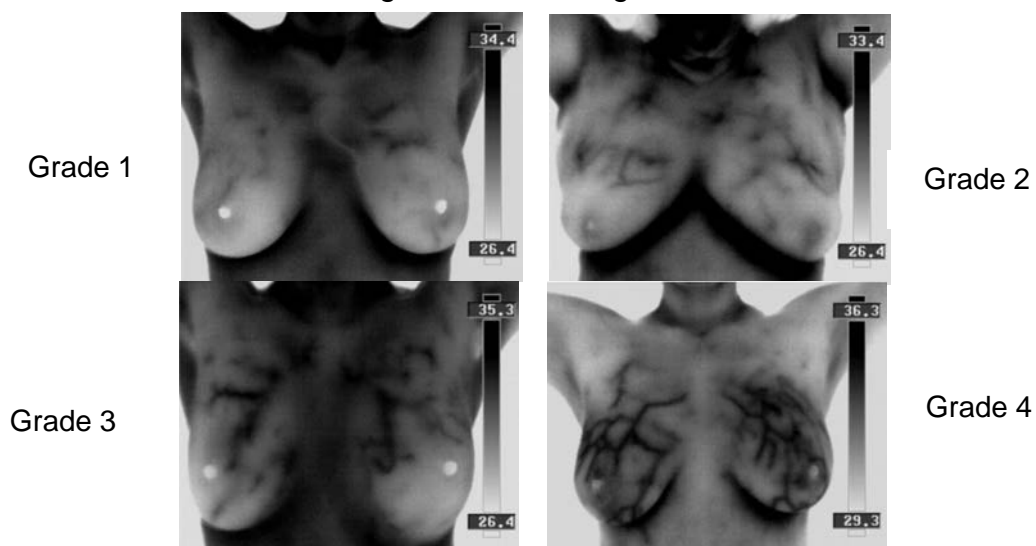
According to the National Institutes of Health, our breasts can hold 10 to 50 times more estrogen than a blood test may reveal. So while many functional and naturopathic doctors recommend urine testing, ie DUTCH, advanced thermography in the form of Risk Assessing Thermal Imaging provides a way of visualizing estrogen stimulation in the breasts.

Hormonal Grades

In addition to providing Thermobiological Risk Ratings, Risk Assessing Thermal Imagers like The Thermogram Center, Inc. measures the highest risk factor for developing breast cancer – prolonged exposure to excess estrogen – with a Hormonal Grade.

Thermal images in black and white enable the visualization of vascular dilation. When vascular dilation is observed across the chest, it suggests the possibility of excess estrogen stimulation. While this is expected and healthy for women who are breast feeding or pregnant, it presents increased cancer risk for women who are not.

The Thermogram Center, Inc. Hormonal Grades are on a scale of 0 to 4 and indirectly assess the level of estrogen stimulation via vascular dilation, relative to a state of lactation, when estrogen levels are high:

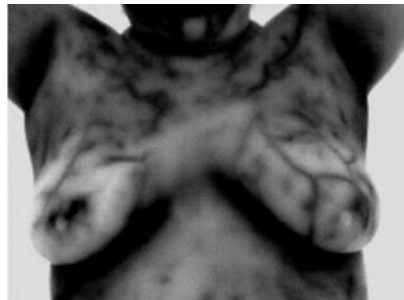


Grade 1 is commonly seen in postmenopausal women, while **Grade 2** is commonly seen between puberty and menopause. **Grade 3** is commonly seen with HRT, birth control pill use, progesterone deficiency, and large breast size. **Grade 4** is commonly seen in lactation, pregnancy, and exogenous estrogen usage.

Example of Estrogen Reduction

Below is an example of a The Thermogram Center, Inc. client whose higher than expected Hormonal Grade (HG) prompted intervention. After a 3 month nutritionally-based regimen to support estrogen metabolism, her Hormonal Grade decreased from a 3 to a 1, demonstrating that while exposure to excess estrogen may be a significant risk factor, she was able to reduce it relatively easily:

Pre-Treatment: HG 3



Post-Treatment: HG 1



Learn more about Hormonal Grades [here](#).

Measuring the Collective Effect

Advanced thermography supports prevention, intervention, and early detection. It can be an integral part of every woman's proactive prevention journey, given that it can monitor the results of her efforts:

"I like to think of my thermal breast imaging as a way of understanding how all the risk factors are impacting my breast health at any given point in time. If I don't like the results, I make changes in one or more of these factors and monitor the impact with a new risk assessment. It is empowering me on my journey towards better breast health." – Tina

Raising the Bar

But advanced thermography isn't just for women. It serves men as well.

The Thermogram Center, Inc. employs advanced thermography in the form of Risk Assessing Thermal Imaging (RATI) and action-oriented preventive education to:

- assess the collective effect of all risk factors in men and women by way of the levels of systemic inflammation in the body
- separate the sources of inflammation, i.e. previously unknown dental issue, from the symptoms of inflammation, i.e. (breast) cancer
- support prevention with complementary preventive education materials, action steps, and lists of local health professionals for further evaluation, testing and professional guidance.

A Window Into the Body

For women, thermal breast imaging is a window into the body. When inflammation levels are low/high in the breasts, they are typically low/high throughout the body.

Do you know that breast cancer does not start in the breasts?

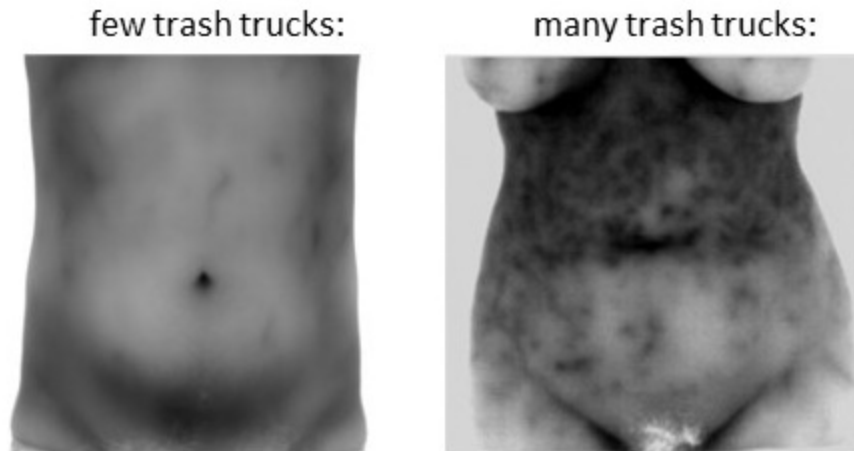
Breast cancer is a symptom of dysfunction in the body, where sources of inflammation compromise the immune system and affect the breasts. So **the source of breast cancer is typically in the body**, not the breasts. (Learn more about [Breast Implant Illness](#).)

In fact, [up to 95% of all cancers are caused by epigenetics \(lifestyle\), not genetics](#). So women and men can benefit from RATI given that it assesses inflammation.

Advanced Thermography Observes Inflammation

For both women and men, RATI at The Thermogram Center, Inc. provides such sensitivity that its black and white images indicate inflammation in [the lymphatic system](#), the highway system for the body's trash trucks:

Risk Assessing Thermal Images and Lymphatic Inflammation



Inflammation Levels Correlate to Collective Risk

When RATI reveals systemic lymphatic inflammation, i.e. the right image, then the body is more toxic and susceptible to disease than bodies with little inflammation, i.e. the left image.

In this way, RATI helps men and women to assess the collective effect of all risk factors in the body based on levels of inflammation.

RATI and Sources of Inflammation

In addition, RATI may reveal sources of (systemic) inflammation in the body, i.e. gut organ dysfunction or dental issues under the gum line.

In this way, RATI can help men and women to direct their attention and efforts on previously unknown sources of inflammation and risk, employ self-care preventive education to reduce risk, and monitor the results of their efforts over time.

Learn more about The Thermogram Center, Inc.'s [approach to a healthier tomorrow](#).



Our mission at The Thermogram Center is, in part, to empower clients with preventive education. Many underlying causes of cancer are manageable. We hope to be a part of your efforts to secure a healthier tomorrow. Learn the mitigation techniques to help you and your loved ones, pets included, to reduce the risk of cancer. Be the Cure. Support Prevention.

by Tirza Derflinger

President, Author, Health Educator, CTT, MBA

Better Breast Health – *For Life!*™

text/call 303-664-1139 • info@thermogramcenter.com

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Advanced Thermography & Preventive Education Since 2002

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Part 5. Celebrate Success

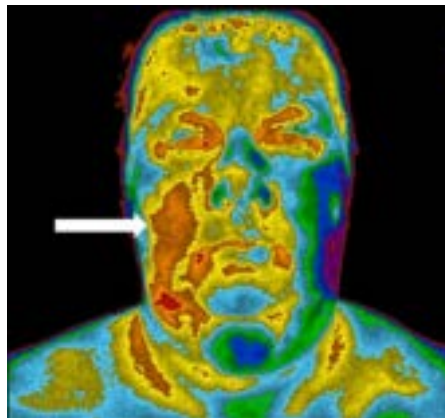
Celebrate Success



Cover by Suzy Cohen RPH

In 2012, this client realized she had cracked root canaled [tooth #5](#) when a piece of its crown came out of her mouth. Her dentist repaired the crown. Months later, she came to The Thermogram Center, Inc. for routine thermal imaging of her breasts and body as seen in the following image..

2012: Months After Repair of Cracked Crown

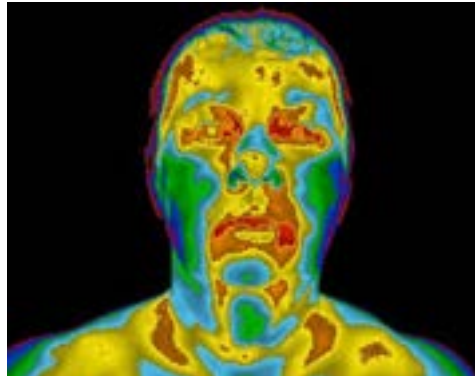


While she was asymptomatic and her dentist thought all was well, her face images revealed significant findings. She subsequently saw an oral surgeon for further evaluation. Bone infection was diagnosed. The tooth was extracted and bone grafting and a zirconia implant and crown followed.

Celebrating 62 Pounds Lost

As of July 2015, the client had lost 62 pounds. As her functional doctor explained, **“Once they were able to get her liver and gall bladder ‘unclogged,’ her body was able to metabolize and detox her body more normally.”** Interestingly, tooth #5 can impact the liver and gall bladder.

2015: 2+ Years After Zirconia Implant



Note the symmetry in the colors and thermal patterns of her cheeks in 2015 vs 2012, and the absence of any significant heat, or inflammation, near tooth #5.

See more dental related thermal imaging examples [here](#).



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Part 6. Summary and Testimonials

Summary & Testimonials



Cover by Suzy Cohen, RPH

By now you understand that advanced thermography in the form of Risk Assessing Thermal Imaging assesses inflammation levels and sources in the bodies of men and women to help assess the collective effect of all risk factors and attempt to reveal sources of inflammation that warrant attention.

Combined with action-oriented, complementary preventive education materials; action steps; and lists of local health professionals for further evaluation, testing and professional guidance; The Thermogram Center, Inc. enables and empowers men and women towards prevention and a healthier tomorrow.

Be The Cure. Seek Prevention.

Client Testimonials

"Thank you so much. I feel like I've found a wonderful new "no cancer" helper in you. I didn't even realize how I have been resigned to the notion that I will be getting cancer in my lifetime. And while I still may, after meeting with you, I feel so encouraged to take steps to prevent cancer and care for my body in an even fuller way. Brian, my husband, was so happy for me. I look forward to seeing you again next year..." – Deborah

“I had recently been diagnosed with breast cancer, and felt my life was out of control. Better Breast Health - for Life! made me feel more in charge and in control of my situation. The details about food choices, personal products, and items we use in everyday life led me to make better decisions to support my health during and after my cancer treatment.” – Glenna

For more testimonials, click [here](#).



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Part 7. Complimentary Articles, EPUB & Paperbacks

Complimentary Articles, EPUB & Paperbacks



Cover by Suzy Cohen, RPH

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