## **Breathing Normal - And Then Some**

Each patient education article in "The Evidence-Based Educator" details research documented in *Somatovisceral Aspects of Chiropractic: An Evidence-Based Approach*, co-edited by Dr. Masarsky and Marion Todres-Masarsky, DC.

"That's the first deep breath I've taken in weeks!" It is not at all uncommon for us to hear our patients saying something along these lines as they get up from the adjusting table.

In the 1980s, two chiropractic practitioners in Virginia published a report on breathing capacity in a series of new patients.<sup>1,2</sup> They measured the liters of air exhaled by their patients when forcing out a full breath; this measurement is called **forced vital capacity**, often abbreviated to **FVC**. They also measured the liters of air exhaled in the first second of forcing out a full breath; this measurement is called **forced expiratory volume in one second**, often abbreviated to **FEV-1**. When repeat measurements were taken after one to three chiropractic adjustments, both FVC and FEV-1 had improved significantly.

This finding was not surprising. Along with many of their colleagues, these doctors of chiropractic frequently heard patients make comments after a session along the lines of, "I feel like I'm taking in more air." However, when the doctors isolated the data for those patients in this series with normal FVC and FEV-1 measurements on their initial visits, they found that these patients had also improved. In other words, a significant number of chiropractic patients seemed to be walking in with normal breathing capacity, and walking out with breathing capacity that was even better. They had started out normal and ended up "normal - and then some."

An almost identical study was carried out in the late 1990s by a doctor of chiropractic in Missouri.<sup>3</sup> Again, chiropractic care was found to improve breathing capacity in "lung-normal" patients, as well as those with respiratory problems.

The significance of these studies lies in the relationship between breathing and longevity. Both FVC and FEV-1 have been established in the biomedical literature as biological markers of aging.<sup>4</sup> When a group of 1,720 50-year-olds in Framingham, Massachusetts was examined with long-term follow-up, it was found that the higher the FVC at age 50, the more likely the odds of survival to age 75.<sup>5</sup>

Breathing is made possible by skeletal muscles - the same type of muscles that enables you to lift, participate in sports, and perform well in other types of physical activity. This is also the same type of muscles that makes normal posture possible. The same *chiropractic adjustments* that may offer improvements in posture, sports performance and productivity at work, can also improve breathing - a vital function linked to longevity.

## References

- 1. Masarsky CS, Weber M. Chiropractic and lung volumes a retrospective study. *ACA J of Chiropractic*, 1986;20(9):65.
- 2. Masarsky CS, Todres-Masarsky M. Breathing and the vertebral subluxation complex. In Masarsky CS, Todres-Masarsky M (eds): *Somatovisceral Aspects of Chiropractic: An Evidence-Based Approach*, Churchill Livingstone, New York, 2001.
- 3. Kessinger R. Changes in pulmonary function associated with upper cervical specific care. *J of Vertebral Subluxation Research*, 1997;1(3):43.
- 4. Beaty TH, et al. Effects of pulmonary function on mortality. *J Chronic Disease* 1985;38:703.
- 5. Goldberg RJ, et al. Factors associated with survival to 75 years of age in middleaged men and women: The Framingham Study. *Archives of Internal Medicine* 1996;156:505.