POSTURE EXERCISE PROGRAM FOR KIDS

AMERICAN POSTURE INSTITUTE

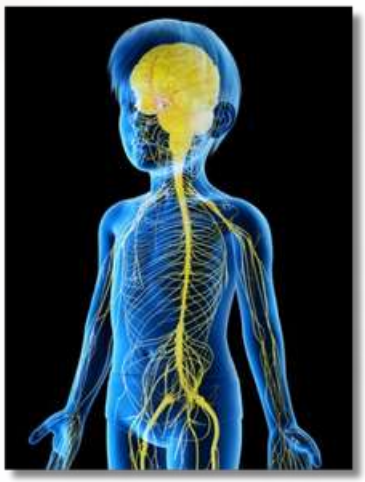
What is Posture?

Posture refers to the position and alignment of the body in relation to gravity. It involves the coordination of various muscles, joints, and other structures to maintain a stable and balanced position. Good posture entails having the body's segments in proper alignment, such as the head, shoulders, spine, and pelvis. It enables efficient movement, optimal function of bodily systems, and the distribution of forces and loads evenly throughout the body.

Posture is influenced by factors such as muscle strength, flexibility, body awareness, and daily habits. Poor posture, on the other hand, involves deviations from the ideal alignment, such as slouching, rounding of the shoulders, or excessive curvature of the spine, which can lead to musculoskeletal imbalances, discomfort, and potential impact on neurodevelopment.

Brain-Posture Connection

The brain plays a crucial role in maintaining posture and balance through a complex interaction of sensory, motor, and cognitive processes. Sensory information from the visual, vestibular (inner ear), and somatosensory systems provides input to the brain about body position and movement in relation to the environment. The brain processes this information and sends signals to activate and coordinate the appropriate muscles to maintain posture and balance.



Motor control centers in the brain, such as the cerebellum, basal ganglia, and motor cortex, regulate and adjust muscle activity to ensure postural stability. Furthermore, cognitive functions, including attention, perception, and planning, interact with the brain's postural control mechanisms, allowing for adaptability and responsiveness to environmental demands. Proper posture is important for neurodevelopment as it contributes to optimal brain functioning and the development of essential neural connections.

Good posture supports the alignment of the spine, which houses the spinal cord, a crucial part of the central nervous system. Maintaining proper alignment of the spine ensures optimal nerve transmission, allowing for efficient communication between the brain and the rest of the body. Proper posture also promotes healthy blood flow and oxygenation to the brain, supporting its metabolic needs and cognitive processes. By providing a stable foundation for movement and sensory input, proper posture enhances body awareness and proprioception, which are important for motor skills development, spatial orientation, and overall neurodevelopmental progress in children.

Common Postural Distortion Patterns

Forward head posture, also known as anterior head carriage, is a postural deviation characterized by the head positioned in front of the body's vertical line of gravity. In this posture, the head shifts forward from its ideal alignment over the shoulders, often resulting in a rounded upper back and increased strain on the neck and upper spinal structures. Forward head posture can lead to musculoskeletal imbalances, such as increased tension in the neck and shoulder muscles, decreased flexibility in the upper back, and potential alignment issues. It is commonly associated with prolonged periods of sitting, excessive screen use, and poor ergonomics. Forward head posture can contribute to discomfort, pain, and potential neurological effects.

Postural hyperkyphosis refers to an excessive forward curvature of the upper spine, specifically in the thoracic region. It is characterized by an exaggerated rounding of the upper back, which can cause the shoulders to hunch forward and the head to protrude. Postural hyperkyphosis can be caused by a variety of factors, including poor posture habits, muscle imbalances, structural abnormalities, or certain medical conditions like Scheuermann's disease. This postural deviation can lead to musculoskeletal issues, such as decreased flexibility in the spine, weakened back muscles, and increased stress on the vertebral discs. Additionally, postural hyperkyphosis can potentially affect neurodevelopment by altering the alignment of the spine and impacting sensory input, motor control, and the overall functioning of the nervous system.

The Impact of Postural Distortion Patterns

When postural distortion patterns are left uncorrected, they can lead to a range of negative consequences for both physical and neurodevelopmental health. Musculoskeletal issues are among the most common outcomes of uncorrected postural distortions. Over time, these imbalances can cause increased strain on muscles, tendons, ligaments, and joints, leading to chronic pain, discomfort, and decreased range of motion. Prolonged poor posture can also contribute to the development of structural abnormalities, such as spinal misalignments, disc herniations, and joint degeneration. These conditions can further exacerbate pain and functional limitations, impacting overall physical well-being.

Poor posture can disrupt the flow of information within the nervous system, affecting sensory input and motor control. This disruption can impair the brain's ability to process and integrate sensory information, leading to difficulties in balance, coordination, and proprioception. The brain relies on accurate sensory feedback from the body's posture to maintain optimal functioning, and when this feedback is distorted or compromised, it can have implications for neurodevelopmental processes. Therefore, addressing and correcting postural distortion patterns is crucial for minimizing the potential negative impacts on both physical and neurodevelopmental health.

Pediatric Posture Exercise Plan

Implement the Pediatric Posture Exercise program to support better postural health. The program focuses on three types of exercises:

1. Alignment
2. Balance
3. Core Control

Perform the exercises two times per day, in the morning before school and in the afternoon after school.

ALIGNMENT EXERCISES

Neck Retractions

- Stand up straight in proper posture
- Retract your chin back so your ears are aligned over your shoulders
- Keep your eyes parallel to the ground
- Retract your neck back and hold for 10 seconds
- Perform 5 repetitions holding for 10 seconds each

Posture Angels

- Begin by standing in proper posture
- Extend your arms overhead
- Bring your arms to 90 degrees on both sides (or lower if you can) by tightening the muscles between your scapulae
- Repeat by bringing your arms to 90 degrees, then straightening again
- If performing against a wall, keep the back of your head, your back, and your arms touching the wall
- Perform 5 slow and controlled repetitions, holding each repetition for 10 seconds

Super Kids

- Begin by lying face down on a mat with your arms out to your sides
- Raise your head and your upper body off the mat
- Raise your feet and your lower legs off the mat
- Contract the muscles in your upper back and your gluteals, and keep your neck in a neutral position
- Hold this position for 30 seconds, and repeat 3 times
- Work up to holding the position for 1 minute

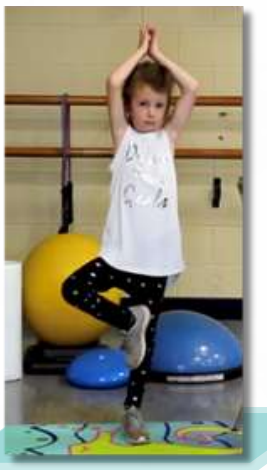
Ball Posture

- Begin by sitting up straight in proper posture on an exercise ball
- Slowly walk your feet forward and lower your back over the exercise ball
- Outstretch your arms overhead
- Open your chest and feel a nice stretch in your chest, back, and arms
- Hold the stretch for 30 seconds
- Slowly raise your body back to a sitting position by walking your feet back and raising up
- Please Note: if you feel off balanced, perform Ball Stretch near a wall or something to hold on to

BALANCE EXERCISES

One Leg Balance

- Stand on one leg
- Bring your other leg up to 90 degrees
- If you feel unstable or off balance perform this balance exercise by a wall or something to hold on to
- Keep your arms by your sides
- Focus on balancing upright with proper posture
- Hold the balance pose for 30 seconds on each leg
- If you begin to wobble or get off balance, put your leg down, re-center your balance, and then continue performing One Leg Balance



Tree Pose

- Stand on one leg
- Bring your other foot to your knee that you balancing on, opening your hip with your other knee out to the side
- If you feel unstable or off balance perform this balance exercise by a wall or something to hold on to
- Begin with your hands on your hips, if you feel balanced, you can make the pose more challenging by raising your arms overhead
- Focus on balancing upright with proper posture
- Hold the balance pose for 30 seconds on each leg
- If you begin to wobble or get off balance, put your leg down, re-center your balance, and then continue performing Tree Pose
- Please Note: this is a challenging exercise, make sure there are no obstacles that you could run into or trip over. Be safe and aware of your surroundings while performing this exercise.

CORE CONTROL EXERCISE

Plank

- Begin by lying face down on a mat with your arms bent underneath your shoulders
- Press your toes into the ground and raise your body up so you are balancing over your arms
- Make sure your back is straight, your neck is in a neutral position, and your shoulders are aligned over your elbows
- Hold the plank position for 30 seconds feeling a strong contraction in your core
- Repeat 3 times
- Work up to holding the contraction for 1 minute each