Be Well Aware – Health Article

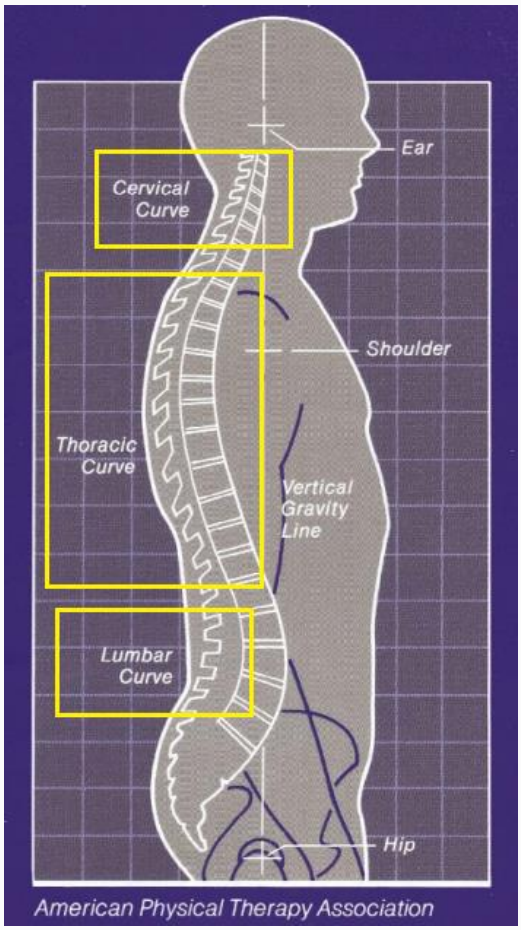
Understanding the Spinal Curves & Back Health

Natural Curves of the Spine

A healthy spine has a natural S-shaped curve when viewed from the side. This shape helps distribute the body's weight evenly, including during movement or exercise. This S-shaped spine can be broken down into three curves:

- The cervical spine curve, located in the neck, curves inward, keeping the head upright. An inward curve of the back is called a lordotic curve.
- The thoracic spine, located in the upper back, naturally has a outward curve, meaning the center of the curve rounds away from the body. An outward curve of the spine is called a kyphotic curve.
- The lumbar spine curve, located in the lower back, has a lordotic curve, similar to the cervical spine curve.

While a natural curve is healthy, any curve of the spine can be exaggerated in any plane, leading to pain, deformity, and disfunction. Some abnormalities may require surgery as treatment, but many can be prevented or improved through exercise.



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What causes an abnormal spine curve?

Some abnormalities come down to genetics and can not be prevented. The most common cause of abnormal spine curvatures in previously healthy spines is poor posture.

The backbone is comprised of many small bones stacked on top of each other with disks in between. Because the spine is responsible for distributing where weight is being held throughout the body, it will naturally compensate for any imbalances.

Slouching in a chair, for example, puts tremendous stress on the body over time. People of all ages will immediately feel back or neck discomfort after sitting or standing for long periods of time. This contributes to the statistic that over one third of Americans over the age of 50 have chronic back or neck problems.

When one stands for a long period of time, the muscles that are "holding good posture" eventually get tired, and the body will naturally redistribute the body weight to lighten the load for those muscles. As muscles continue to tire out, the back continues picking up more of the load, acting as a counterbalance.

Standing is just one example. If you are in a position with poor posture, your bones are not properly aligned. If the bones are not properly aligned, the involved muscles, joints, tendons, and ligaments all take on more strain, often beyond their natural function.

Abnormalities and Exercise

The most common abnormality is lordosis, which often presents itself as an anterior pelvic tilt. This indicates that the abdominal muscles need strengthening to help even out the pelvis, instead of letting the lower back compensate and carry the load.

To improve lordosis in the lower back, start with core strengthening exercises that require you to keep the pelvis neutral. Examples include all plank variations, crunching exercises that involve no hip movement, or laying single leg raises.

The next most common abnormality is thoracic kyphosis, which is an exaggerated curve that the thoracic spine naturally has. It often presents itself as a rounded or hunched back.

To improve thoracic kyphosis, we need to strengthen the muscles that counteract the pull of the spine forward. These exercises would focus on thoracic extension, which is essentially the opposite of thoracic kyphosis. A great exercise to start with is a lying superman, with an emphasis of raising the chest off of the ground. Incorporating different variations of the back row will also help pull the shoulders back, which will reduce the forward pull on the spine.

The last common spinal abnormality is scoliosis. If you were to look at a healthy spine from the back, it should be s straight line down. With scoliosis, the spine has a sideways curve that could present itself as an "S" or "C" shape in either direction. While exercising is important to keeping scoliosis of the spine healthy, it's advised that you speak with a doctor, chiropractor, or physical therapist to determine what exercises may cause more harm than good.

References

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