

HEALTH IN MOTION

UPTOWN PHYSICAL ❖ THERAPY ❖

SPOTLIGHT: ASSESSING POSTURE

Postural imbalances take on many forms from the most conspicuous being clients with severe scoliosis, osteoporosis, or hemiplegia to the more subtle deviations involving a forward head alignment, protruding abdomen, hyperextending knees, slumped thoracic spine, elevated ilium or winging scapula.

Some causes of poor posture are fixed or structural, such as scoliosis or osteoporosis. These deformities involve mainly changes in bone and are not easily correctable without surgery. Fixed postural imbalances may result from congenital anomalies, disease, trauma or developmental problems. (1)

Other causes of faulty posture are flexible or positional, such as poor awareness resulting in a slumped sitting posture during daily activities. Occupational or sport demands may also place unusual stress on alignment.

Sometimes an injury leads to poor postural alignment or gait deviations, in turn causing further imbalances and pain. For example, a sprained ankle causing a client to walk with a limp may produce lower back and contralateral hip pain over time. A shoulder injury often leads clients to "protect" their arm by keeping it tucked in close to the body. This static positioning may in time, cause neck pain, mid back pain or headache. (2)

Conversely, poor postural habits over prolonged periods can cause injury. This microtrauma is the result of the cumulative effect of repeated chronic stress over a long period of time. Clients who stand or sit for long periods may begin to slouch causing their postural muscles to work continuously in a lengthened position against gravity. These abnormal stresses cause excessive wearing of

the articular surfaces of joints and produce osteophytes (bone spurs), which represent the body's attempt to alter its structure to accommodate these repeated stresses. The soft tissue (e.g. muscles, ligaments, tendons) may become weakened, stretched, or traumatized by the increased stress. (1)

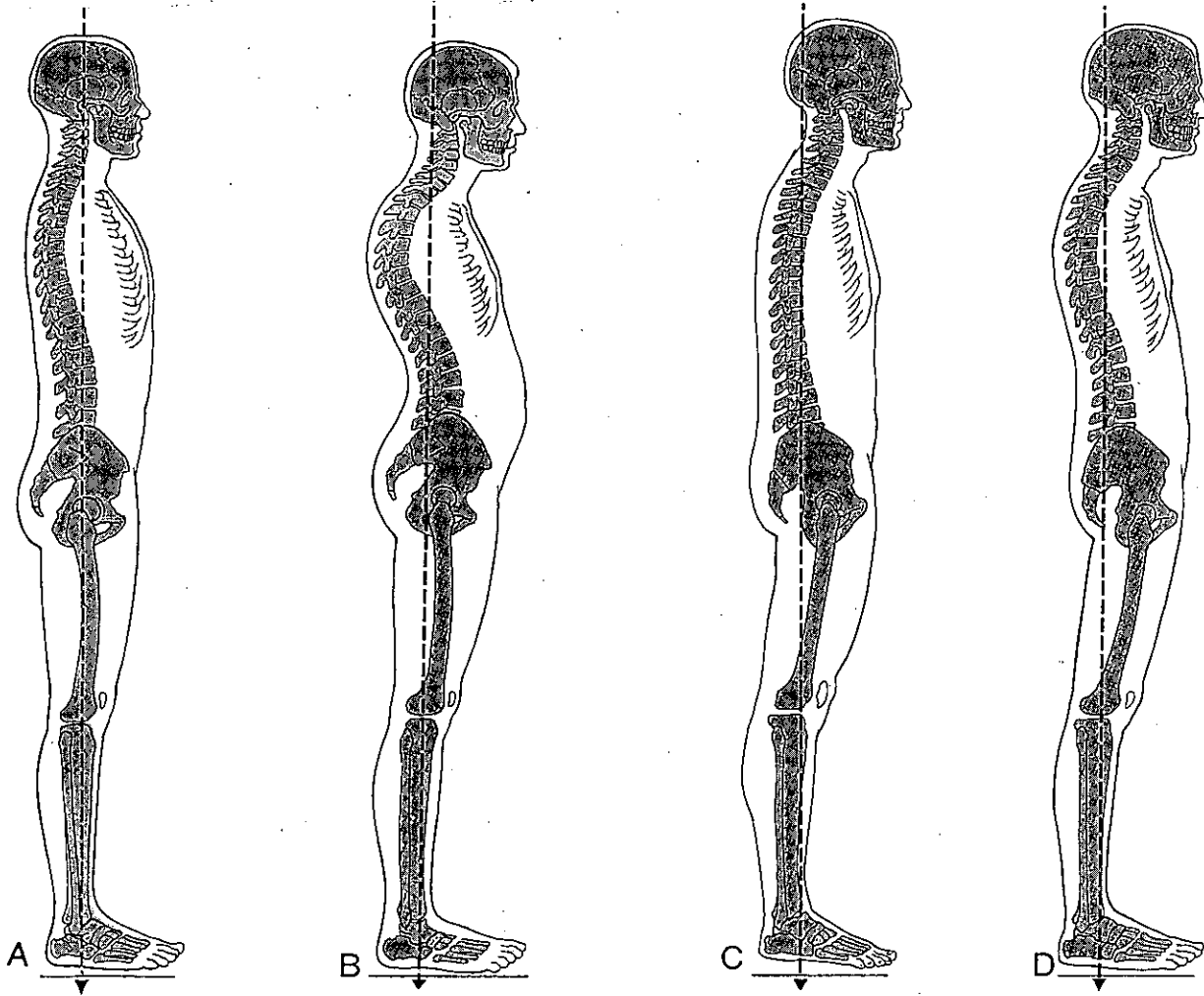
After a thorough assessment of postural imbalances throughout the spine and extremity joints as indicated, treatment at Uptown Physical Therapy includes a combination of postural/body mechanics instruction to improve awareness of alignment during daily activities, manual "hands-on" therapy to increase joint mobility and reduce muscular tension, and specialized therapeutic exercise to strengthen weakened muscles and lengthen shortened muscles. This helps to restore the natural curves of the spine. Pilates exercises are often used to help promote optimal musculoskeletal performance by focusing of core stability, neutral alignment and patterned breathing. (3)

We try to encourage clients that "Good posture is not an end in itself, but a part of general well-being" (2) ongoing throughout one's lifetime.

References:

1. Magee, D.J. 2002. Orthopedic Physical Assessment, Fourth Edition, Philadelphia, PA: Saunders.
2. Kendall, F. P., McCreary, E.K. 1993. Muscles, Testing and Function, Fourth Edition, Baltimore, MD: Williams and Wilkins.
3. Stott-Merrithew, M. 2003. Stott Pilates Comprehensive Matwork, Third Edition, Toronto, Canada: Merrithew Corporation.

FOUR TYPES OF POSTURAL ALIGNMENT



A
Ideal Alignment

B
Kyphosis-Lordosis Posture

C
Flat-back Posture

D
Sway-back Posture (2)

Postural Defect	Muscles Commonly Shortened	Muscles Commonly Weakened
Swayback Posture	Upper abdominals Internal intercostals Hip extensors Lower lumbar extensors	Lower abdominals Lower thoracic extensors Hip flexor muscles
Lordotic/Kyphotic Posture	Lumbar extensors Hip flexors Intercostales Pectoralis major Serratus anterior Levator scapulae Upper trapezius	Upper and lower abdominals Thoracic erector spinae Rhomboids Middle and lower trapezius
Flat Back Posture	Abdominals Hip extensors Thoracic erector spinae Scapula retractors	Lumbar extensor muscles Hip flexor muscles Scapular protractor muscles Anterior intercostal muscles

From Giallonardo, L.M.: Posture. Orthopedic Physical Assessment, Philadelphia, Elsevier Sciences, 2002, p.883

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