

POSTURE





- ❧ Posture Is a position or attitude of the body a relative arrangement of body part for a specific activity or a characteristic manner of bearing the body
- ❧ POSTURE acronym for easy reference:
- ❧ P:-Pelvis in neutral, with weight distributed
- ❧ O:-on the whole foot
- ❧ S:-Stable joints
- ❧ T:-Tight abdominals
- ❧ U:-upright ribs
- ❧ R:-retracted shoulders
- ❧ E:-ear over shoulder



Types:

Inactive

Active:

Static

Dynamic

POSTURAL REFLEX



- ❧ 1. Muscle
- ❧ 2. Eyes
- ❧ 3. Ears
- ❧ 4. Joint Structure
- ❧ 5. Skin sensation also plays a part, eg. soles of the feet, when the body is in standing position.
- ❧ Impulses from all these receptors are conveyed and coordinated in the central nervous system.



- ❧ Postures are of 2 types
- ❧ Good/ correct posture
- ❧ Bad / faulty posture.

GOOD POSTURE



- ❧ Good posture is the state of muscular and skeletal balance that protect the supporting structures of the body against injury or progressive deformity irrespective of the attitude.
- ❧ A stable psychological background Joy, Happiness- Posture in which position of extension.
- ❧ Sad, Unhappy- In which position of flexion.
- ❧ Position in which minimum stress is placed on each joint.

POOR POSTURE



- ❧ Any position that increases stress on each joint.
- ❧ Birth E
- ❧ Entire spine concave forward (flexed)
- ❧ PRIMARY CURVES
 - ❧ Thoracic spine
 - ❧ Sacrum
 - ❧ Developmental (usually around 3 mos.)
- ❧ SECONDARY CURVES
 - ❧ Cervical spine
 - ❧ Lumbar spine



- ❧ Postural developmental factors
- ❧ Bony contours
- ❧ Laxity of ligamentous structures
- ❧ Fascial & musculotendinous tightness
- ❧ Muscle tonus
- ❧ Pelvic angle
- ❧ Joint position & mobility
- ❧ Neurogenic outflow & inflow

POOR POSTURE



- ❧ Causes
- ❧ POSITIONAL FACTORS:
 - ❧ Appearance of increased height (social stigma)
 - ❧ Muscle imbalances/ contractures
 - ❧ Pain
 - ❧ Respiratory conditions



❧ STRUCTURAL FACTORS:

❧ Congenital anomalies

❧ Developmental problems

❧ Trauma

❧ Disease

POSTURAL EXAMINATION

- ∞ Anterior view
- ∞ Lateral view
- ∞ LATERAL VIEW:
 - ∞ The ear lobe
 - ∞ Spinal segment
 - ∞ Shoulder
 - ∞ The chest, abdominal & the back muscles
 - ∞ No chest deformity
 - ∞ The pelvic angle
 - ∞ The knees

ANTERIOR VIEW



- œ Head straight on shoulders
- œ Posture of jaw
- œ Tip of nose
- œ Upper trapezius neck line
- œ Shoulders level
- œ Clavicles/ AC joints
- œ Sternum & ribs
- œ Waist angles & arm positions
- œ Carrying angles



- ∞ Iliac crests
- ∞ ASIS
- ∞ Pubic bone level
- ∞ Patellae
- ∞ Knees
- ∞ Fibular heads
- ∞ Malleoli
- ∞ Arches
- ∞ Foot rotation

FAULTY POSTURE



- ❧ Lordotic posture
- ❧ Kyphotic posture / Round back
- ❧ Scoliotic posture
- ❧ Sway back posture / slouched posture
- ❧ Flat back posture
- ❧ Flat neck posture
- ❧ Forward head posture

5 TYPES OF POSTURE

 BRACEABILITY



HEALTHY



KYPHOSIS



FLAT BACK



SWAYBACK



FORWARD
HEAD

LORDOSIS



- ❧ Lordosis is the normal curve (anterior convexity) of cervical and lumbar spine which is found all normal individual pathologically.
- ❧ Exaggeration of normal curve in cervical and lumbar spine.

LORDOSIS



❧ CAUSES:

- ❧ Weakness of abdominals muscle
- ❧ Tightness or contracture of hip flexor (iliopsoas)
- ❧ Congenital problems such as bilateral congenital dislocation of hip
- ❧ Pregnancy
- ❧ High heel shoes / foot wears
- ❧ Spondylolisthesis
- ❧ Anterior tilt of pelvis as a result of weak extensor of hip and Abdominals
- ❧ Tightness or shortening of cervical extensor

TREATMENT



- ❧ Mobilization of the lumbar spine.
- ❧ Anterior stretching of the lumbar spine
- ❧ Strengthening of the abdominals, glutei and hamstring.
- ❧ Training in grade correction of pelvic tilt
- ❧ Toe touching in long sitting or forward bending sitting exercise
- ❧ Spinal extension or hyper extension should be strictly avoided.
- ❧ Treat the cause of increase lumbar lordosis.

KYPHOSIS/ ROUND BACK

- It is a faulty posture in which lumbar spine and cervical spine get hyper extended while thoracic spine get flexed and head .become slightly forward

COMMON CAUSES



- ❧ Shortening or tightness of extensors of cervical spine and lumbar spine and flexor of hip joint.
- ❧ Weakness of neck flexors ,upper back extensors (erector spinae) and Hamstring muscle.
- ❧ Bony anomaly
- ❧ Ankylosing spondylitis.
- ❧ Other congenital anomalies.

TREATMENT



- ☞ Relaxation
- ☞ Repeated stretching session
- ☞ Posture of head, neck and shoulder
- ☞ Mobilization of the whole spine
- ☞ Resistive exercise for longitudinal and transverse back muscle
- ☞ Controlled pelvic tilt

SCOLIOSIS



∞ Lateral curvature of the spine.

STRUCTURAL SCOLIOSIS:

∞ Neuromuscular disease

∞ Osteopathic disorder

∞ Idiopathic disorder.

∞ NON -STRUCTURAL:

∞ Leg length discrepancy, either structural or functional,

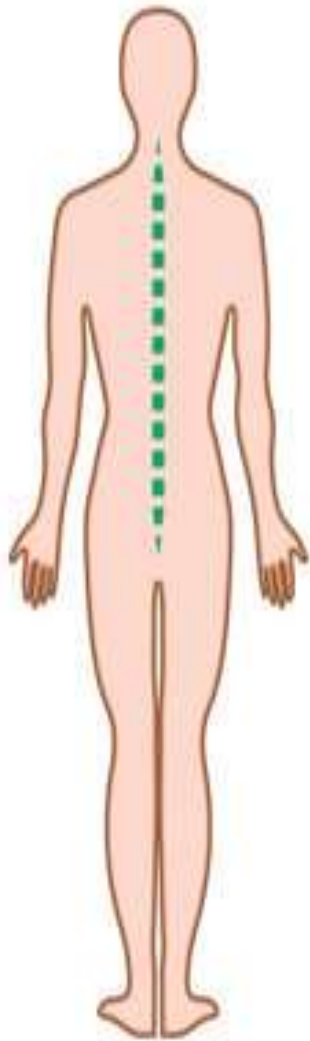
∞ Muscle guarding or spasm

∞ habitual or asymmetric posture.

TREATMENT



- ∞ Active Correction with postural adaptation
- ∞ Passive Correction by Hanging
- ∞ Educate the patient by active effort
- ∞ Relaxation technique
- ∞ Repeated sessions of maintenance
- ∞ General free mobility exercises
- ∞ Deep breathing
- ∞ Balance Exercises
- ∞ Traction



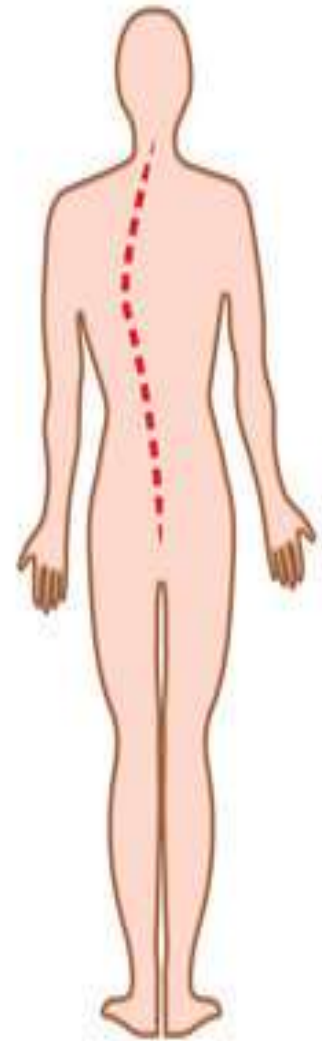
Healthy



Kyphosis



Lordosis



Scoliosis

SWAY BACK POSTURE/SLOUCHED

- ❧ Faulty posture
- ❧ Head becomes slightly forward
- ❧ Extension of cervical spine,
- ❧ Flexion of thoracic spine.
- ❧ Loss of lordosis of lumbar spine extension of hip and knee joint



∞ Causes:

∞ Tightness of hamstring and abdominal muscle

∞ Weakness of iliopsoas

∞ Bony anomaly

TREATMENT



- ❧ Stretching of hamstring and abdominal muscle
- ❧ Relaxation of the body
- ❧ Strengthening of iliopsoas
- ❧ Maintain position of head is backward, extension of thoracic Spine
- ❧ Maintain normal lordosis of lumbar spine
- ❧ Always standing in erect position

FLAT BACK POSTURE



- ❧ Whole lumbar and thoracic spine gets flattened.
- ❧ Flattening of normal lumbar lordosis
- ❧ CAUSES:
 - ❧ Tight trunk flexor (rectus abdominis and intercostal) and hip extensor muscle.
 - ❧ Stretched and weak lumbar extensor and possibly hip flexor muscle..

TREATMENT



- ❧ Increase lumbar lordosis which results in forward tilting of pelvis.
- ❧ Maintenance of arch by active holding and also passive support in sitting are effective in maintaining lordosis
- ❧ Mobility and strengthening exercise of lumbar extensor are important.
- ❧ Stretching of trunk flexor and hip extensor muscle.

FLAT NECK POSTURE



- ∞ Increased upper flexion of the occiput on atlas
- ∞ Decreased lordosis of the cervical spine.
- ∞ CAUSES:
 - ∞ Short anterior neck muscle
 - ∞ High pillow under the head
 - ∞ Spasm of cervical spine

TREATMENT



- Relaxed passive movement
- Strong isometric exercise of the cervical muscle are maintained or improved.
- Stretching the anterior neck muscle.
- Strengthening exercises of levator scapulae, sternocleidomastoid and scalene muscle.
- Improvement of the posture and function of neck.

FORWARD HEAD POSTURE

- ❧ Excessive extension of upper cervical spine
- ❧ Flexion of the lower cervical and upper thoracic spine.
- ❧ CAUSES:
 - ❧ Working on computer which is slightly higher than the position of head.
 - ❧ High pillow under the neck
 - ❧ Tight levator scapulae, Sternocleidomastoid, Scalene and Sub-occipital muscle.
 - ❧ Stretched and weakened anterior throat muscle and lower cervical and upper thoracic erector spinae muscle.

TREATMENT



- ❧ Stretching of levator scapulae, Sterocledomastoid, Scalene and Sub-occipital muscle.
- ❧ Avoid pillow or small pillow under the neck.
- ❧ PNF techniques.
- ❧ Strong isometric exercise to the cervical muscle are to be maintained or improved.