

# Maintaining Posture

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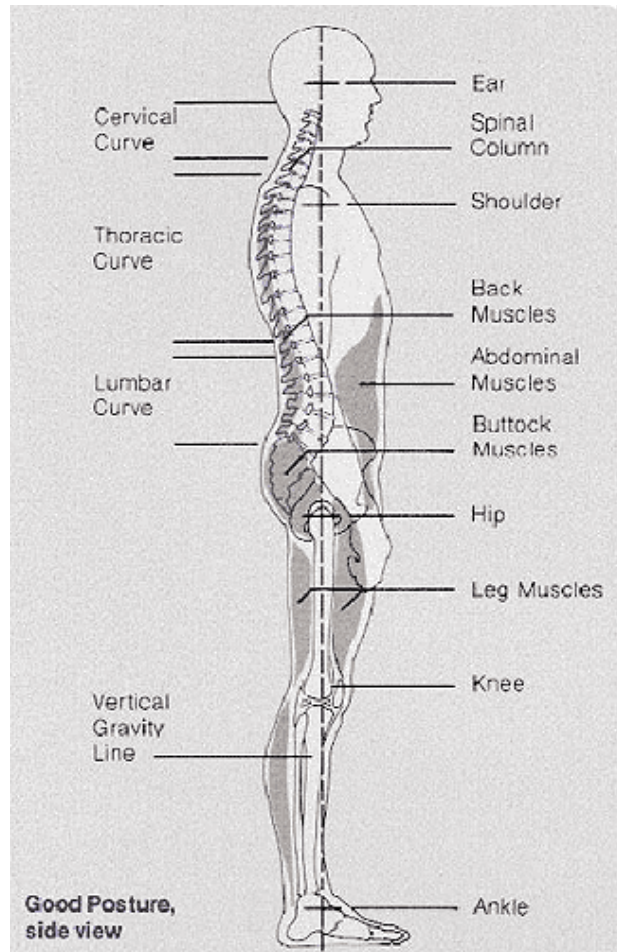
Department of PM&R

# Posture - Definition



- Noun:
  - the way in which your body is positioned when you are sitting or standing
- Verb:
  - to assume a posture; *especially* : to strike a pose for effect

# Ideal Standing Posture



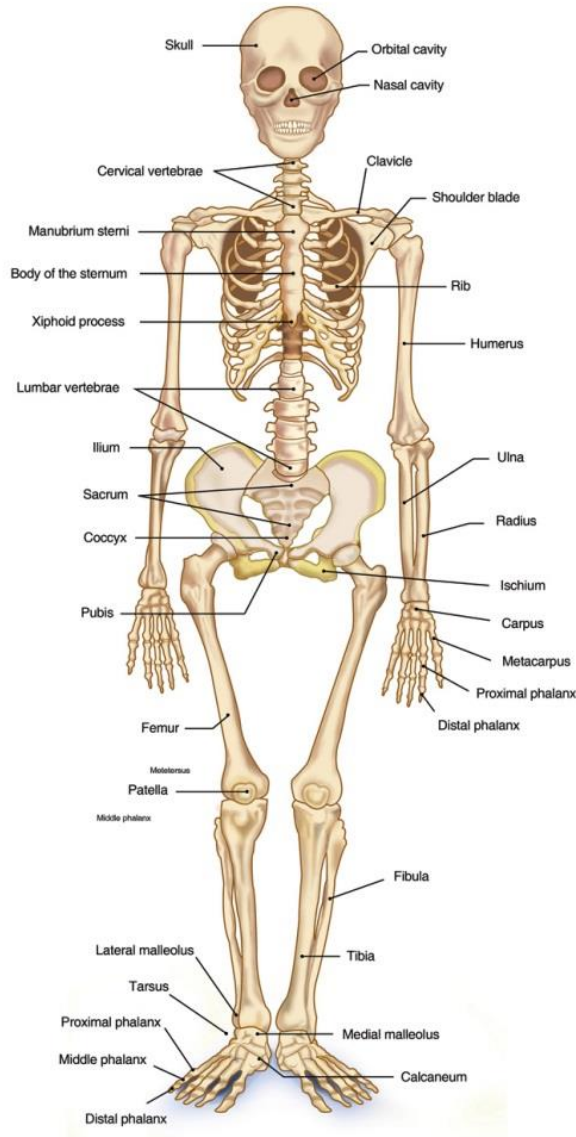
- Head looking straight ahead
- Ear centered over shoulder
- Shoulders open
- Arms relaxed
- Torso balanced over hips
- Knees slightly bent
- Feet shoulder width apart, weight even, over arch of foot

# Postural Determinants

- Skeletal anatomy
- Muscle function
- Joint function
- Connective tissue
- Weight distribution
- Genetics
- Habits
- Pain



## The Human Skeleton



# Posture

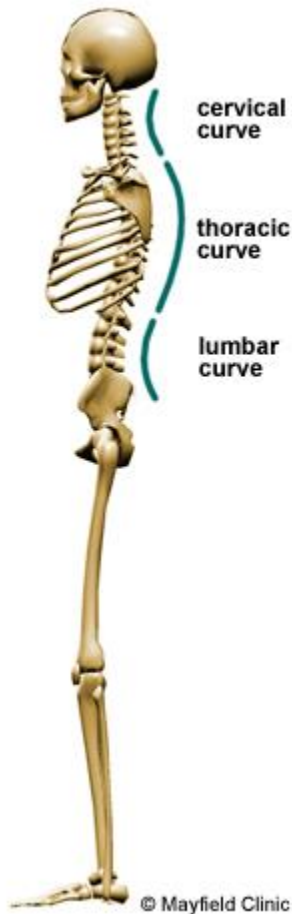
- Skeletal Alignment
  - Spine
  - Pelvis
  - Lower extremities
  - Joints
  - Feet

# Posture



- Muscles
  - Strength
  - Flexibility
  - Coordination
  - Balance
- Connective Tissue
  - Strength
  - Flexibility
  - Integrity

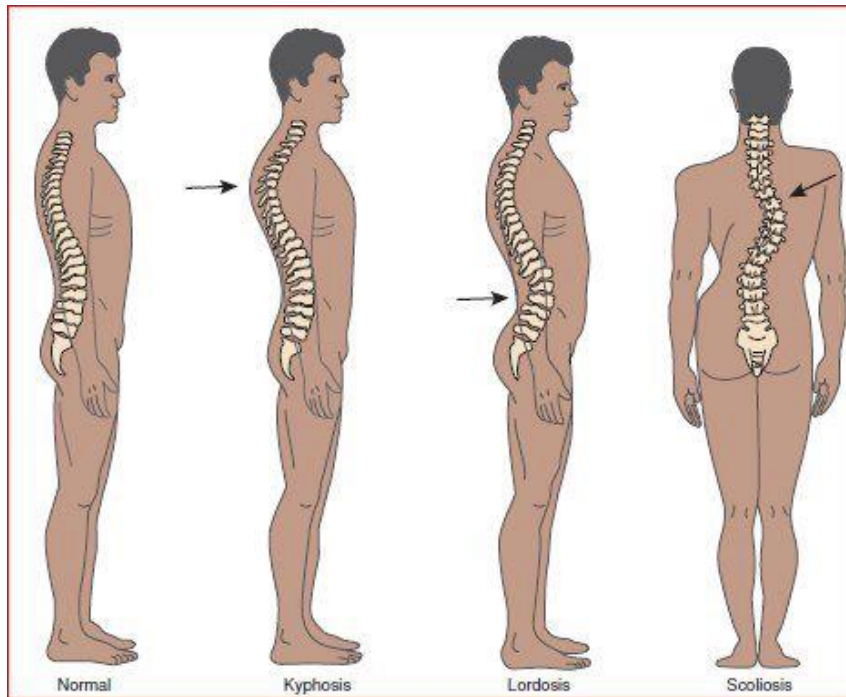
# Normal Spinal Curves



- A healthy back has three natural curves:
  - An inward or forward curve at the neck (cervical curve)
  - An outward or backward curve at the upper back (thoracic curve)
  - An inward curve at the lower back (lumbar curve)

# Spinal Asymmetry

- Abnormal Spinal Curves

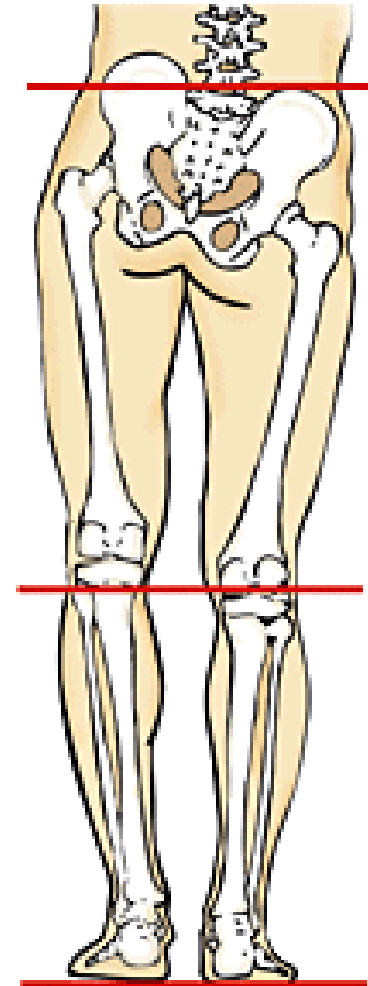


- May be primary or secondary
- May be flexible or fixed
- May be due to bone abnormalities
- May be balanced or unbalanced
- May or may not cause symptoms



# Lower Extremity Asymmetry

- Skeletal Asymmetry
  - Leg length difference
  - Pelvic tilt/ rotation
  - Joint problem
  - Muscle weakness
- Causes may include:
  - Genetics
  - Illness (polio)
  - Injury
  - Degeneration



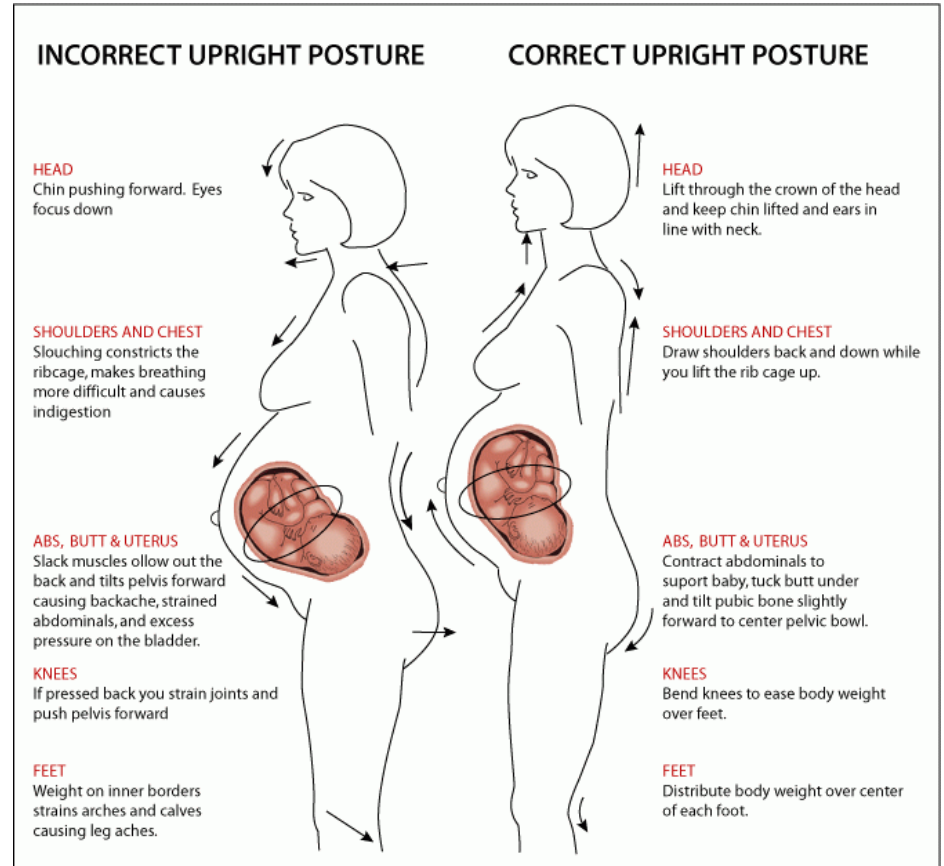
# Muscle Imbalance

- Poor or uneven support
- Altered body mechanics
- Changes in joint and/ or spine alignment
- Altered growth of bones
- Lax or tight tendons, ligaments and connective tissue



# Weight Imbalance

- Increases load on muscles
- Changes center of gravity
- Affects balance
- Alters body mechanics



# Postural Factors in a Polio Survivor

- Fixed
  - Genetics
  - Skeletal anatomy
  - Muscle weakness
  - Joint function
  - Body mechanics
- Modifiable
  - Weight distribution
  - Muscle strength
  - Muscle flexibility
  - Connective tissue
  - Joint function
  - Body mechanics
  - Habits
  - Pain



# “Good” Posture

- Keeps bones and joints in the correct alignment so that muscles are being used properly.
- Helps decrease the abnormal wearing of joint surfaces that could result in arthritis.
- Decreases the stress on the ligaments holding the joints of the spine together.
- Prevents the spine from becoming fixed in abnormal positions.
- Prevents fatigue because muscles are being used more efficiently, allowing the body to use less energy.
- Prevents strain or overuse problems.
- Prevents backache and muscular pain.
- Contributes to a good appearance

