

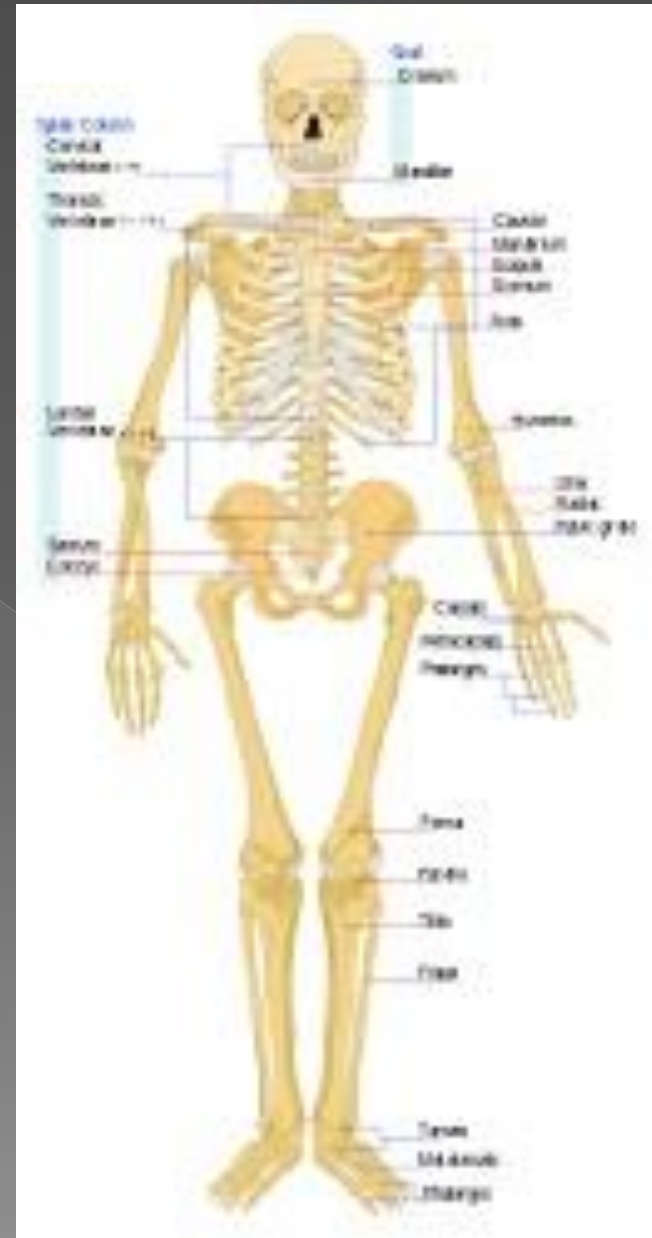
Musculoskeletal assessment

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Muscular system Skeletal system



What to be assessed

- a. bone integrity
- b. posture
- c. joint function
- d. muscle strength
- e. gait
- f. ability to perform activities of daily living

A) Health history:

- Present Health History

- - Ask the patient about any symptoms indicating musculoskeletal impairment include pain, weakness, deformity, limitation of movement, stiffness, and joint crepitation, Ankylosis, Contracture, Crepitation , Dislocation , Atrophy

Past Health History.

- ◎ - Question the patient about past illnesses that are known to affect the musculoskeletal system either directly or indirectly, e.g. tuberculosis, poliomyelitis, diabetes mellitus, parathyroid problems, rickets, and neuromuscular disabilities.

Nutritional Assessment

- ◉ Assess intake of vitamins C and D, calcium, and protein.
- ◉ Ask about abnormal nutritional patterns that can predispose individuals to problems such as osteoporosis.
- ◉ Assess body weight, as obesity places additional stress on weight-bearing joints such as the knees, hips, and spine.

(B) Physical Examination:

□ Inspection.

- ⊙ A systematic inspection starting at the head and neck and proceeding to the upper extremities, lower extremities, and trunk.
- ⊙ Note the patient's general body build and symmetry of joints.
- ⊙ Observe for any swelling, deformity, nodules or masses, and discrepancies in limb length or muscle size.

Assessment of the Spine

- ⦿ Inspection of the spine is carried out with the patients gown open to expose his entire back, buttocks, and legs.
- ⦿ Differences in height of the shoulders or iliac crests are noted.
- ⦿ The straight line of the vertebral column is inspected with the patient erect and bending forward.

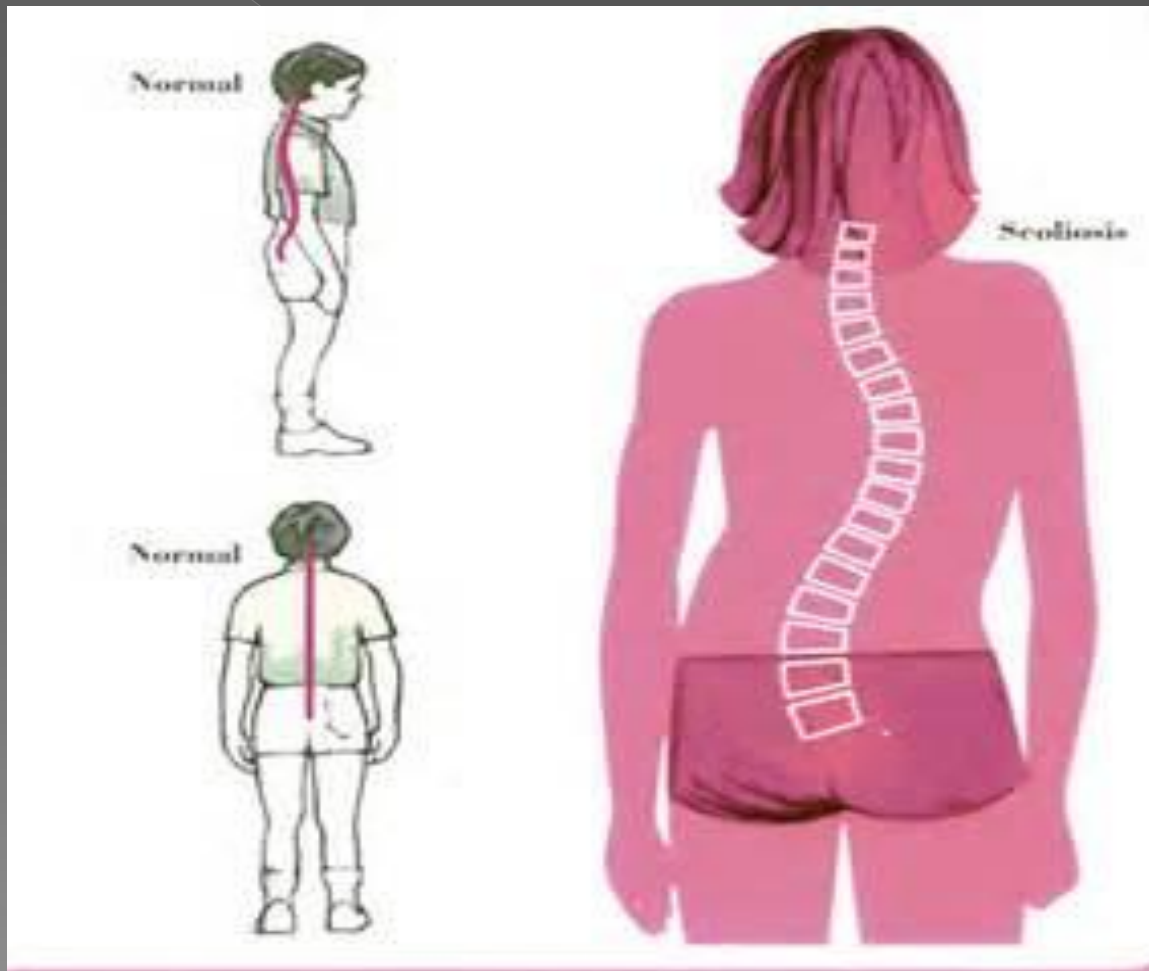
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- ◎ Lordosis (swayback; exaggeration of the lumbar spine curve).



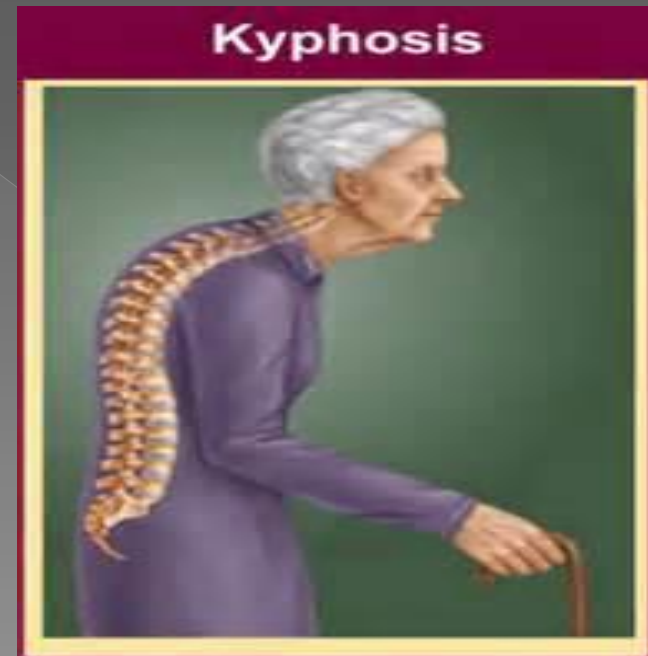
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- ⦿ Scoliosis (a lateral curvature of the spine)



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- Common deformities of the spine that may be noted include: Kyphosis (an increased roundness of the thoracic spine curve) .



□ Palpation.

- ⊙ Palpate area of complaint or that appears abnormal on inspection.
- ⊙ Palpate both muscles and joints to evaluate skin temperature, local tenderness, swelling, and crepitus.

□ Motion.

- ⊙ Assess patient's joint mobility, and carefully evaluate both active and passive range of motion.
- ⊙ Ask the patient if activities such as eating and bathing need to be performed with assistance or cannot be done at all.

□ Muscle-Strength Testing.

- ◉ Grade the muscles' strength during contraction bilaterally, with full resistance to opposition.
- ◉ Have the patient apply resistance to the force the examiner is exerting.







Diagnostic Studies of Musculoskeletal System

- Standard x-ray
- Diskogram: X-ray of cervical or lumbar inter-vertebral disc after injecting contrast media. It permits visualization of inter-vertebral disc abnormalities.
- Computed tomography (CT) scan
- Magnetic resonance imaging (MRI)
- Myelogram with or without CT: Involves injecting a radiographic contrast medium into sac around nerve roots. CT scan may follow.

- ⦿ Bone scan
- ⦿ Arthroscopy
- ⦿ Arthrocentesis: Incision or puncture of joint capsule to obtain samples of synovial fluid from within joint cavity or to remove excess fluid.
- ⦿ Rheumatoid factor (RF)
- ⦿ Uric acid
- ⦿ C-reactive protein (CRP)

