

UNIT 4 - SKELETAL SYSTEM

Diseases And Disorders Of The Skeletal System

A. **Herniated Disk**

The intervertebral disks are soft pads of cartilage located between each of the vertebrae to absorb shock and provide some flexibility for movement. Within each of these disks is a gelatinous center called the nucleus pulposus. A herniated disk, also known as a ruptured, slipped, or bulging disk, occurs when the nucleus pulposus spills out into the spinal canal and presses on the spinal nerves in that region. The most common location is the lumbosacral area which causes pressure and pain on the sciatic nerve. The patient then experiences numbness, weakness, and/or pain down the affected leg. Treatment may include bedrest, analgesics, hot or cold applications, and may require surgery at some later point.

B. **Osteoarthritis**

Osteoarthritis is a type of arthritis caused by the destruction of cartilage from the joints. This is the most common form of arthritis. It develops from normal wear and tear on the joints. The first symptoms of arthritis are vague and include joint soreness, aching, stiffness, and swelling. Eventually, nodes are noted at the affected site as well as a loss of the range of motion. Treatment involves the use of analgesics to relieve pain, use of steroids to reduce inflammation, and possibly surgical replacement of the joint.

C. **Osteoporosis**

Osteoporosis is a loss of bone mass and bone density which leads to porous bones making them more susceptible to fracture. Although there are no overt symptoms, the bones may now be scanned for density. Women who are small boned, from European or Asian backgrounds, and have a family history should be screened as well as those who have not eaten a calcium rich diet. There are now bone-building drugs available. A calcium rich diet as well as weight bearing exercises to improve muscle mass and bone density are also encouraged.

D. **Scoliosis**

Scoliosis is the abnormal lateral curvature of the spine (vertebral column) resulting in a S-shaped appearance. It is more common in women than men. It causes one hip or one shoulder to be higher than the other. Treatment plans vary with the degree of the severity from a brace to surgical placement of a rod to help keep the spine straight.

E. Spina Bifida

Spina bifida occurs when the posterior part of the vertebrae fails to form properly and does not enclose the spinal cord. The neural deficits seen in the patient will vary with where the impairment occurred. For example, some people are able to walk while other people are confined to wheelchairs. The intake of folic acid (folate) before and during pregnancy seems to reduce the incidence by fifty percent. Surgery may be required to fix the herniation. Experimental surgeries have included surgery on the fetus while he/she is still in utero.

F. Fractures

Fractures or broken bones are caused by the stress on bones placed upon them by trauma or disease conditions. They can occur in any bone of the body and are classified by the fracture -- either by specific names or locations of the bone break.

G. Sprains

Sprains are tears of the ligaments which are holding two bones together.