



Health Concerns

Bone Problems

People with HIV/AIDS are at increased risk of developing certain bone problems. These include osteopenia (bone weakness), osteoporosis (porous bone) and osteonecrosis (bone death). These problems may be due to HIV infection itself or to side effects of the medications used to treat HIV.

Osteopenia and osteoporosis

Bones are made up of minerals, such as calcium, magnesium and phosphorus. Osteopenia is a condition in which bones lose their minerals and become weak. When mineral loss becomes severe, the bones become very thin and easy to break. This condition is known as osteoporosis.

What causes osteopenia and osteoporosis?

As we age, it is natural for our bones to lose their mineral content and become weaker. However, the risk of osteopenia and osteoporosis is increased if you:

- are over 50 years old
- are female
- are Caucasian or Asian
- have low body weight
- lack calcium and vitamin D in your diet
- smoke
- regularly use large amounts of caffeine and alcohol
- do not exercise
- take steroids or certain other medications

Anti-HIV medications can cause negative side effects that may increase your risk of osteopenia and osteoporosis. These include abnormal fat levels in the blood (hyperlipidemia) and abnormal changes in fat production and distribution (lipodystrophy).

What are the symptoms of osteopenia and osteoporosis?

There are no obvious symptoms in the early stages of osteopenia and osteoporosis. However, when bones get really weak fractures may occur. Fractures occur most commonly in the spine, wrists or hips and may cause pain and loss of height.

How are osteopenia and osteoporosis diagnosed?

Osteopenia and osteoporosis are usually diagnosed by a special X-ray known as a DEXA scan (dual energy x-ray absorptiometry). This tells your doctor what your bone mineral density is like. Your bone density is then compared to that of people your age and health to check if your bones are weaker than they should be.



How do you treat osteopenia and osteoporosis?

- You can help strengthen your bones by taking dietary supplements of calcium, magnesium and vitamin D.
- Your doctor may also prescribe medications such as bisphosphonates (Fosamax and Actonel) and raloxifene (Evista).
- The use of a cane, walker or crutches may help reduce the risk of falls.
- Hormone therapy was used widely in post-menopausal women to prevent bone loss. However, it has been found to increase other problems, so ask your physician for advice on how to best protect bone health after menopause.

Osteonecrosis

Osteonecrosis means bone death. This occurs when the blood supply to the bone is cut off. It is also known as avascular necrosis.

What causes osteonecrosis?

The risk of osteonecrosis increases if you:

- have injuries to your bones and joints
- drink a lot of alcohol
- take steroids or certain other medications
- have high fat levels in your blood

What are the symptoms of osteonecrosis?

Symptoms of osteonecrosis include pain and weakness in the affected area of the body, joint stiffness, muscle pain and spasm, and loss of range of motion. Osteonecrosis often happens in the hip area.

How is osteonecrosis diagnosed?

Magnetic resonance imaging (MRI) is the most sensitive test to diagnose early osteonecrosis. X-rays and CT-scans can also be used to diagnose bone damage in more advanced cases.

How do you treat osteonecrosis?

If you have osteonecrosis, you may benefit from:

- surgery to reinforce the bone, remove the dead bone, or replace the affected bone and joint partially or totally
- pain medications to control the pain associated with this complication
- a cane, walker or crutches to reduce pain and prevent falls

What can I do to prevent bone problems?

Here are some ways to help your bones stay healthy and strong:

- Make sure you get enough calcium, magnesium and vitamin D. Foods that include these nutrients include: low fat milk, yogurt, cheese, canned salmon and sardines with bones, green leafy vegetables, tofu, almonds, beans and peas. You can also take calcium, magnesium and vitamin D supplements.



- Do more weight-bearing exercises such as walking, jogging and dancing, which can help strengthen your bones
- Reduce smoking and your intake of caffeine and alcohol.
- Maintain healthy levels of fat in your blood.
- Reduce your risk of falls.

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