

Osteonecrosis

Osteonecrosis occurs when the bone tissue dies due to a lack of blood supply.

Osteonecrosis literally translates to bone cell death (Greek: osteo = bone, necrosis = cell death). It can lead to a number of tiny breaks within the bone, and eventually its collapse. The blood flow into sections of the bone can be interrupted if the joint ends up dislocated or the bone is fractured. Sometimes the condition is known as avascular necrosis (meaning reduced blood supply causing cell death).

Osteonecrosis is associated with long-term usage of high-dose steroidal medications and too much alcohol consumption. It can also be associated with osteoarthritis.

The hip is the most common of all areas affected by the condition. While the condition can happen to anyone, it often occurs in men who are between 50 and 60 years of age.

In the early to mid-stages, osteonecrosis will usually be diagnosed on MRI which is performed due to unresolved joint pain. In the later stages it will be picked up on X-ray.

Osteonecrosis is very hard to spot by either a doctor or a physical therapist, instead the diagnosis is usually attributed to a problem with the joint such as osteoarthritis, and it is only picked up incidentally on MRI scan when other conservative methods of joint pain treatment have failed.

Initially there are no symptoms, but as the disease develops, you can expect joint pain, bony pain, reduced range of movement in a joint and tenderness over the joint or bone affected. There may also be swelling around the joint.

Osteonecrosis Causes

- The bends from decompression sickness following diving.
- Lupus.
- HIV.
- Radiation therapy and cancer treatment.
- Injury and osteo-arthritis.
- Alcohol abuse.
- Drug use.
- Long term corticosteroid use.
- Following organ transplant.

How to Treat Osteonecrosis:

1. Non-Steroidal Anti-Inflammatory Medication

Medications can help to relieve inflammation and pain associated with osteonecrosis. However, this may not be a long term solution.

2. Osteoporosis Drugs

Some studies have shown that these medications can help to slow the disease progression.

3. Cholesterol Drugs

By reducing the amount of fat lipids in the bloodstream, it can help to prevent any blockages in the vessels causing osteonecrosis to occur.

4. Blood Thinners

For those with clotting disorders, blood thinners might be prescribed to prevent the formation of clots within the vessels that feed the bones.

5. Rehab

Reducing the stress and amount of weight placed on the affected bone might help slow down the damage of the condition. Work with your therapist doing home exercises to help maintain strength to the joint. Certain types of exercises will help you to maintain, if not improve, the movement in the joints. Physical therapists will choose appropriate exercises based on your condition, as well as teach you the proper ways to do them.

6. Manual Therapy

Osteopathy, chiropractic and physiotherapy can all help reduce the biomechanical stress on the joint, as well as improving range of joint movement and reducing localized pain. Many osteopaths also promote that restoring blood flow to a part of the body can significantly improve healing rates.

7. Surgery

Usually this involves joint replacement, depending on the severity/progression of the bone collapse. But in lesser cases it can be treated with a bone graft, osteotomy (where the bone is cut in half and turned in a different direction slightly to offload a particular area), or a bone decompression where the pressure within the bone is lowered allowing blood to re-enter.

Tips:

- Limit the amount of alcohol you consume. Drinking heavily is a major risk factor for the disease.
- Keep your cholesterol levels at a minimum. Tiny fat bits are the most common substance that can block the supply of blood to the bones.
- Monitor usage of steroids.
- Undergoing radiation treatment puts you at an increased risk of getting this condition.
- Receiving large doses of osteoporosis medications via IV can counteract the damage that was caused by cancer within the bones.