

# Osteomyelitis

Osteomyelitis is a bone infection. Infections are able to reach the bone by traveling through the bloodstream or entering from surrounding tissue. It can also begin inside of the bone itself if an injury causes the bone to be exposed to germs. In children, the condition commonly affects the longer bones of the upper arm and legs, while adults are more prone to developing the condition in the bones making up the spine and pelvis. For those with diabetes, osteomyelitis might develop in the feet if there are foot ulcers present.

At one point, the condition was considered incurable, but today, it can be treated successfully. Most individuals require surgery to remove the bone parts that are dead, followed by a round of strong antibiotics for a period of six weeks.

The literal translation of osteomyelitis is bone marrow inflammation (Greek: osteo = bone, myelo = marrow, -itis = inflammation).

Acute osteomyelitis usually occurs in children. Osteomyelitis can occur in adults, but they are usually immunosuppressed, or under heavy drug therapy (or suffering with drug abuse). When it does occur in adults it is usually due to a local bone infection and the staphylococcus organism invading the host. Sometimes osteomyelitis is secondary to tuberculosis.

The most commonly attributed method of infection is via bacteria entering the blood stream, but can be caused by local infection (e.g. in cellulitis, or a tooth abscess) and also following surgery like joint replacement. It can also happen in diabetics who suffer with peripheral neuropathy (causing numbness in the extremities) where a local wound has occurred.

## Osteomyelitis Symptoms

As this is an infection, you can expect symptoms of fever, nausea, over-heating (running a high temperature), chills or shivering, swelling or redness in the area, swelling around the affected bone, and loss of range of movement of the associated joint. The bone will also be tender to touch, and a tender lump may develop.

If you suspect symptoms, you should talk to your GP or doctor straight away. With early treatment the infection can be removed quickly. However, delayed treatment can lead to complications further down the line.

Your GP will probably send you first for blood tests, to check the white blood cell count, and also the ESR or CRP (shows signs of inflammation in the body). If infection is suspected, an antibiotic might be used. Further investigations may be an X-ray or MRI scan.

## How to Treat Osteomyelitis:

### 1. Medication

Bone biopsies reveal what germ caused the infection, so that way an antibiotic can be chosen accordingly based on the type of infection. Antibiotics could be oral in the early stages. In the late stages, antibiotics are often administered for four to six weeks through an IV. If the infection is serious, an additional round of antibiotics might be required.

### 2. Hyperbaric Oxygen Therapy

In those who have difficult osteomyelitis, this therapy might help get the bone more oxygen and promote the healing process. This therapy delivers more oxygen than what would normally be found in the air. It is performed using a pressure chamber resembling a large, clear tube.

### 3. Surgery

Depending on how severe the infection is, surgery might include one or more of the following:

- Draining of the infected area
- Removing the diseased tissue and bone
- Restoring blood flow into the bone
- Removing foreign objects
- Amputating the limb

#### Tips:

- If you are prone to infections, discuss methods for preventing the infection from occurring.
- Reducing the chance of getting an infection will reduce the chance of developing the condition.
- Take precautions to avoid any scrapes and cuts, which provide germs with an easy access route into your body.
- If you happen to get any scrapes or cuts, clean the area quickly and apply a bandage to the wound.
- If you have any wounds, make sure to check them frequently for any signs of infection.