



# PATIENT FACT SHEET

## Osteonecrosis



### CONDITION DESCRIPTION

**Osteonecrosis is a painful condition that involves the death of bone cells due to decreased blood flow.** It is also called avascular (AVA) or aseptic necrosis. Bone collapses, and this often leads to osteoarthritis in nearby joints such as the hips or knees. Shoulders, hands and feet are less often affected. Rarely, osteonecrosis affects the jaw. Osteonecrosis usually occurs between 20 and 50. Bones and marrow need steady blood supply to stay

healthy. Decreased blood flow causes bone cells to die. Corticosteroid use, heavy drinking, lupus and severe trauma or injury may cause osteonecrosis. Bisphosphonates may lead to osteonecrosis of the jaw. Rarer causes of osteonecrosis include HIV, decompression disease ("the bends"), blood disorders such as sickle cell anemia, radiation therapy and organ transplant.



### SIGNS/ SYMPTOMS

**An early sign of osteonecrosis is local pain in the affected bone or joint.** Hip osteonecrosis may cause pain in the groin. Pain from hip or knee osteonecrosis may be worse during weight-bearing or walking. Nearby joints may develop osteoarthritis. Osteonecrosis of the jaw may cause ulcers on gum tissue, exposed jawbone and pain.

Diagnosis of osteonecrosis begins with an X-ray of the painful area. Other imaging tests such as bone scans or magnetic resonance imaging (MRI) may be needed. MRI is effective for early osteonecrosis detection. Osteonecrosis of the jaw often is diagnosed when exposed bone is seen during a mouth or dental exam.



### COMMON TREATMENTS

**Treatment of early osteonecrosis includes pain medications and modifying activity to reduce weight-bearing on affected joints.** Patients with worsening osteonecrosis may have core decompression surgery to remove bone from the affected area and restore blood flow. In more advanced cases of osteonecrosis, osteotomy surgery may remove dead bone and reposition bone to support the weight-bearing joint. Patients with bone collapse may need total joint replacement

of the hip or knee. Another option is bone grafting surgery, where dead bone is removed and replaced with healthy bone from another part of the body to restore blood flow. Some studies show short-term bisphosphonate treatment may slow, improve or prevent bone collapse in the hip or knee. For jaw osteonecrosis, removal of dead tissue, antibiotics and medicated mouthwash are conservative treatments.



### CARE/ MANAGEMENT TIPS

**Steps to prevent osteonecrosis include avoiding heavy drinking and the use of tobacco.** Smoking raises osteonecrosis risk. If patients must take corticosteroids for other conditions, they should take the smallest possible dose for the shortest time necessary. Good dental hygiene and regular dental exams may prevent jaw osteonecrosis. Dental work should be

done before bisphosphonate therapy is started or soon after. Patients should tell their dentist right away if they have jaw pain, swelling or gum redness. If patients develop osteoarthritis, physical therapy may help treat pain and stiffness. An arthritis exercise program may also be helpful for managing arthritis symptoms.