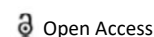




Commentary



## Symptoms of Osteoarthritis Disease and its Causes

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### Description

Osteoarthritis (OA) is a type of degenerative joint disease resulting from the breakdown of joint cartilage and underlying bone that affects one in 7 adults in the United States. It is believed to be the fourth leading cause of disability in the world. The most common symptoms are joint pain and stiffness. Symptoms usually progress slowly over years. At first, they may only occur after exercise, but may change over time. Other symptoms may include joint swelling, reduced range of motion, and, if the back is involved, weakness or numbness in the arms and legs. The joints most commonly involved are the two near the ends of the fingers and the joint at the base of the thumb; knee and hip joints; and joints of the neck and lower back. Joints on one side of the body are often affected more than the other. Symptoms can interfere with work and normal daily activities. Unlike some other types of arthritis, only the joints are affected, not the internal organs.

Causes include previous joint injury, abnormal joint or limb development, and factors. The risk is greater in those who are overweight, have legs of different lengths, or have jobs that lead to high levels of joint stress. Osteoarthritis is believed to be caused by mechanical stress on the joint and low-grade inflammatory processes. It develops when cartilage is lost and the underlying bone is affected. Because pain can make exercise difficult, muscle wasting can occur. Diagnosis is usually based on signs and symptoms, with medical imaging and other tests used to support or rule out other problems. Unlike rheumatoid arthritis, osteoarthritis does not make the joints warm or red

### Symptoms

The main symptom is pain, causing loss of ability and often stiffness. The pain is usually worsened by prolonged activity and relieved by rest. Stiffness is most common in the morning and usually lasts less than thirty min-

utes after beginning daily activities, but may return after periods of inactivity. Osteoarthritis can cause a crackling sound (called “crepitus”) when the affected joint is moved, especially the shoulder and knee. The person may also complain of joint locking and joint instability. These symptoms would affect their daily activities due to pain and stiffness. Some people report increased pain associated with low temperature, high humidity, or a drop in barometric pressure, but studies have mixed results.

Osteoarthritis commonly affects the hands, feet, spine, and large weight-bearing joints such as the hips and knees, although theoretically any joint in the body can be affected. As osteoarthritis progresses, movement patterns (such as walking) are usually affected. Osteoarthritis is the most common cause of joint effusion of the knee.

Hard bony enlargements called Heberden’s nodes (at the distal interphalangeal joints) or Bouchard’s nodes (at the proximal interphalangeal joints) can form in smaller joints, such as the fingers, and although not necessarily painful, they limit significant movement of the fingers. Osteoarthritis of the toes can be a factor in the formation of bunions that cause them to be red or swollen.

### Causes

Damage caused by mechanical stress with insufficient self-repair of the joints is considered to be the primary cause of osteoarthritis. Sources of this stress may include bone malalignment due to congenital or pathogenic causes; mechanical injury; excess body weight; loss of strength in the muscles supporting the joint; and peripheral nerve damage, leading to sudden or uncoordinated movements. However, exercise, including non-injury running, was not found to increase the risk of knee osteoarthritis. Joint cracking was not found to play a role either. The risk of osteoarthritis increases with age.