

Osteoarthritis

What is osteoarthritis?

Osteoarthritis (OA) is the most common form of **arthritis**, affecting about 27 million people in the United States. Also called degenerative joint disease (DJD), OA is associated with **joint** injury and with the aging process. It is a **chronic** disease that causes deterioration of the joint **cartilage** and the formation of new bone (bone spurs) at the edges of the joints. Cartilage and synovial fluid are meant to provide a smooth, low friction transition between the ends of bones. When cartilage loses its elasticity and wears down, joint movement becomes less smooth. Eventually cartilage can completely erode and the opposing bone ends can rub together. This leads to pain that may be intermittent or chronic, to stiffness in the morning and after rest, to small pieces of bone and fragments of cartilage in the remaining synovial fluid, and to a loss of mobility.

OA occurs in both men and women, although it is more common in men before age 45 and in women after that age. It is also common in athletes who sustain multiple joint injuries over time. The primary cause is mechanical (for example, joint damage caused by running or excess weight-bearing) but, more rarely, it may be metabolic, genetic, or chemical in nature. Obesity, muscle weakness, and other diseases such as **rheumatoid arthritis**, **septic arthritis**, **gout**, **Paget's disease**, and **hemochromatosis** can increase the risk of developing OA and can exacerbate the symptoms associated with it. The joints most commonly affected by OA are those of the hips, knees, hands, and spine.

Testing

The goals of testing are to diagnose OA, to distinguish it from other forms of arthritis and causes of joint pain and stiffness, and to monitor the side effects of various Treatment.

Laboratory tests

There is no specific laboratory test to diagnose OA. It is diagnosed by a doctor using a person's medical history, a physical exam, X-rays, and in some cases with an examination of synovial fluid from an affected joint. Tests that may be ordered to rule out other conditions and to evaluate the person's health include:

- **Rheumatoid factor (RF)** and **Cyclic Citrullinated Peptide Antibody (CCP)** – to help diagnose **rheumatoid arthritis (RA)** and differentiate it from osteoarthritis.
- **Synovial fluid analysis** – to look for signs of joint infection and to detect monosodium urate (uric acid) crystals (that could indicate **gout**) or calcium pyrophosphate crystals that may contribute to joint damage in osteoarthritis.
- **Erythrocyte sedimentation rate (sed rate or ESR)** – to detect inflammation in the body; ESR will be increased in RA but not in osteoarthritis.

- **C-reactive protein test (CRP)** – to detect inflammation and test for the activity of the disease; it may be used to help differentiate osteoarthritis and RA. An increased level of CRP occurs in RA but not in osteoarthritis.
- **Complete Blood Count (CBC)** – to help evaluate the person's red and white blood cells and hemoglobin; it may be ordered to monitor the side effects of some OA treatments.
- **Comprehensive Metabolic Panel (CMP)** – to help evaluate and monitor the person's kidney and liver function.

Non-laboratory tests

- X-rays of the affected joints may show loss of cartilage, bone damage, bone spurs, and narrowing of the joint space but will frequently not show significant changes early in the disease.
- MRI (magnetic resonance imaging) – may also be used to examine affected joints.

www.bhasinpathlabs.com