

Diseases, Disorders and Injuries

Osteoarthritis

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What is osteoarthritis?

Osteoarthritis, also known as osteoarthrosis or degenerative joint disease, is a disorder that affects the joints. At the joint, the surfaces of the bones are lined with tissue called cartilage. Cartilage provides a smooth surface for movements. Sometimes, the cartilage between bones breaks down. The normally smooth cartilage becomes pitted and frayed, and cartilage segments may be lost. Bony outgrowths also form, which interfere with the movement of nearby tendons and joints. These changes make movement of the joint more difficult and very painful, and are signs of degenerative joint disease or osteoarthritis.

Osteoarthritis is the most common form of arthritis. In Canada, it affects about one in seven people. It becomes more common as age increases. Osteoarthritis affects joints such as the knees, hands (finger and thumb joints), neck, back, shoulder, and hips. Risk factors include age, gender, heredity factors, body weight, history of injury, lifestyle, or bone and joint disorders - congenital (present at birth) or developmental (occurred while the bones were growing).

What are the symptoms of osteoarthritis?

Symptoms of osteoarthritis vary depending on which joints are affected and the severity of the problem. Common symptoms are pain, aching, stiffness lasting less than 30 minutes (especially in the morning or after resting), reduced range of movement in the joint, and swelling. These symptoms develop over a period of time. Affected people will also experience a grating sensation, or a clicking or cracking sound when a joint bends (e.g., knees).

How is osteoarthritis recognized?

The diagnosis of osteoarthritis is made by your doctor, who will examine the joints and test their range of motion. Medical tests such as X-rays and magnetic resonance imaging (MRI) may be used to confirm the diagnosis. Laboratory tests may also include a blood test (to rule out other causes of joint pain) or a joint fluid analysis.

How is osteoarthritis treated?

Because osteoarthritis is a chronic disease, there is no cure, but the symptoms can be managed.

In many cases, doing physical activity that involves gentle exercises and stretches will help such as walking, swimming, water fitness, yoga, or tai chi. Other recommendations are physical therapy to strengthen the muscles around your joint, or occupational therapy to find ways to do daily tasks without placing additional stress on the joint. Maintaining a healthy weight will also ease the pressure on the joints.

Medications for pain are available. Sometimes, a doctor may suggest cortisone injections, lubrication injections, realigning of bones, or joint replacement surgery. Canes, walkers, crutches, or braces can also help manage pain caused by pressure on the joint.

What is the cause of osteoarthritis?

This degenerative joint disease is typically caused by mechanical overstrain or stress, such as rapid, repetitive movements and the use of force in extreme positions that could result in joint trauma. Mechanical overload can also break down the cartilage. These causes can happen in the workplace or through non-work activities.

Should osteoarthritis be an occupational concern?

Occupational stress factors, such as carrying heavy loads, can cause changes such as joint degeneration. Awkward postures, extreme movements and injuries can start symptoms or make existing symptoms worse in workers. Occupations that require the worker to put repeated stress on a particular joint, or those that perform heavy physical labour, may be at greater risk of developing osteoarthritis. Examples include dancers, heavy machine operators, and construction workers.

What are some things a workplace can do?

Proper body mechanics should be used in all daily activities – including at work – to reduce joint stress and decrease pain whenever possible.

Good ergonomic principles can help, such as:

- Installing easier-to-grip levers and handles.
- Picking up books or files with straight fingers or between palms rather than grasping with bent fingers.
- Locating work directly in front of you, not to one side. Avoid twisting movements by centring your body to your work.
- Using the strongest muscle groups available for the activity (e.g. lift with your leg muscles, not your back). Roll objects rather than lift them, or use a trolley or other lifting aids.
- Using [tools](#) that are balanced and have appropriately designed handles or grips may help reduce a person's stress.
- Avoiding tasks that require a tight grasp and pressure along the thumb side of the hand, such as picking up parts or materials.
- Avoiding [awkward working positions](#) and body postures.
- Avoiding prolonged standing or sitting positions to minimize muscle stiffness, pain and fatigue.

Other options may be to provide tools or facilities that will help accommodate employees, including:

- Providing organizational policies and practices that help the individual manage their chronic health condition, including accessibility, accommodation, leave of absence, return to work, and health promotion.
- Reducing muscle effort and increasing strength by using tools with built-up handles - for example, scissors, and utensils.
- Installing a raised toilet seat and grab bars to make it easier and safer to stand up.
- Planning for alternate tasks or breaks so that there can be a change in body position.
- Discussing options for flexible work schedules and tasks with your employer to allow you to plan for changes in function that come with arthritis.

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