Osteoarthritis



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 softens, and some of its fibres separate. The normally smooth cartilage becomes pitted and frayed, and whole segments of cartilage may be lost. Bony outgrowths 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 10% of the adult population. Osteoarthritis most commonly affects joints such as the knees, hands (finger and thumb joints), neck, lower back, and hips.

What are the symptoms of the osteoarthritis?

Symptoms of osteoarthritis vary depending on which joints are affected and severity of the problem. Most common symptoms are pain, tenderness, and stiffness. Symptoms are often worse first thing in the morning, or after resting. These symptoms develop over 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, 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?

As the 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, yoga, or thai 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. In some cases, a doctor may suggest cortisone injections, lubrication injections, realigning of bones, or joint replacement surgery.

What is the cause of osteoarthritis?

The cause of this degenerative joint disease is not known. Some researchers claim that one cause of the degenerative joint disease is mechanical overstrain or stress, such as rapid, repetitive movements and the use of force in extreme positions that could result in joint trauma. Another theory is that mechanical overload breaks the cartilage. However, many researchers do not agree with these theories of mechanical origin. They suggest that some factors, including mechanical stress, may activate the release of certain substances that destroy the cartilage. In any event, these are causes that could happen in the workplace or through non-work activities.

Should osteoarthritis be an occupational concern?

The relationship between degenerative joint disease and work is not clear. Other, non-work related risk factors are implicated; for example, age, gender, heredity factors, obesity, and bone and joint disorders – congenital (present at birth) or developmental (occurred while the bones were growing). Other risk factors that may or may not be work-related are any previous inflammatory joint disease and injury to joints.

Most likely, joint degeneration develops from a combination of hereditary, constitutional and environmental causes. 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 who already have degenerative joint disease. Whatever the causes, time may be a factor. It is not a common disease in people under 40. On the other hand, about 80% of people over 75 years of age have osteoarthritis. The age group between 40-50 years old is the part of the population that has the highest diagnosis rate for osteoarthritis. Loss of joint function from this disorder is a major cause of long-term work disability.

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 when ever possible.

Good ergonomic principles can help, such as:

- 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 centering your body to your work.

- Using the strongest joints available for the activity (e.g. lift with your leg muscles, not your back). Roll objects rather than lift them, or use a trolley.
- Using tools that are balanced, and that have appropriately designed handles or grips may help reduce the stress felt by a person.
- Avoiding tasks that 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:

- Reducing muscle effort and increasing strength by using tools with built-up handles – for example: scissors, and utensils.
- Installing a raised toilet seat 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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