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Arthritis

Key points

- Osteoarthritis is a joint inflammation that results from cartilage degeneration.
- Osteoarthritis can be caused by aging, heredity, and injury from trauma or disease.
- The most common symptom of osteoarthritis is pain in the affected joint(s) after repetitive use.
- There is no blood test for the diagnosis of osteoarthritis.
- The goal of treatment in osteoarthritis is to reduce joint pain and inflammation while improving and maintaining joint function.

What is arthritis?

Arthritis means "inflammation of the joints." It's a general term for more than 170 conditions. Arthritis can strike at any age, causing varying degrees of pain, inflammation and limited movement.

Which is the most common form of arthritis?

Of the many types of arthritis, osteoarthritis is by far the most common.

What is the pathological process?

Osteoarthritis attacks cartilage, a rubbery tissue that covers the ends of the bones and lies between joints. As osteoarthritis progresses, surfaces of cartilage and underlying bone become compressed and irregular. Bony outgrowths called spurs may form. Instead of gliding smoothly, joint surfaces rub against each other. The result: stiffness and pain.

What are the causes of osteo-arthritis?

The exact causes of osteoarthritis are unclear, but the following factors increase the risk:

- Age 45 years and older,
- Female gender,
- Hereditary conditions, including defective cartilage and malformed joints
- Joint injuries caused by physical labor or sports
- Obesity
- Faulty postures and life style

- Joint infections
- Genetic or hereditary tendency to arthritis.

What are the signs and symptoms?

The triad of symptoms is pain, stiffness, and swelling. Weight bearing, walking, and motion can be difficult. Weakness and deformity of the joint may occur.

What is the description of the pain?

Typically, pain is the earliest symptom. The typical description is a sharp pain appearing on the use of the affected joint, especially if overused or the joints have been inactive for a while. With rest the pain may subside.

What is the description of the stiffness?

Stiffness is especially in the morning or in the standing posture. After about a minute or two, stiffness usually subsides. It's unusual to lose complete movement in a joint affected by osteoarthritis. The patient often finds it more difficult to open a jar, peel fruit or sew on buttons.

How common is inflammation?

Redness and warmth occur more often in rheumatoid arthritis — a less common type of arthritis. But inflammation can also be a symptom of osteoarthritis. In osteoarthritis, the joint may become inflamed after excessive use or, redness and warmth may occur as an early symptom of the disease.

Which joints does arthritis affect?

The disease typically affects;

- **Fingers:** Bony knobs called "nodes" can enlarge the finger joints.
- **Spine:** Slow deterioration of discs between the bones along the spine can lead to back and neck stiffness.
- **Weight-bearing joints:** The parts of the body that bear the majority of weight, i.e. the hips, knees and feet are most susceptible to osteoarthritis.

How the diagnosis is made?

The classical triad of typical symptoms, physical findings and radiographic changes is diagnostic of the disease. Clinically the diagnosis is based on symptoms of pain, swelling, stiffness and limited function of the joint. Signs include tenderness, restricted motion, swelling, and weakness. Limping in the legs and rubbing or grinding of the joint are other signs.

What is the mode of treatment?

A variety of medications are available for pain relief.

- **Acetaminophen/ Paracetamol** — This is stomach friendly. However, it doesn't reduce inflammation.

- **Nonsteroidal anti-inflammatory drugs (NSAIDs)** — NSAIDs relieve pain. Higher prescription dosages also can reduce inflammation.
- **Aspirin** — Aspirin, a type of NSAID, is the oldest available nonprescription pain reliever. Like other NSAIDs, aspirin can reduce inflammation, but one might need up to 12 tablets a day. Plus, aspirin isn't stomach friendly.
- **Cox 2 inhibitors** — These are the new class of drugs that relieve pain & inflammation and are stomach friendly too. Ask your Doctor for more details.

What are the principles of the treatment?

Reducing the level of activity, using nonsteroidal anti-inflammatory drugs (NSAIDs) such as ibuprofen or celecoxib or heat, and careful exercises can help to relieve symptoms. Some form of support, such as a cane, crutches, or a brace, may also help.

What are other modes of treatment?

A change in diet can help certain forms of arthritis. Losing excess weight can help, especially when the legs are affected by arthritis. For occasional flare-ups, a cold pack often dulls the sensation of pain in the first day or two. Place ice in a plastic bag, then put the bag in a towel. Apply cold several times a day, but for no more than 10 minutes at a time.

After acute pain subsides, a warm pack or a heat lamp relaxes muscles around a painful joint and may relieve symptoms better than ice. Limit each heat application to 10 minutes.

What is the role of surgery?

Several types of surgery may be done. Surgery is not indicated in the initial or mild stages of the disorder. It is reserved for severe arthritis that is disabling.

How to correct the life style?

Small changes in how you use the body can reduce stress on the joints and save energy. Here are a few tips for the patients

- **Don't grasp or twist** — For example, rest a book comfortably on your palms instead of pinch gripping its edges. Also look for a variety of household devices that minimize twisting, turning and gripping movements. Choose from vegetable peelers with thick rubber handles to specially designed jar openers and knives.
- **Distribute your weight** — Spread the weight of an object over several joints. For example, use two hands to lift a heavy pan.
- **Favor large joints** — Don't push open a heavy glass door with your hands. Lean onto it with your shoulder.
- **Use good posture** — When standing, pull in your stomach. Hold your shoulders back. Don't slouch when sitting.

- **Plan your moves** — Think through each stage of your favorite activities. Then plan accordingly. When flying, for example, schedule a less crowded flight and ask for a seat that offers extra legroom. If you have a garden, sow plants in raised beds or install a window greenhouse to limit bending.
- **Rest** — Lie down or put your feet up periodically during the day. But avoid prolonged inactivity because it decreases muscle tone and overall health and fitness.
- Cycling and swimming are one of the best joint friendly exercises.
- Do not indulge in any exercises, which you cannot do for life. For example exercises against resistance.
- Avoid squatting postures.
- Avoid low level chairs, sofas etc. While sitting the legs should not make an angle more than 90 degrees.

What if the joints are inflamed?

Avoid exercising affected joints: One should stop exercising at the onset of pain. Pain that persists for more than two hours after exercising often means one has overdone it. One should rest and take an OTC pain reliever as needed until the pain goes away. Next time, one should break the activity into smaller segments, reduce the intensity or change the movement. If pain persists for more than a few days, it's the time for the patient to consult a doctor.