



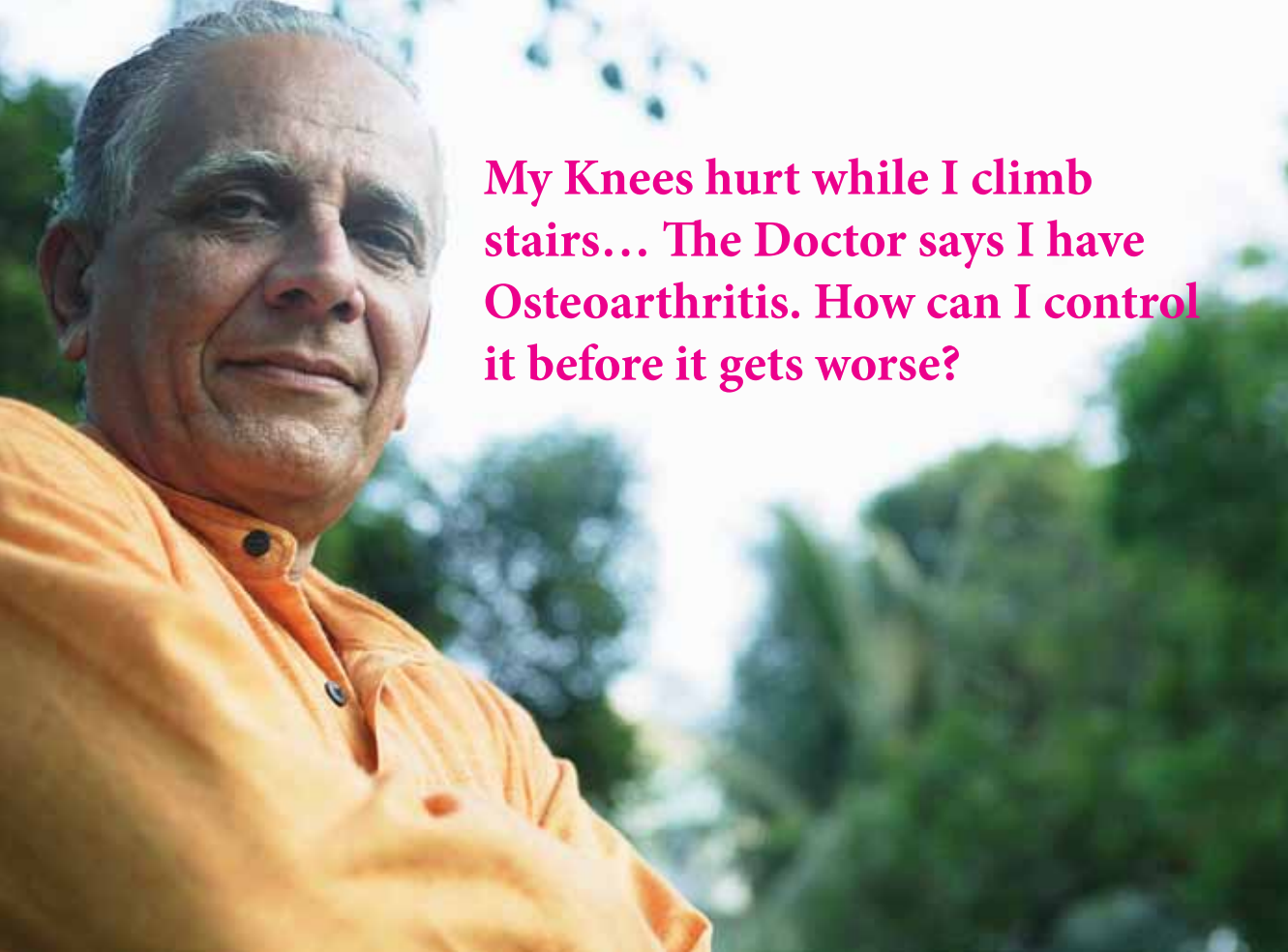
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Your Journey With Arthritis...Now Gets Easy



How can I control it before it gets worse?





My Knees hurt while I climb stairs... The Doctor says I have Osteoarthritis. How can I control it before it gets worse?

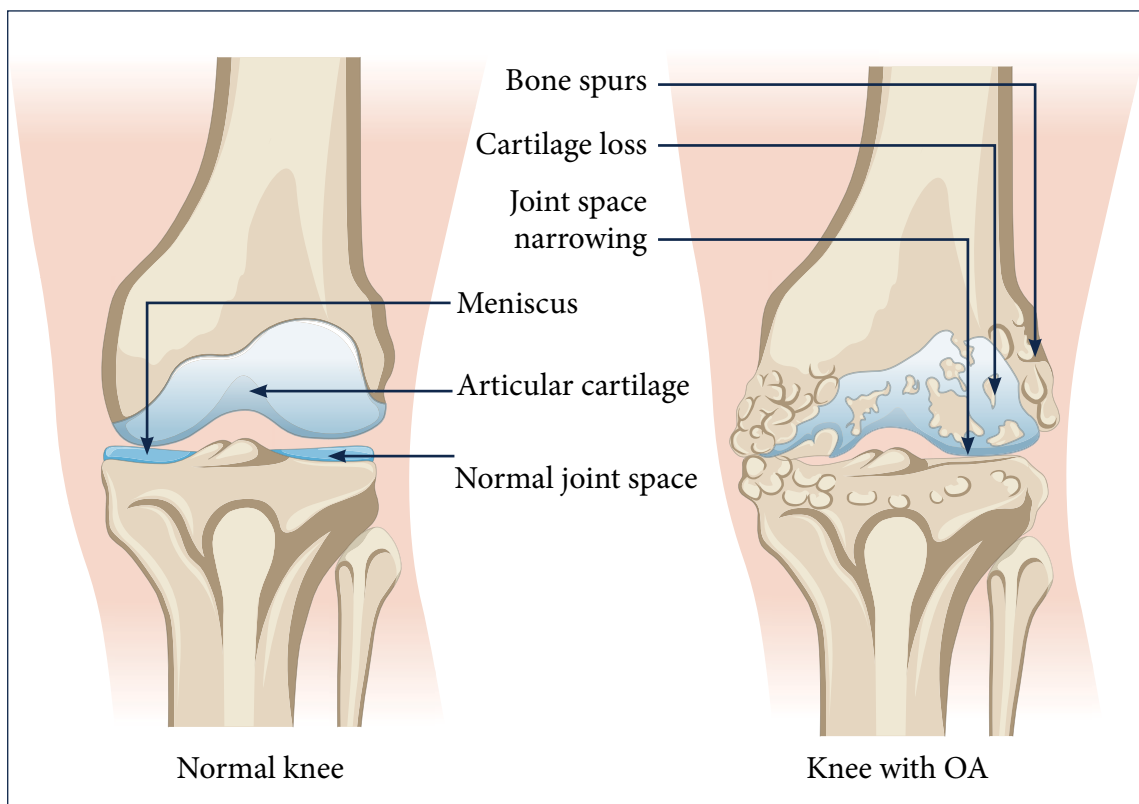
What is osteoarthritis?

Osteoarthritis (OA) is a chronic degenerative joint disease commonly affecting the weight-bearing joints of the body such as the knees, hips, spine and feet. It causes considerable joint pain, stiffness and limited mobility of the joints. OA tends to worsen with time; if left untreated, OA of the knee can significantly affect one's quality of life. Individuals with OA may no longer be able to perform their routine activities, and even a simple task such as walking may seem difficult. In such cases, the doctor may prescribe surgery to replace the damaged knee.

How Knee OA progresses?

OA develops when the cartilage lining (which acts as a cushion and absorbs shock) between the ends of the femur and the tibia (shin bone) wears off and bone-to-bone contact occurs. This can then give rise to inflammation, severe pain, tenderness and joint stiffness. Over time, bony spurs and fluid build-up can also occur in the joint space.

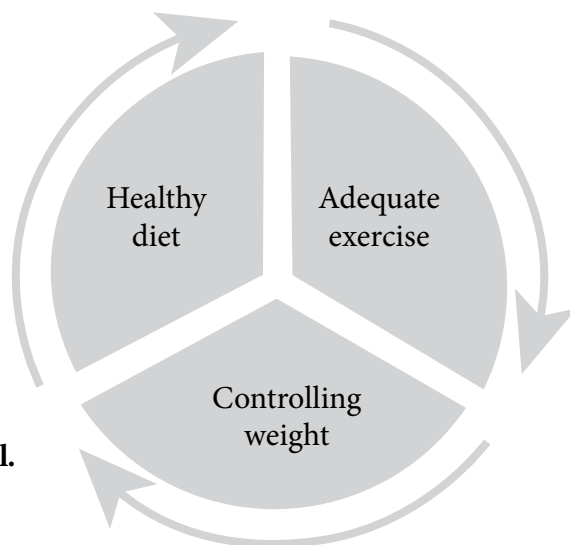
How can I control it before it gets worse?



There are a number of ways in which you can control this disease progression. These include:

- A healthy diet
- Appropriate physical activity and knee-strengthening exercises (done only under the doctor's guidance and as per instructions)
- Weight management

Read on to understand each of these in detail.



Should I alter my diet?

Eating a well-balanced, healthy diet can go a long way in reducing inflammation and keeping your knees healthy and disease free. You can do this by including the following foods in your diet:

- Fruits and vegetables—rich in anti-oxidants and help reduce inflammation, alleviate pain and slow down disease progression
- Foods rich in vitamin C—contain anti-oxidants that help in the development of cartilage
- Foods rich in vitamin D—prevent cartilage breakdown
- Foods rich in beta-carotene—contain anti-oxidants
- Foods rich in omega-3 fatty acids—anti-inflammatory in nature
- Foods rich in bioflavonoids—anti-inflammatory in nature
- Certain spices (ginger and turmeric)—have anti-inflammatory effects
- Whole-grain breads instead of refined white breads
- Nutritional supplements—glucosamine and chondroitin supplements can be helpful in reducing pain and stiffness. However, it is important that these supplements be taken only when prescribed by your doctor

The use of healthy vegetable oils, such as olive oil, nuts and dried fruits, garlic and green tea are some of the healthy choices that you can make in your daily life to keep inflammation at bay.

It is also important that you avoid certain foods that can trigger inflammations and lead to arthritic pain. These include:

- High-calorie foods—can lead to weight gain and be harmful for the knees
- Fried and processed foods
- Heated, grilled, fried and pasteurised foods
- Dairy products
- Sugars and refined carbohydrates
- Alcohol and tobacco
- Food containing preservatives

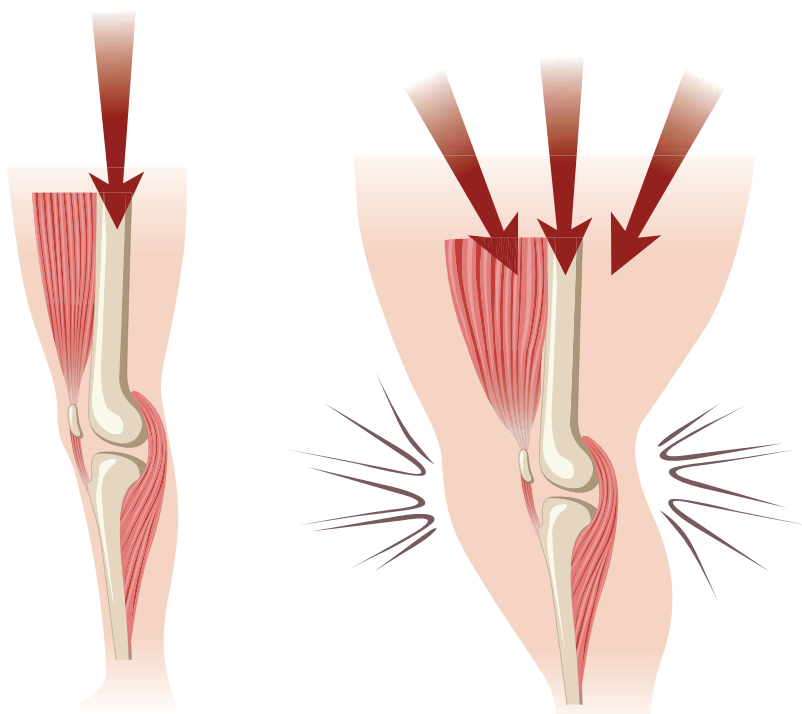


Avoid Fast Foods

How can I control it before it gets worse?

Will weight reduction help?

Being overweight or obese can be harmful to the knee joints in a person with knee OA. The extra weight places additional pressure on the joints, stresses the muscles and tendons surrounding them and tends to hasten disease progression by breaking down the cartilage. In addition, it limits the affected individual from leading an active and independent life by aggravating the pain.



Normal joint force

Joint with increased pressure due to obesity

It is also observed that the risk of developing joint OA (especially at the weight-bearing joints) increases with increasing weight in overweight individuals. Hence, it is important for overweight individuals to take appropriate steps to either control or reduce their weight.

Weight loss of 1 pound (0.45 kg) can reduce joint load of the knee by 4 times in obese/overweight people with knee OA. Thus, weight loss helps in reducing joint stress, alleviating pain and delaying the disease progression.

If you are suffering from knee OA, it is important that you talk to your doctor and chart out a weight-reduction plan. You can start by setting achievable weight-loss goals each week. You can do this by:

- Taking part in moderate physical activity on most days of the week
- Reducing the intake of dietary fats and calorie-rich foods that lead to weight gain
- Doing adequate exercises as per the doctor's instructions

How do I manage the pain?

The pain due to OA can be quite disabling and a cause of great discomfort to the patient. There are different treatment options available based the severity of your condition and present health status that can help alleviate. Some of the treatment options are as follows:

- NSAIDs (Non-Steroidal Anti-inflammatory Drugs)—Aspirin, acetaminophen and ibuprofen
- Topical ointments, creams, gels and sprays—applied on the affected area to reduce inflammation and pain
- Hot/cold therapy—use of heating pads and cold compresses
- Exercises and physical therapy—gentle exercises such as swimming, cycling and walking on flat surfaces can help
- Weight reduction—helps a lot in reducing pain
- Nutritional supplements—glucosamine and chondroitin sulphate can help reduce pain
- Acupuncture—helps reduce pain
- Narcotics—pain killers used in severe OA pain
- Steroid and other injections—steroid injections administered directly into the joint space can help. In other cases, hyaluronic acid injections can also help
- Devices (braces, splints and inserts) for joint protection—help reduce stress on the joints
- Surgery—performed when other treatments to control pain have failed



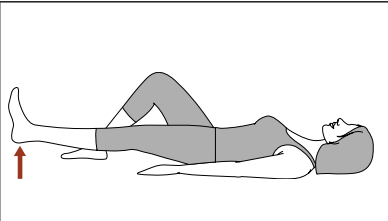
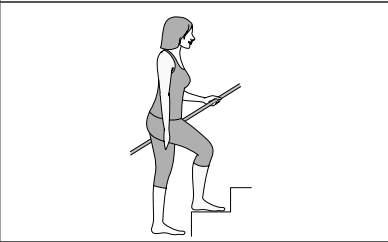
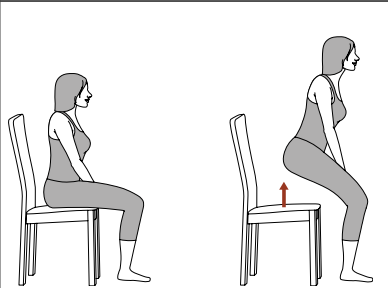
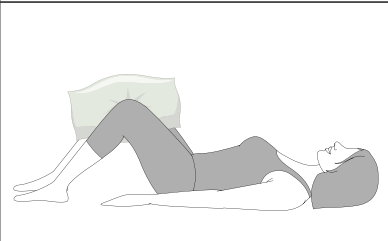
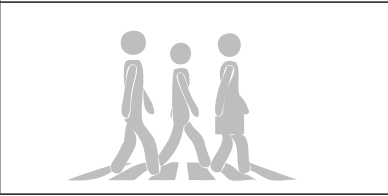
Your doctor will prescribe the best treatment option for you on the basis of your medical history, x-rays, test results, joint function and other important parameters.

How can I control it before it gets worse?

What are the exercises that can help strengthen my knee?

Important: Always get your doctor’s approval before beginning any exercise routine.

Following are some of the exercises that may help in reducing pain, improving function and slowing the progression of disease in the knee joints:

	<p>Straight-leg raise: Lie on your back. Bend one leg at the knee and keep the other leg extended. Lift the extended leg off the ground and hold for a count of 5. Slowly lower the leg. Repeat 5 times for both the legs.</p>
	<p>Step-ups: Stand at the bottom of the stair holding onto the railing for support. Squeeze the muscles of the left leg tight and step-up with your right foot. Touch the step with the right foot and lower onto the floor. Repeat 10 times before switching legs.</p>
	<p>Sit-stand: Sit up straight on a chair with feet flat on the ground and back straight. Slowly and smoothly stand up without the support of your hands. Sit back slowly. Make sure that your bent knees do not project forward. Repeat for 1 minute and slowly increase the number of times. Use pillows if you find it difficult.</p>
	<p>Pillow squeeze: Lie on your back with both the knees bent. Place a pillow between the knees and squeeze the pillow using your knees. Hold for 5 seconds and relax. Repeat 2 sets, 10 times each. This exercise may also be done sitting in a chair.</p>
	<p>Walking: Walking is a very good exercise even for aching knees. Start slowly but keep doing it. Walking improves muscle strength, lessens pain and improves posture and flexibility.</p>

What about physical activities?

It is important to engage in the right amount and type of physical activities to keep your knees healthy. Performing rigorous and strenuous exercises or leading a completely sedentary lifestyle can have a negative effect on knee joint in patients with OA, as it can give rise to degenerative changes in the joint cartilage.

Research has shown that moderate, low-impact physical activity can preserve joint, maintain good function and lead to better performance in patients with OA.

Following are some CDC* recommendations for patients with arthritis.

2 hours and 30 minutes (150 minutes) of moderate-intensity aerobic activity per week
OR
1 hour and 15 minutes (75 minutes) of vigorous-intensity aerobic activity per week
OR
An equivalent combination of both moderate and vigorous activity
AND
Muscle-strengthening exercises for 2 or more days per week
Balance exercises for 3 days per week if at risk of falling

*Centre for Disease Control and Prevention.

Points to remember:

- Start low and go slow on activities
- Modify activities if symptoms become severe
- Activities should be joint friendly
- Identify other ways to be active
- Always consult a healthcare professional about the type and amount of activities to be performed
- Avoid inactivity

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How do I protect my knee joints?

Although OA is a disabling condition, most patients can lead normal and healthy lives, provided they make certain healthy changes to their lifestyle. A healthy diet, moderate physical activity and weight control can play a great role in controlling the progression of OA.

Some useful self-care tips to control symptoms are given below:

- **Follow RICE:** One can reduce discomfort by:
 - **Resting** the knee
 - Applying **Ice** to reduce swelling
 - Using a **Compressive bandage**
 - **Elevating** the knee
- **Apply cold and hot packs:** Applying a cold pack for 15-20 minutes 3-4 times a day helps in reducing swelling and numbing the pain. One may use a bag of ice, or a pack of frozen peas works fine as well. Later, heat may be applied using a warm bath, warm towel or a heating pad for 15-20 minutes 3-4 times a day
- **Pace activities** throughout the day. Avoid too much physical work at a time
- **Change the way you move.** Do shift positions, stretch in between and watch your posture
- **Lose weight:** Losing weight **lessens load** on the knees. Even a small weight loss makes a difference
- **Use appropriate foot wear:** Cushioned insoles reduce the stress on the knees
- **Modifications to home or work place** may be planned to reduce avoidable strain
- Reduce load on knee by using **walking aids** such as walking stick of appropriate height, crutches, knee splints and braces that provide support and stability
- **Reduce risk of falling** by using proper lighting, hand rails for support while climbing stairs and a sturdy ladder or steps while reaching for something placed at a height



Don'ts in OA

- Avoid shoes that have high heels or are too hard and sandals; instead, use shoes with low heels or those that lace up and provide proper support to the feet
- Avoid walking on steep slopes and very soft or uneven terrain
- Avoid using the stairs: Use the elevator where possible.
If one has to use stairs:
 - Climb one stair at a time and take support of the hand rail
 - Always put the healthy foot forward
- Avoid carrying heavy objects; heavy objects places additional stress on the knees
- Do not fold the legs behind the chair, stretch your legs gently and frequently change their position
- Avoid standing continuously for long periods of time; instead, take a break after every hour
- Avoid putting pressure on the affected knee while getting up from a bed or chair. Instead, forcefully push downwards with both the hands in order to get up
- Avoid sitting on low chairs; choose chairs that have a high seat and armrests
- Avoid kneeling down; many jobs that need kneeling down may be done using low chairs or stools



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