



Exercise programme for knee arthritis

Strengthening and activity for knee osteoarthritis

Exercise is one of the most effective treatments for knee osteoarthritis, and NICE recommends it for everyone with the condition. Stronger muscles support and protect the joint, ease pain and help you stay active. This programme can be started at home and built up gradually.

At a glance

How often	Strengthening exercises 3-4 times a week, plus staying active every day
How much activity	Build towards 150 minutes of moderate activity a week, such as walking, cycling or swimming
Is some pain OK?	Yes. Mild to moderate discomfort during exercise is acceptable if it settles by the next day
How long until it helps	Most people notice improvement after 6-12 weeks of regular exercise
Weight	If you are overweight, losing even a small amount of weight reduces the load on your knees

Using pain as a guide

- Some discomfort while exercising is normal and does not mean you are damaging the joint.
- Aim to keep pain at a level you find acceptable, roughly 5 out of 10 or less, and settling by the next morning.
- If pain is worse the next day, do fewer repetitions or an easier version, then build up again.

Building up

- Start with 1-2 sets of 8-10 repetitions of each exercise.
- When it feels easy, increase to 3 sets, then add more challenge, for example a lower chair, a higher step or an ankle weight.
- Warm up with a few minutes of gentle walking or cycling.

Your exercises

Sit to stand

From a firm chair, stand up without using your hands if you can, then sit down slowly. Use a higher chair to make it easier, a lower one to make it harder.

Seated knee straightening

Sitting on a chair, straighten one knee fully, hold 5 seconds, then lower slowly. Add an ankle weight as you get stronger.

Straight leg raise

Lying or sitting, tighten the thigh muscle and lift the straight leg about 15 cm. Hold 5 seconds and lower slowly.

Step-ups

Step up onto the bottom stair or a sturdy step, leading with the stronger leg at first, holding the rail. Step down slowly.

Mini squats

Holding a firm support, bend your knees slightly as if to sit, keeping your weight through your heels, then straighten. Go only as low as is comfortable.

Calf raises

Holding a support, rise up onto your toes and lower slowly.

Bridging

Lying on your back with knees bent, squeeze your buttocks and lift your hips off the bed. Hold 5 seconds and lower.

Balance

Holding a support, stand on one leg for up to 30 seconds. Progress by letting go when you feel safe.

Staying active

- Walking, cycling, swimming and aqua exercise are all good for knee arthritis.
- Supportive, cushioned footwear can make walking more comfortable.
- Group programmes such as ESCAPE-pain, often available locally, combine exercise and education.

Sources. This guide is based on Mr Umar's practice and is guided by NICE and British Orthopaedic Association (BOA) guidance: NICE NG226: Osteoarthritis in over 16s - diagnosis and management; British Orthopaedic Association (BOA) - guidance and patient information.

When to seek medical advice

Seek urgent medical help (NHS 111 or A&E) if a joint suddenly becomes hot, red and swollen and you feel unwell or feverish.

Stop the exercises and get advice from your GP, physiotherapist or Mr Umar's team if:

- Pain increases a lot and has not settled by the next day, despite reducing the exercises
- The knee or hip locks, gives way repeatedly or you cannot put weight on it
- You develop new swelling, numbness or pins and needles in the leg
- Pain wakes you every night or you feel generally unwell



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Questions?

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This is general guidance. Always follow the specific advice from your own clinical team, as your care may differ.

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