

Knee Osteoarthritis Conservative Management

A practical plan to reduce pain, improve confidence and keep your knee moving.



Osteoarthritis is manageable. The aim is not to force the knee through pain. The aim is to calm irritated symptoms, improve strength around the knee and hip, and choose activities your joint can tolerate consistently.

The main levers that improve symptoms

1 Keep moving, but choose the load

Flat walking, cycling, pool exercise and controlled strengthening help pain and function. Reduce deep knee bend, hills and impact during flares.

2 Build the support system

Stronger quadriceps, gluteals, calves and trunk muscles share load and make stairs, chairs and longer walks easier.

3 Reduce avoidable joint stress

If weight loss is relevant, sustained gradual weight reduction can improve pain and function. Supportive shoes, pacing and a cane can also help.

4 Use medicines wisely

Topical anti-inflammatory gel is often a useful first step. Tablets or injections may help selected patients, but should be matched to your medical risks.

The 24-hour pain-monitoring rule

Green light

0-3/10 discomfort during activity that settles back to baseline by the next day.

Yellow light

4-5/10 pain, limp, swelling or next-day soreness. Reduce depth, distance, speed or repetitions.

Red light

Sharp pain, locking, giving way, major swelling, fever, redness, or inability to bear weight. Seek advice.

This guide is general education. Your surgeon, GP or physiotherapist may adapt it for your arthritis pattern, pain severity, balance, medical conditions, medicines and goals.

Weekly rhythm

Most weeks

BUILD CAPACITY

- **Strength:** 2-4 days per week.
- **Mobility:** 5-10 minutes most days.
- **Cardio:** 10-30 minutes of cycling, pool work or flat walking.
- **Progress:** add one variable at a time.

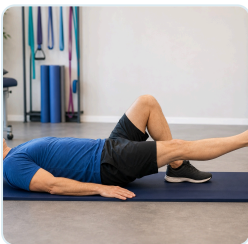
Technique checklist

EVERY REPETITION

- Knee points over the second toe.
- Use shallow depth first; do not chase a deep squat.
- Move slowly on the way down.
- Stop before swelling or a limp appears.

Home strengthening program

Start with the easiest version that stays green-light. If you are new to exercise, begin with one set of each exercise and build gradually.



Quad set + straight leg raise

Tighten the thigh, straighten the knee fully, then lift the leg slowly. Lower with control.

2-3 sets of 8-12



Sit-to-stand

Use a chair height that feels safe. Stand tall, then sit slowly without dropping into the chair.

2-3 sets of 8-12



Glute bridge

Push through the heels and lift the hips. Keep knees hip-width apart and ribs relaxed.

2-3 sets of 10-12



Side-lying hip abduction

Keep hips stacked. Lift the top leg slightly behind you without rolling backwards.

2-3 sets of 10-15



Supported mini squat

Hold a bench lightly. Sit the hips back and bend only as far as the knee tolerates.

2 sets of 8-10



Low step-up

Use a low step. Push through the whole foot. Step down slowly and keep the pelvis level.

2-3 sets of 6-10 each side

Progression rule: make the exercise harder only after symptoms stay settled for 1-2 weeks. Options include more repetitions, a lower chair, a slightly higher step, or light resistance.

Adjust the activity, not your whole life

Reduce during a flare

- Repeated stairs, steep hills or long downhill walks.
- Deep squats, deep lunges, kneeling and heavy leg presses.
- Running, jumping and sudden direction changes.
- Large spikes in walking distance or standing time.
- Exercises that cause swelling or next-day limping.

Use instead

- Shorter, flatter walks with planned rests.
- Stationary bike with light resistance and a comfortable seat height.
- Pool walking, water aerobics or gentle swimming.
- Smaller exercise range and slower repetitions.
- Heat before activity or ice after activity if it helps.

Simple symptom tools

Walking aid

A cane in the opposite hand can reduce load on a painful knee during longer walks or a flare. Use it selectively if it helps you move well.

Brace or sleeve

A sleeve can improve confidence. An unloader brace may help if arthritis is mainly on one side of the knee, but fitting matters.

Shoes

Choose comfortable, supportive shoes. Shoe wedges are not routinely recommended for knee arthritis pain relief.

Weight strategy

If relevant, aim for steady, sustainable change rather than a crash diet. Combining nutrition change with exercise gives the best chance of symptom improvement.

Sleep and recovery

Pain is more sensitive when sleep is poor. Plan lighter days after heavy activity and avoid stacking multiple hard days together.

Physiotherapy

A physiotherapist can individualise exercise depth, strength progression, gait, balance and flare control.

Medicines and injections to discuss

Gel Topical anti-inflammatory

Often a useful first option for local knee pain, especially when tablets are risky.

Rx Tablets

Oral anti-inflammatories or paracetamol may help selected patients, but check kidney, stomach, heart and blood-thinner risks.

Inj Cortisone injection

May provide short-term relief for a painful inflammatory flare. Repeated frequent injections are usually avoided.

? Gel, PRP or stem cells

Evidence and cost-effectiveness vary. These are not a reliable cure and should be discussed case by case.

A realistic 12-week target

Weeks 1-2

Calm the flare. Choose easy range-of-motion, gentle strengthening, short flat walks and symptom tools.

Weeks 3-6

Build a repeatable routine. Add sit-to-stand, bridge, hip work, bike or pool exercise if the knee stays settled.

Weeks 7-12

Increase capacity. Gradually add step work, walking distance, balance and resistance if pain remains green-light.

When to arrange review

6w Not improving

Symptoms are not improving after 6-8 weeks of consistent exercise and load modification.

! Mechanical symptoms

The knee locks, repeatedly gives way, swells significantly, or you cannot trust it on stairs.

ADL Daily life is shrinking

Walking, work, sleep, exercise or social activities remain limited despite sensible conservative care.

Plan You need options

Review can clarify imaging, injections, bracing, physiotherapy direction or whether joint replacement should be discussed.

What success looks like

Success does not mean the X-ray has changed. It means the knee is less irritable, you can walk and climb stairs with more confidence, flares settle faster, and you know which activities help or hurt.

Clinical basis

This brochure draws on contemporary knee osteoarthritis guidance from the JAAOS summary of the AAOS non-arthroplasty knee OA guideline, AAOS OrthoInfo patient guidance, Hospital for Special Surgery core osteoarthritis management education, and Fowler Kennedy rehabilitation principles emphasising swelling control, range of motion, quadriceps activation, movement quality and gradual progression.

Key themes are consistent across these sources: exercise is recommended over no exercise, self-management and education help, sustained weight loss helps overweight patients, topical and oral anti-inflammatory medicines may help when safe, canes and braces can be useful for selected patients, cortisone may provide short-term relief, opioids are avoided, and arthroscopic washout/debridement is not recommended for primary knee OA.

Remember: arthritis pain naturally fluctuates. A flare is usually a signal to adjust load and recovery, not proof that all activity is damaging the knee.