Knee Strengthening Exercises

8 moves a physiotherapist commonly prescribes, with dosing and progressions

Start below what you think you can do and build weekly. Discomfort up to about 3 out of 10 that settles within 24 hours is generally acceptable.

1 Sit-to-stand

Sit toward the front of a sturdy chair, feet hip-width apart. Lean forward from the hips, push through your whole foot to stand tall, then take three slow seconds to lower back down. No hands unless you need them.

Dose: 3 sets of 8 to 12, every other day.
Progress: Use a lower chair, slow the lowering, then shift more weight onto one leg.

Weeks done: ☐ ☐ ☐

2 Glute bridge

Lie on your back, knees bent, feet flat. Push through your heels and lift your hips until your body forms a straight line from knees to shoulders. Squeeze the glutes at the top for two seconds, then lower with control.

Dose: 3 sets of 10 to 15, every other day.
Progress: Hold a weight on your hips, march at the top, or work up to a single-leg bridge.

Weeks done: ☐ ☐ ☐

3 Step-up

Stand facing a low step. Place one foot fully on it, press through that heel and bring the other foot up, keeping your knee tracking over your middle toes rather than caving inward. Step down slowly, that lowering is where the strength is built.

Dose: 3 sets of 8 to 10 per leg, 2 to 3 days per week.
Progress: Raise the step height, slow the step-down, then add dumbbells.

Weeks done: ☐ ☐ ☐

4 Wall sit

Slide your back down a wall until your knees are comfortably bent, somewhere between a quarter and half squat. Keep your whole foot planted and breathe. Holds like this are often well tolerated by sore, tendon-related knees because nothing is moving.

Dose: 3 to 5 holds of 30 to 45 seconds, most days if it stays comfortable.
Progress: Sink slightly deeper, hold longer, or hold a weight against your chest.

Weeks done: ☐ ☐ ☐

How to dose these exercises

A realistic template for most adults is 2 to 3 strengthening sessions per week on non-consecutive days, using 2 to 3 sets of 8 to 15 repetitions where the last two reps feel genuinely effortful. Early improvements come from better coordination; true muscle strength takes roughly 6 to 12 weeks of consistent work. Pain above 3 out of 10, sharp pain, or a knee that is more swollen or sore the next morning means the dose was too high: reduce depth, weight or reps rather than quitting altogether.

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This sheet is general information, not a prescription; stop if pain increases. Every knee is different. Book an assessment with a registered physiotherapist for a programme matched to you.

Train the hips and calves as well as the quads: the knee is steered from above and cushioned from below.

5 Side-lying hip abduction

Lie on your side, bottom knee bent, top leg straight and in line with your body. Lift the top leg about 30 to 45 centimetres, leading with the heel and keeping your hips stacked so you do not roll backward. Lower slowly.

Dose: 3 sets of 10 to 15 per side, every other day.
Progress: Add an ankle weight or a resistance band above the knees, or hold at the top for three seconds.

Weeks done: ☐ ☐ ☐

6 Calf raises

Stand tall with fingertips on a counter for balance. Rise up onto the balls of both feet, pause, then lower over three slow seconds. Keep your weight even across the big-toe side of each foot.

Dose: 3 sets of 12 to 15, every other day.
Progress: Move to single-leg raises, then do them off the edge of a step for extra range.

Weeks done: ☐ ☐ ☐

7 Split squat

Take a comfortable stride stance, one foot forward, one back, hips facing front. Lower straight down until the back knee hovers near the floor, or as far as stays comfortable, keeping the front knee over the middle of the foot. Push back up through the front heel.

Dose: 2 to 3 sets of 8 to 10 per side, 2 to 3 days per week.
Progress: Increase depth first, then add dumbbells, then elevate the back foot.

Weeks done: ☐ ☐ ☐

8 Hamstring bridge walkout

Set up like a glute bridge, but with your feet farther from your hips so the hamstrings do the work. Lift your hips, then slowly walk your heels out a few small steps and back in while keeping the hips up. You should feel the back of your thighs working, not cramping.

Dose: 3 sets of 6 to 8 walkouts, every other day.
Progress: Straighter legs, slower steps, or slide your heels on a towel on a smooth floor instead.

Weeks done: ☐ ☐ ☐

When a generic list is not enough

Persistent swelling, locking, giving way, or pain that is not improving after a few weeks means it is time for an assessment, not a bigger exercise list. Wellmax Physiotherapy in Oakville starts every new patient with a full 60-minute assessment and offers a free in-person consult if you are not sure where to start. Call (905) 829-1100 or book online at wellmaxphysiotherapy.ca.

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