

KNEE REHAB

THE KNEE STRENGTH & CAPACITY STARTER GUIDE

Build strength. Improve control. Return to what matters.

A practical educational guide to the strength, mobility and physical capacity that support comfortable movement.

01

CALM IRRITABILITY

Find a tolerable starting dose rather than avoiding all movement.

02

BUILD STRENGTH

Train the quadriceps, hips and calf to share lower-extremity load.

03

RESTORE FUNCTION

Progress toward stairs, squatting, running or sport-specific demands.

Inside: five starter exercises, coaching cues, progressions and a simple framework for building capacity.

WHY KNEE PAIN CAN HAPPEN

Pain is rarely explained by one factor. Symptoms can emerge when the demands placed on the region exceed what it is currently prepared to tolerate.

01	LOAD CHANGES A rapid increase in running, jumping, stairs, kneeling or training can outpace adaptation.
02	QUADRICEPS CAPACITY The quadriceps absorb and produce force during walking, stairs, squatting and running.
03	HIP & CALF CONTRIBUTION The joints above and below the knee influence how load is managed.
04	RECOVERY Training tolerance is affected by sleep, stress, nutrition and recovery time.
05	INJURY HISTORY Prior injury, swelling or time away can affect strength, confidence and exposure to load.

KEY IDEA

The goal is not to avoid load forever. Find an appropriate starting point, monitor the response and progressively build capacity.

THE KNEE FOUNDATION

A useful rehabilitation plan considers the region as part of a larger movement system. These five areas provide a practical starting framework.

01	QUADRICEPS Supports knee control and force absorption.
02	HIPS & GLUTES Contribute to pelvic and lower-extremity control.
03	CALF & SOLEUS Help manage impact and propulsion.
04	SINGLE-LEG CONTROL Prepares for stairs, running and sport.
05	LOAD MANAGEMENT Balances activity, symptoms and gradual progression.

Exercise selection should be individualized based on symptoms, health history, goals and current capacity.

5 EXERCISES FOR KNEE PAIN

These are examples that may fit within a broader rehabilitation program. They are not a universal treatment protocol.

1. WALL SIT

Why: Quadriceps endurance with adjustable depth.

How: Lean against a wall, slide to a comfortable knee bend and hold while breathing normally.

Start: 3–5 holds of 20–40 sec.

2. SIT-TO-STAND

Why: Functional hip and knee strength.

How: Stand from a chair without momentum, then sit slowly with knees tracking comfortably.

Start: 2–3 sets of 6–10 reps.

3. LOW STEP-UP

Why: Controlled knee loading and single-leg strength.

How: Step onto a low platform, stand tall, then lower slowly using the working leg.

Start: 2–3 sets of 6–10/side.

4. BRIDGE

Why: Hip-extension strength and pelvic control.

How: Press through both feet, lift the hips while keeping the ribs controlled, then lower.

Start: 2–3 sets of 8–12 reps.

5. CALF RAISE

Why: Calf strength and lower-leg capacity.

How: Rise onto the balls of the feet, pause, and lower slowly near a support.

Start: 2–3 sets of 10–15 reps.

FEATURED EXERCISE: LOW STEP-UP

This exercise offers a practical way to build controlled knee capacity. Use a comfortable range and appropriate starting level.

01	SET UP Choose a stable, low step and place the full foot on it.
02	LOAD Shift weight onto the working leg while keeping the foot grounded.
03	RISE Stand tall with controlled knee and pelvis motion.
04	LOWER Return slowly without dropping onto the trailing foot.

COACHING CUES

Move with control. Keep breathing. Use a range and resistance that feel manageable, and avoid forcing through sharp or escalating symptoms.

REGRESS	BASE	PROGRESS
Lower step or hand support	Bodyweight step-up	Add height, load or tempo

HOW TO PROGRESS

Progression should reflect the person in front of you—not simply the calendar. Advance one variable at a time and watch the response.

01	CONTROL Own the movement through a comfortable range and tempo.
02	VOLUME Gradually add repetitions, sets, hold time or total work.
03	RESISTANCE Add external load when the current level is well tolerated.
04	SPEED & COMPLEXITY Introduce faster or more complex movement when appropriate.
05	ACTIVITY-SPECIFIC DEMANDS Progress toward the work, recreation or sport demands that matter to you.

SIMPLE RESPONSE CHECK

Mild symptoms during exercise may be acceptable for some conditions if they remain manageable and return toward baseline afterward. A marked or lasting increase means the dose may need to change.

READY FOR A PLAN BUILT AROUND YOU?

ONLINE REHABILITATION CONSULTING | SPORTS MEDICINE | PERFORMANCE

Move beyond generic exercise lists.

Online rehabilitation consulting can help you understand your symptoms, choose an appropriate starting point, and build a progressive plan around your goals, equipment and schedule.

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WHEN TO SEEK PROMPT MEDICAL CARE

Seek appropriate care after major trauma or for severe or rapidly worsening pain, major swelling or deformity, inability to use the limb, fever or unexplained illness, new or progressive weakness, persistent numbness or tingling, loss of coordination, or other concerning symptoms.

EDUCATIONAL DISCLAIMER

This guide is for general educational purposes only and is not a substitute for individualized medical evaluation, diagnosis or treatment. Exercise selection and progression should be based on your health status, symptoms, history and goals. Consult a qualified healthcare professional before beginning a new exercise or rehabilitation program, particularly if you are currently experiencing pain or injury. Stop an exercise and seek appropriate guidance if symptoms are concerning or worsening. Online consultation availability and scope may depend on your location and individual needs.