

# Anterior Knee Pain

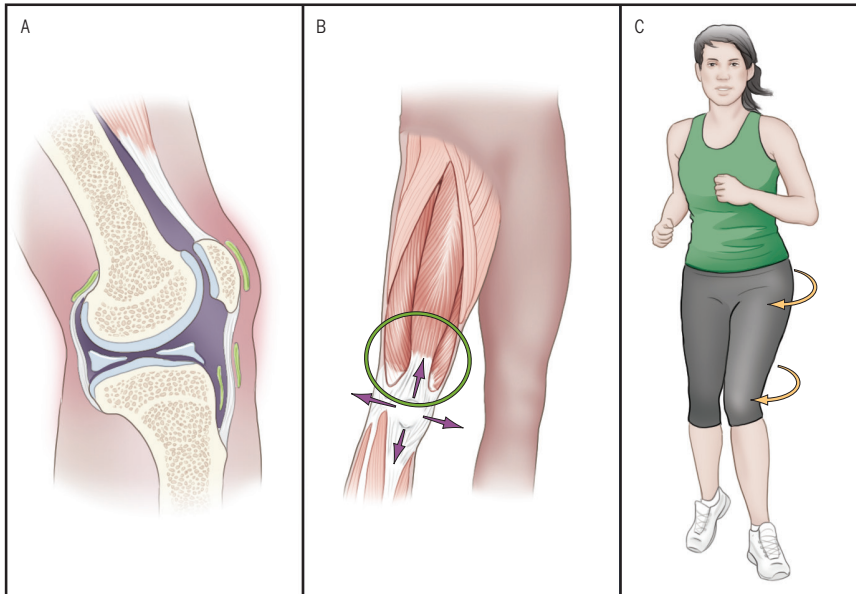
## *What Muscles Should I Strengthen?*

*J Orthop Sports Phys Ther 2018;48(1):32. doi:10.2519/jospt.2018.0501*

**P**ain in the front of your knee or under your kneecap is often called patellofemoral pain. You may feel this pain after exercising or when you sit too long. The pain may be a nagging ache or an occasional sharp twinge. Because the pain is around the front of your knee, treatment has traditionally focused on the knee itself and may include taping or bracing the kneecap, or patella, and/or strengthening the thigh muscle—the quadriceps—that helps

control your kneecap to improve the contact area between the kneecap and the thigh bone, or femur, beneath it.

However, recent evidence suggests that strengthening your hip muscles can also help. The theory is that strong hip muscles can decrease the stress in your knee. A study published in the January 2018 issue of *JOSPT* provides new insights and evidence-based suggestions on how to strengthen your entire leg to decrease your knee pain and help you return to full activity.



**KNEE AND HIP MUSCLES.** Knee pain that is in the front of your knee or under your kneecap is often called patellofemoral pain (A). Strengthening exercises for patellofemoral pain have historically focused on the muscles in the front of your thigh, the quadriceps muscles, because they help track the movement of the kneecap (B). There is now evidence that stronger hip muscles can help lessen the stress under the kneecap, indicating that it is best to strengthen both the knee and hip muscles to avoid the movement shown here, which can cause knee pain (C).

This *JOSPT* Perspectives for Patients is based on an article by Nascimento et al, titled “Hip and Knee Strengthening Is More Effective Than Knee Strengthening Alone for Reducing Pain and Improving Activity in Individuals With Patellofemoral Pain: A Systematic Review With Meta-analysis” (*J Orthop Sports Phys Ther 2018;48(1):19-31. doi:10.2519/jospt.2018.7365*).

This Perspectives article was written by a team of *JOSPT*'s editorial board and staff. Deydre S. Teyhen, PT, PhD, Editor, and Jeanne Robertson, Illustrator.

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### NEW INSIGHTS

The expert clinicians and researchers who authored this paper reviewed 14 of the best published research studies using a process called a systematic review. The studies they examined included 673 patients with moderate-to-severe patellofemoral pain. The researchers found that combining hip and knee strengthening exercise is not only effective but also superior to simply strengthening the knee muscles to lessen pain and help people return to their normal activities. The other important finding is that the benefits of these exercises lasted even after the patients completed their physical therapy.

### PRACTICAL ADVICE

People with this type of knee pain get better with physical therapy. Specifically, the combination of hip and knee strengthening exercises has been found to reduce your pain and help you return to full activity. Exercises that are designed to strengthen your thigh (quadriceps) and hip (abductors, lateral rotators, and extensors) muscles are all beneficial for those with patellofemoral pain. The evidence suggests that these exercises should be done 3 times a week for at least 6 weeks. If you have had moderate-to-severe patellofemoral pain for at least 3 months, this exercise approach may be beneficial to you. Your physical therapist can evaluate these muscles, determine which ones may be weak, and help personalize a program that best meets your needs.



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