Keep Your Knees Pliable with Exercise

With proper bending, stretching, and strengthening, your knees could last your lifetime.

Your knees are the center point of your legs—literal pillars of strength that hold your body up. As one of the largest joints, knees connect your leg bones—the femur, tibia, fibula, and patella—with tendons, cartilage, and ligaments. You depend on healthy knees to connect your calves to your thighs to give your legs the ability to bend, twist, and lift while walking, running, driving, and so much more. Maintaining strong knee function can help preserve your quality of life.

Wear and Tear on the Knees

There are many things that can put undue stress on the knees and cause them to wear down more quickly, including being overweight, age, overuse, and diseases such as arthritis. "High-impact, repetitive exercises cause mechanical stress on the knees that is detrimental to joint health," explains Angela Leis, a physical therapist in the Weill Cornell-affiliated Hospital for Special Surgery's Sports Physical Therapy department.

In addition, "Instability within the knees can increase compressive loads on the joint, prematurely wearing down the internal structures that provide shock absorption and stability," she says.

In addition, she adds, poor body alignment, such as being bowlegged or knock-kneed, also can add undue stress to the knee joints and cause additional wear, while a history of knee trauma can lead to increased joint degeneration or early onset arthritis.

Why Exercise Is Important for Knees

The knee is a synovial joint, and synovial fluid provides nourishment to and a lubricating environment for the articulating surfaces. "Improved lubrication of the joint cartilage can decrease bone loss and joint swelling, and minimize stiffness and pain in the knee," Leis says. A regular regimen of moderate physical activity can promote the release of synovial fluid into the joint and improve joint health.

There are several repetitive-motion exercises that can help maintain lubrication around the knee joint, particularly for a woman over 50. They include cycling, swimming, foam rolling, strengthening, and stretching (after your muscles are warmed up). In particular, "strengthening exercises for the muscles around the knee also help to support and stabilize the joint," she says.

Proper Walking/Bending Technique

If knee pain is causing you to develop an altered gait pattern, such as a limp, consider using an assistive device such as a brace or cane to offload pressure from the knee, Leis suggests. If you continue to walk with poor mechanics, you can further aggravate not only the knee, but also, surrounding areas, including your lower back, hips, and ankles.

Painful activities also can increase swelling in or around the knee, and prevent the muscles around the joint from moving properly. Therefore, Leis says, activity modification is essential for managing knee pain. "Limit the distance you walk at one time, avoid high-impact activities, such as jumping or running, and take your time with stairs."

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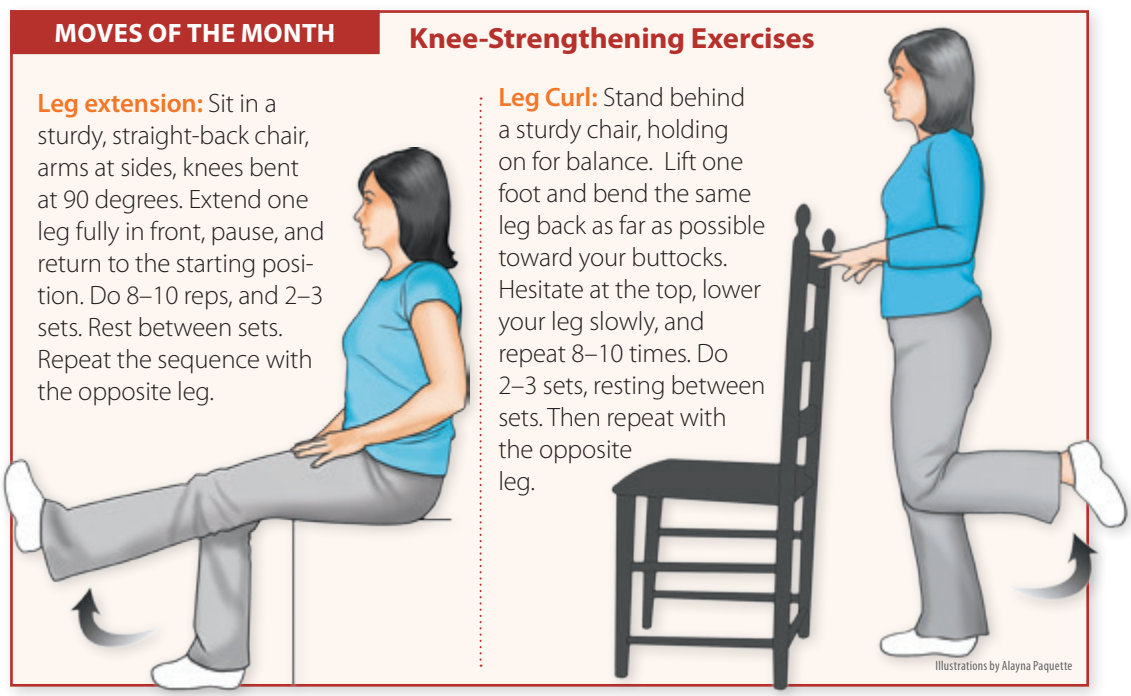
Exercise such as walking helps the knees stay lubricated with synovial fluid.

MOVES OF THE MONTH

Knee-Strengthening Exercises

Leg extension: Sit in a sturdy, straight-back chair, arms at sides, knees bent at 90 degrees. Extend one leg fully in front, pause, and return to the starting position. Do 8–10 reps, and 2–3 sets. Rest between sets. Repeat the sequence with the opposite leg.

Leg Curl: Stand behind a sturdy chair, holding on for balance. Lift one foot and bend the same leg back as far as possible toward your buttocks. Hesitate at the top, lower your leg slowly, and repeat 8–10 times. Do 2–3 sets, resting between sets. Then repeat with the opposite leg.



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