

Knee Arthritis: Prehab Program

UNDERLYING PHILOSOPHY: Pre-surgery rehabilitation, or prehab, looks to start you on exercises to improve strength, flexibility, motion, balance and overall physical health. The goal is to reduce overall pain and stiffness to ideally help you avoid a procedure. However, should you need one, you are better positioned to recover by adhering to this program. Specific exercise like walking, hydrotherapy, and knee strengthening has been shown to reduce pain, improve knee strength, and improve overall functional capacity in those with osteoarthritis. As knee strength is a good indicator of a patient's ability to perform overall daily function, building strength before a potential surgery may help speed the return to normal daily life activity post-operatively.

Important note: LET PAIN BE YOUR GUIDE. IF IT HURTS, DON'T DO IT. This should be a strengthening program that works on the muscles that will offload your arthritic joint pain. If these exercises are not helpful or too painful, make sure you're doing them correctly. In rarer cases, your disease may be too severe. Find what works for you and customize the program to your needs that will improve your strength, pain, and flexibility.

FUNCTIONAL EXERCISES (you can get started on this right away before seeing a therapist!)

- Mini squat: With your feet hip width apart, slowly lower your body into a mini squat position (hips and knees at 45 degrees) while keeping your back straight and your knee caps over your second toes. Do this for 3 sets of 10 repetitions twice a day.
- Heel raises: Holding onto a bench in front of you, slowly raise your heels to lift up onto the balls of your feet. Slowly lower. Do this for 3 sets of 10 repetitions twice a day.
- Standing hip abduction: Holding onto a bench next to you, stand straight and lift one leg out to the side and back again. Do this for 3 sets of 10 repetitions twice a day.
- Leg slides: Lying on your back with your legs straight, slowly slide your heel up the bed to bend your knee as much as possible. Slide back down. Do this for 3 sets of 10 repetitions twice a day.
- Knee extension: With a rolled-up towel under your knee, lift your heel off the bed to straighten your knee. Slowly lower back down. Do this for 3 sets of 10 repetitions twice a day.
- Hamstring stretch: Lying on your back, place a belt or strap around the arch of your foot. Holding the ends of the strap with your hands, lift your leg up into the air with your knee as straight as possible until you feel a gentle stretch in the back of your leg. Allow your arms to help support the stretch through the strap. Hold this for 30 seconds.
- Stationary bike: 30 minutes of no or low resistance cycling can aid to lubricate your knee joint and help improve mobility along with improving heart health and knee strength.

RESISTED LEG RAISES

- Progressive Resistance Exercise Progression – EMPHASIZE VMO STRENGTHENING (PERFORMED IN 90-30 ARC)
 - Multiple angle Isometrics
 - Eccentric closed chain Isotonics

- Concentric closed chain Isotonics – i.e. Step-ups, Short arc squats

FLEXIBILITY EXERCISES

- Achilles
- Hamstrings
- Lateral Hip/Thigh
- Lateral Retinacular stretching

OTHER THERAPEUTIC ACTIVITIES

- Assess for Patellar taping benefit
- Retro ambulation
- Calf and Hip PRE's
- Muscle endurance activities
- Functional closed chain exercises for Static and Dynamic Patellar stabilization
- Nordic track
- Progress to Stairmaster / Versiclimber, short arc
- Cryotherapy and Modalities prn