



ORTHOPEDIC
ASSOCIATES
of HARTFORD

50 Years of Excellence

ANTERIOR KNEE PAIN

Home Exercises

Anterior knee pain is pain that occurs at the front and center of the knee. It can be caused by many different problems, including:

- Weak or overused muscles
- Chondromalacia of the patella (softening and breakdown of the cartilage on the underside of the kneecap)
- Inflammations and tendon injury (bursitis, tendonitis)
- Loose ligaments with instability of the kneecap
- Articular cartilage damage (chondromalacia patella)
- Swelling due to fluid buildup in the knee joint
- An overload of the extensor mechanism of the knee with or without malalignment of the patella

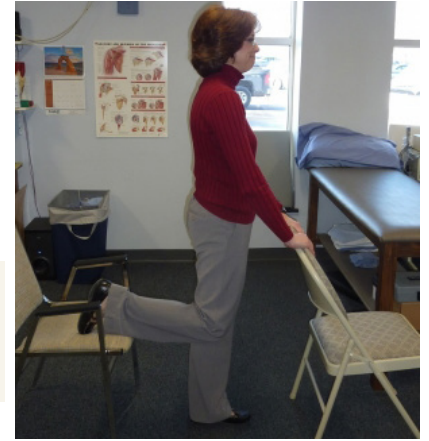
You may feel pain after exercising or when you sit too long. The pain may be a nagging ache or an occasional sharp twinge. Because the pain is around the front of your knee, treatment has traditionally focused on the knee itself and may include taping or bracing the kneecap, or patella, and/ or strengthening 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 and core muscles can also help.

The control of your knee from side to side comes from the glutes and core control; that is why those areas are so important in management of anterior knee pain. The exercises below will work on a combination of flexibility and strength of your knee, hip, and core. Although some soreness with exercise is expected, we do not want any sharp pain—pain that gets worse with each rep of an exercise or any increased soreness for more than 24 hours. If this is the case, modify the exercises to decrease the number of reps or the frequency.

STANDING QUAD STRETCH

With a chair behind you, bend the knee of the affected leg and place the foot on the seat of the chair. You should feel a stretch in the front of the leg (if you don't feel a stretch put your foot on a higher surface, arm or back of the chair might be needed). Make sure to stand upright with good posture.

Repeat 4 Times **Hold 30 Seconds**
Complete 1 Set **Perform 2 Times a Day**



SEATED GASTROC STRETCH

Sit with legs out straight in front of you. Put a stretching strap or long towel around the toes of one foot. Pull your toes towards you until you feel a stretch in the back of your calf.

Repeat 3 Times **Hold 30 Seconds**
Complete 1 Set **Perform 2 Times a Day**



HAMSTRING STRETCH

While lying on back, use a stretching strap or long towel to bring your leg into the air. Keep knee straight. You should feel a stretch in the back of your thigh.

Repeat 3 Times **Hold 30 Seconds**
Complete 1 Set **Perform 2 Times a Day**



STRAIGHT LEG RAISE 2 - SLR

While lying or sitting, raise up your leg with a straight knee. Keep both knees straight the entire time.

Repeat 10 Times **Hold 1 Second**
Complete 3 Sets **Perform 2 Times a Day**



HIP ABDUCTION - SIDELYING

While lying on your side, slowly raise up your top leg to the side. Keep your knee straight and maintain your toes pointed forward the entire time. Keep your leg in-line with your body or slightly behind.

The bottom leg can be bent to stabilize your body.

Repeat 10 Times **Hold 1 Second**

Complete 2 Sets **Perform 2 Times a Day**



SIDELYING CLAMSHELL - CLAM SHELL

Tighten your stomach While lying on your side with your knees bent, draw up the top knee while keeping contact of your feet together.

Do not let your pelvis roll back during the lifting movement.

Repeat 10 Times **Hold 1 Second**

Complete 2 Sets **Perform 2 Times a Day**



BRIDGE

- 1) Begin in hooklying position (Knees bent up as shown)
- 2) Engage your core by lightly bringing belly button closer to the spine.
- 3) While maintaining the core contraction, activate the glutes, which may roll the pelvis backwards (tuck the tail)
- 4) Push through the heels while holding core/glute contraction to lift hips/pelvis off the ground
- 5) Elevate the hips until they are in line with the knees (hip should be in the same plane as the torso). Lower the hips back to the ground while maintaining squeeze.
- 6) Once you reach the ground you may let the glutes go.
- 7) Complete for assigned repetitions
- 8) Remember, there should be little movement/extension in the low back, you want to extend through the hip

Repeat 10 Times

Complete 3 Sets **Perform 2 Times a Day**



PRONE ALTERNATE ARM AND LEG

While lying face down and keeping your lower abdominals tight, slowly raise up an arm and opposite leg. Slowly lower and then raise the opposite side.

Do not allow your spine to move the entire time.

Repeat 10 Times Hold 1 Second

Complete 2 Sets Perform 2 Times a Day



MODIFIED LATERAL PLANK - UNSUPPORTED CLAMS

While lying on your side with your knees bent, lift your body up on your elbow and knees. Hold this modified lateral plank position and try and maintain a straight spine.

Advanced- While holding this position, raise your upper leg separating your knees. Lower the knee back down and repeat the lifting and lowering of the leg.

Repeat 10 Times Hold 5 Seconds

Complete 2 Sets Perform 2 Times a Day

