



**FLOOR EXERCISES** for  
**strengthening your  
hip and knee**  
**INTERMEDIATE LEVEL**

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When you have pain or an injury to your knee or lower extremity, it's necessary to strengthen muscles in your whole lower body to have the best recovery possible, even if your injury is just in one area. The hip and trunk muscles support your knee, ankle and foot, and they all work together when you move. The exercises in this booklet will help you strengthen these muscles to help you recover.

Please read the instructions carefully and follow the advice of your physical therapist or doctor when starting or progressing an exercise program such as this. If your symptoms get worse while doing these exercises, please read the instructions again to be sure you are doing the exercises exactly as described. If your symptoms continue to worsen, talk to your health care provider.

- Equipment needed:**
- exercise ball
  - foam
  - exercise band \_\_\_\_\_ (color) or resistance band
  - pillow
  - towel(s)

## THIGH (QUADRICEPS) STRENGTHENING

- ❑ **Quadriceps set:** Place a small towel roll under your knee. Straighten your knee by tightening your thigh muscles. Press the back of your knee into the floor or towel and hold for 5-10 seconds. This may also be done sitting.

FREQUENCY \_\_\_\_\_



- ❑ **Straight leg raise:** Lie on your back with your affected leg straight and your other leg bent. Tighten your thigh muscle then lift your straight leg no higher than the other knee without allowing your knee to bend. Keep your thigh muscles tight while you lower your leg.

FREQUENCY \_\_\_\_\_



### *Variation:*

In a sitting position, lift your leg no higher than your other knee.

FREQUENCY \_\_\_\_\_



- ❑ **Short arc knee straightening:** Lie on your back with a large towel roll under your knee. Tighten your thigh muscles and lift your heel off the ground. Keep your knee on the towel roll as you hold your leg as straight as possible for 5 seconds.

FREQUENCY \_\_\_\_\_



*Variation:*

Sit up with your hands behind you.



## HIP STRENGTHENING ON YOUR SIDE

- ❑ **Basic clam:** Lie on your side with both knees bent and positioned in front of you. Gently tighten your abdominal muscles to protect your back. Slowly raise your top knee up and outward like a clam opening while keeping your feet together. Keep your buttock muscles tight throughout the exercise. Hold for 5 seconds and slowly lower your knee back down to starting position. Do not roll your body or pelvis backwards.

FREQUENCY \_\_\_\_\_



- ❑ **Clam with resistance band:** Progress basic clam by wrapping a resistance band above your knees and following instructions for basic clam exercise.

FREQUENCY \_\_\_\_\_



- ❑ **Side support clam:** Lie on your side. Lift your body up onto your forearm and knees, making a straight line between your nose, chest and hips. Hold this position and rotate your top leg up and outward like a clam. Slowly return your knee to starting position and then lower your body back to the ground.

FREQUENCY \_\_\_\_\_



- ❑ **Side support clam with resistance band:** Progress the side support clam exercise by wrapping a resistance band around your thighs and following instructions for side support clam exercise. Frequency \_\_\_\_\_

- ❑ **Top leg lifts:** Lie on your unaffected side with your top leg straight. Bend your bottom leg to help keep you balanced. Gently tighten your abdominals to protect your back. Slowly lift your top leg up towards the ceiling 6-8 inches. Keep your knee pointing forward and your ankle in line with your trunk. Do not roll your body or pelvis backwards.

FREQUENCY \_\_\_\_\_



- ❑ **Fire hydrant:** Lie on your unaffected side with knees bent. Gently tighten your abdominals, roll your hips forward slightly and maintain this position throughout the exercise. Lift your top leg up and out so that your knee points slightly towards the ceiling.

FREQUENCY\_\_\_\_\_



- ❑ **Bottom leg lifts:** Lie on your affected side with your top leg bent and your foot on the floor behind your bottom leg. Lift your bottom leg up 6-8 inches.

FREQUENCY\_\_\_\_\_



## HIP STRENGTHENING ON YOUR BACK

- ❑ **Basic bridge:** Lie on your back with knees bent and feet hip width apart and flat on the floor. Gently tighten your stomach and buttocks muscles. Lift your hips 3-5 inches from the floor without arching your back. Hold bridge for \_\_\_\_seconds then slowly lower your hips to the floor.

FREQUENCY\_\_\_\_\_



- ❑ **Bridge with resistance band:** Wrap a resistance band above your knees. Lie on your back. Push your knees apart so they are in line with your hips and maintain this position as you do the basic bridge exercise.

FREQUENCY\_\_\_\_\_



### ❑ Bridge with legs on ball

Easier: Lie on your back with legs on a ball. Gently tighten stomach and buttocks muscles and press your legs into the ball.

FREQUENCY \_\_\_\_\_



Harder: Gently tighten stomach and buttocks muscles and press your legs into the ball. Lift buttocks up.

FREQUENCY \_\_\_\_\_



### ❑ Bridge with feet on ball

Easier: Lie on the floor with your feet resting on the ball. Gently tighten stomach and buttocks muscles. Press your feet into the ball as you lift and lower your hips.

FREQUENCY \_\_\_\_\_



Harder: Gently tighten stomach and buttocks muscles. Press your feet into the ball as you lift your hips up. Hold hips up and roll the ball toward you and away from you.

FREQUENCY \_\_\_\_\_



## ALL 4'S WITH LEG LIFT EXERCISES

- **All 4's with bent knee lift:** Begin on your hands and knees. Gently tighten your stomach muscles and keep your hips level throughout the exercise. Lift one leg up from the floor with your knee bent. Slowly lower leg to the starting position. Repeat with the other leg. Continue alternating sides.

FREQUENCY \_\_\_\_\_



*Variation:*

Lift your leg with the knee straight.



*Variation:*

If you can't kneel, stand while leaning over a counter or table and do the exercise above.

- ❑ **All 4s fire hydrant (lift and rotate):** Begin on your hands and knees. Tighten your stomach muscles throughout the exercise. Raise your knee outward and upward diagonally towards the side. Keep your back and hips straight. Repeat with the other leg. Continue alternating sides.

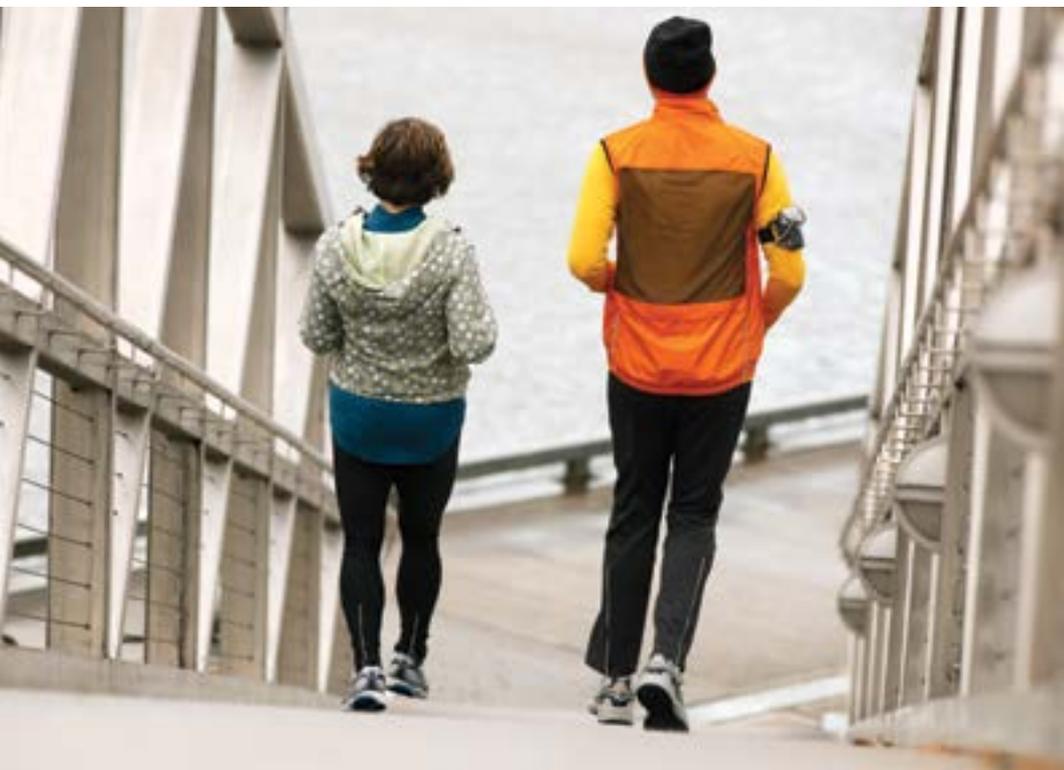
FREQUENCY \_\_\_\_\_



## ADDITIONAL RESOURCES

- Connect to our website at [kp.org/mydoctor](http://kp.org/mydoctor) to access health and drug encyclopedias, interactive programs, health classes, and much more.
- Contact your Kaiser Permanente Health Education Center or Department for health information, programs, and other resources.





Consult with your physical therapist or doctor if you experience an increase in your symptoms with recommended exercises, or if you develop new symptoms of numbness, tingling, or a spread of the pain. This information is not intended to diagnose health problems or to take the place of medical advice or care you receive from your physician or other health care professional. If you have persistent health problems, or if you have additional questions, please consult with your doctor.