

# ANTERIOR KNEE PAIN

## Due to Patello- Femoral Syndrome

### WHAT IS IT?

Pain around the kneecap (patella). In most cases, poor alignment of the kneecap causes pressure and friction between the patella and femur. Soft tissue structures such as the joint capsule and retinaculum which attach the knee cap to the bones become irritated and inflamed.

### WHAT WILL I FEEL?

You may have symptoms of aching, localized pain, swelling or sometimes a grinding sensation. You may experience pain only with certain activities such as running, jumping, squatting and climbing stairs. Symptoms may be experienced several hours after the activity.

### WHAT CAUSES IT?

Repeated minor injuries; forceful exercises and strains on the kneecap from running, jumping, deep knee bends, squatting, falling or hitting the kneecap.

Weakness of the large thigh muscles, which stabilize the kneecap.

Tightness of the quadriceps muscle, the lateral thigh muscle or the ligaments around the kneecap. When these structures are tight, they pull the kneecap to the side.

Poor alignment of the leg (knock knees, flat feet, pigeon toed, knees hyper-extended), alters the position of the kneecap over the femur bone.

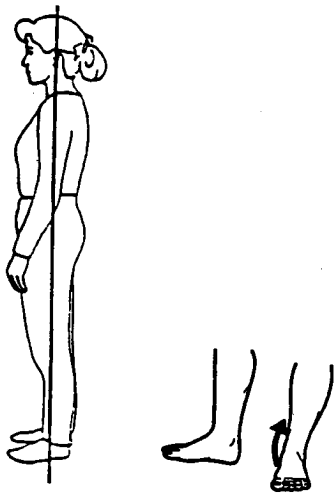
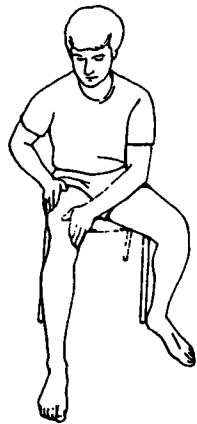
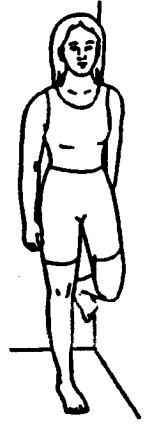
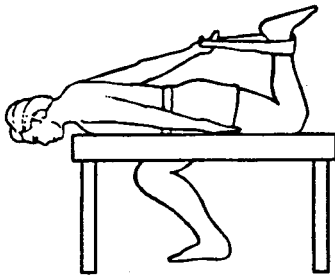
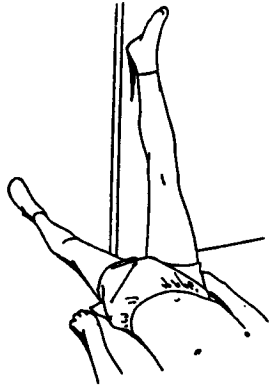
### WHAT CAN I DO TO HELP MYSELF?

- **Ice** - to decrease pain and inflammation. **15 minutes. 3-4 times each day.**
- **Medication** - Talk to your health care provider or consult the *Healthwise Handbook*. It may take 10-14 days for you to notice the benefit.
- **Modify Your Activities** - at work, home and in sports:  
Avoid movements that are painful. Avoid or modify squatting, kneeling, climbing stairs, sitting or standing for long periods.
- **Supportive Shoes** – with good arch supports and cushions. Non-prescription orthotics may be advised to support your feet. Avoid high heels.
- **Maintain Proper Alignment** – Be aware of postural habits such as standing with the knees locked back and try to correct frequently throughout the day.
- **Exercise** - Do the exercises listed on the back of this form to decrease pain, stretch muscles that are tight and strengthen muscles that are weak. Do the exercises only when you are able to do them without increasing your pain.



## Patellofemoral Exercises:

- Do the first 2 exercises 5 times every hour of the day. Do the rest 2X each day
- All exercises must be done **PAIN - FREE**. Feeling a stretching or pulling sensation is OK. **Stop** doing any single exercise if it immediately increases your pain.
- If you have increased **pain that lasts more than 1 hour** after finishing the exercises, you need to decrease the number of repetitions of each exercise.

<p><b>Standing Alignment</b> Stand with your feet shoulder width apart. Unlock your knees. Tighten the buttocks muscles. Gently raise your arches.</p> 	<p><b>VMO Isometrics</b> Sitting with one knee almost straight, place your hand on the inner part of the thigh muscle just above the knee. This is the vastus medialis muscle. Tighten your thigh muscle. Hold for 5 seconds. Try to focus on making the part of the muscle under your hand tighten more with each repetition.</p> 	<p><b>Standing Hip Presses Into Wall</b> Stand sideways to the wall with the affected leg on the outside. Be sure that the knee of the affected leg is unlocked. Bend the knee closest to the wall without bending the hip. Press leg into wall. Hold 5-10 seconds. Repeat 10X.</p> 
<p><b>Quadriceps Stretch</b> Lie on your stomach on the edge of the couch or bed. Place one leg on the floor and the other leg on the bed. Use a towel or belt wrapped around the ankle to gently pull your heel toward your buttock until a comfortable stretch felt in the thigh muscle, not in the knee. Hold stretch for 30 seconds. Repeat 2X.</p> 	<p><b>Hamstring Stretch</b> Lie on the floor with the affected leg on wall and other leg through doorway. Scoot buttocks toward the wall until a comfortable stretch is felt in back of the thigh. As your leg relaxes, try to scoot closer to the wall. Hold stretch 30 seconds. Repeat 2X.</p> 	<p><b>Gastroc Stretch</b> Stand, facing wall. Place both hands on wall. Place one foot forward with knee bent, one leg back, knee straight and foot facing directly forward. Keep head and chest up. Lean forward into front leg. Hold stretch 30 seconds. Repeat 2X.</p> 