

## UW Medicine

SPORTS, SPINE &  
ORTHOPEDIC HEALTH

### Runner's Knee

Knee pain can strike any runner, from novice to seasoned veteran. One cause of knee pain is so common in running athletes; it has been called "Runner's Knee." The medical term for this problem is Patellofemoral Syndrome, so called, since it is caused by abnormal forces between the patella (kneecap) and the femur (thigh bone). Normally, the kneecap rests in a groove at the tip of the femur. Abnormal tracking of the kneecap in this groove causes soreness. Fortunately, this condition usually responds to appropriate treatments.

Runner's Knee commonly causes pain behind the kneecap. This is made worse with positions or activities that increase the pressure between the kneecap and the femur. Often, pain is worse with sitting for prolonged periods and climbing or descending stairs. Swelling may occur and the knee may feel unstable. Runners may notice pain during their run, a short while after running, or even the day after a workout.

The cause of Runner's Knee is not fully understood. Traditionally, weakness of the vastus medialis (the inner most quadriceps muscle) was thought to contribute to abnormal tracking of the kneecap and result in pain. More recently, weakness of the gluteus medius and other hip muscles has been recognized as a contributing factor. The hip muscles support the body and control the femur during running. When these muscles are weak, the thigh may drift inward and contribute to abnormal tracking of the kneecap. While runners are usually strong in their hip flexors due to their training, they are commonly weak in hip abductor (gluteus medius) strength.

Whatever the cause, Runner's Knee is easily treated. Initially, one can ice the affected knee approximately 20 minutes, several times per day. Judicious use of over the counter medications such as acetaminophen or anti-inflammatories can be helpful. Often, rest from running will improve symptoms as well. If these first line approaches do not provide adequate relief, see your regular doctor or sports medicine specialist for other treatment options. These might include a specialized brace or taping to stabilize and support the kneecap. Measures to optimize biomechanics can help provide lasting relief from Runner's Knee. These include use of orthotics, when appropriate, and a physical therapy program to strengthen those weak muscles that play a key role in supporting the knee.

*Authored by UW Medicine Sports Medicine Physicians*

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