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Knee Pain? Could Be Patellofemoral Pain Syndrome

Congratulations to all those who competed in the 45th River Bank Run. It was great to hear the pounding of feet and cheers from the crowd throughout Grand Rapids, and to see the smiles of exhaustion and happiness as participants crossed the finish line and celebrated their accomplishment.

As you recover, it is important to take care of your body and address the aches and pains you may have experienced throughout your training. You need to keep your body in peak shape so you can continue to meet or exceed your next goals.

If you experienced knee pain during your training and runs/walks, know that it is one of the most common complaints of runners and walkers. The most common diagnosis contributing to knee pain is patellofemoral pain syndrome, or PFPS. PFPS is otherwise known as Runner's Knee, although you do not necessarily need to be a runner to have this diagnosis. In most cases, there is no trauma or injury that causes the pain. Typically, the pain is more closely related to mechanical and muscular changes in the hip, leg, and knee.

To understand PFPS, you first need to understand the anatomy of the knee. The kneecap (patella) sits in a groove at the front of the knee along the femur (thigh bone). The role of the patella is to protect the knee, aid in smooth flexion and extension of the knee, and increase range of motion. When the knee is flexed and extended, the patella should glide smoothly in this groove. But even subtle changes in the leg muscles can cause the patella to slide side-to-side and cause pain.

You will probably not see any tracking abnormalities of the patella by visually inspecting your knee, but you will feel the pain. Pain from PFPS can be described as dull, achy, sharp, stabbing, burning, and throbbing. You also may note clicking, catching, and popping. PFPS can be very painful and limiting and affect even the most elite athletes. You may note pain along the sides and deep into the patella when getting up from a seated position, going up and down stairs, squatting, lunging, and walking/running on flat surfaces, but especially going up or down inclines. In some cases, you may feel as though the leg is going to give out on you and be unstable if the pain is intense. The pain with running/walking may occur immediately or within minutes into exercise and can be debilitating.

PFPS occurs because of muscular imbalances. Running and walking is not a simple action for the body. It requires significant coordination of essentially all muscle groups, from your legs to your upper body. Imbalances in these muscles can alter other muscle groups and affect joints in a way that they begin to function abnormally. The major muscle groups that are notorious for causing and contributing to PFPS are the quadriceps (thigh muscles in the front of the leg), hamstrings (thigh muscles in the back of your leg), gluteal muscles (butt muscles), abdominal muscles, and calf muscles. If any of these groups are not functioning in a balanced fashion, the patella may track abnormally. Most of the time, weakness in the quadriceps and gluteal muscles are to blame. Although there can be a lot of pain associated with PFPS, in most cases there is no damage to underlying tissues. But if PFPS is not

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treated, over time there may be damage to the chondromalacia, which is the cushioning cartilage that covers the back of the patella.

PFPS is correctable. You can recover and return to full sport activities without restrictions. Simple treatments to address the pain include Tylenol, anti-inflammatories, ice, and heat. These treatments are good in the short term, but they are not a cure. Effective and longer-term treatment involves correcting the underlying imbalances through physical therapy. Performing a directed physical therapy program and meeting with a physical therapist is the best option. Therapy may last a few weeks to a few months as it may take a while to alter the abnormal muscle function. Bracing of the patella can also aid in decreasing pain in the interim and keep you exercising while physical therapy addresses the mechanics. PFPS is not typically treated with injections because it is more of a malfunction than a structural abnormality. Surgery for PFPS is also not a warranted treatment.

Patellofemoral pain syndrome is a limiting and sometimes debilitating cause of knee pain during exercise. However, be assured that if this is the cause of your knee pain, it can be resolved with proper treatment. If you are experiencing knee pain that isn't subsiding with simple home remedies, it is important to meet with a physician to make a proper diagnosis and treatment plan so you can get back on track.

If you have any questions or concerns regarding an injury or pain, please reach out to one of our experienced sports medicine physicians at Corewell Health Medical Group Orthopedics at (616)267- 8860. You can also find more information about our orthopedic program and providers on our [website](#).
