



## The “Kneed” for Assistance

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*Sylvia is a 42-year-old professional who comes to your office having just restarted an exercise program. She likes to jog and has been running outside two to three times per week after not having run for years. Following the first two weeks, she started to develop anterior knee pain. She complains of the pain after her runs and also notices difficulty ascending stairs and sitting with her knee bent for an extended period of time.*

You take a further history and perform a physical examination on Sylvia. You notice a number of risk factors for her pain. The pain appears to be anterior in nature. Most of her tenderness appears to be behind the patella. You notice that she has an alignment issue, a hyper-pronation state of her feet and maltracking of her knee cap. Also, although she exercises on a regular basis, she has obvious weakness of her quadriceps muscle. You have explained the features of her condition, Patella Femoral Syndrome (PFS), and suggest a few things to do.

*Sylvia takes your advice to eliminate the risk factors. She visits a physical therapist to develop a comprehensive stretching and strengthening program for her quadriceps muscle, is assessed for customized orthotics for her shoes and wears a patella-stabilizing brace to help with the maltracking of the patella.*

The brace will help keep the patella in a more medial position and allow the patella to move up and down in the femoral groove with less pressure on the retropatellar area. The more pressure, the more potential for the development of chondromalacia (softening of the articular cartilage) in years to come.



*Sylvia returns four weeks later to tell you that her knee is feeling much better, but she still has difficulty with pain after running.*

Her running shoes are eight months old and are looking ragged. You mention that she shouldn't wear a pair of jogging shoes for running once they have logged more than 400 miles. As well, you find that she is doing deep squats and lunges to help strengthen her quadriceps muscle. Clearly, the very action she is doing to strengthen her muscle is aggravating it. You mention a few modifications to her exercise program.

She loves the orthotics and comments on how much more comfortable her feet feel in her shoes. She wears the brace for running and notices pain relief. She continues with her plan of management.

*Sylvia returns for another followup appointment. She has listened to your advice and has bought a new pair of running shoes. She has also changed how she does her strengthening exercises, so that she does not put too much weight on her bent knee (no greater than a 40° bend). She finds that icing for 10 to 15 minutes a few times per day is also helpful. She now knows not to do any repetitive kneeling, deep squatting or hard, pounding-type activities.*

With this regimen, Sylvia continues to do well. She is reminded that her exercises are to be done on a regular basis as homework for life. Many times, it takes a patient a good couple of months to build up enough strength to have a positive impact on their symptoms. Consistency is the key. Whatever you do, don't use the "A" word, unless you have strong objective evidence that the patient has arthritis.

PFS is a very treatable condition and the patient should be encouraged to expect improvement with the appropriate treatment.

Please note that no X-rays were ordered for this patient. If an X-ray is not going to alter the plan of management, then don't order one (to avoid exposing the patient to further radiation). If you spend the appropriate time with the patient, assessing all of their risk factors and educating them properly, then you will eliminate the patient's "kneed" for any assistance in the long run.

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