

Management of Osgood-Schlatter

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In clinical practice, you will see teenagers and even pre-teens with [Osgood-Schlatter disease](#), particularly if you treat young athletes. The condition can be quite debilitating, and is particularly aggravated by walking up steps and during running and jumping activities. Pain is typically right at the tibial tuberosity and will be tender to palpation.

Assessment Tests

One of the things you commonly notice with these patients upon evaluation is that when you do the squat test, they are quad squatters and do a poor job of squatting into their hips and glutes. This means that when they squat, as you observe from the side, the knee is projected out further forward than the foot, especially as they reach the bottom of the squat. People who are very strong at squats are never quad squatters, but instead squat into their hips and glutes, and drive up from there. You will notice that as Olympic-level power-lifters or high-level athletes reach the bottom of their squat, their alignment will show the knee directly above the dorsum of the foot.

Quad squatting puts excessive stress on the knees and aggravates Osgood-Schlatter. You will often notice tightness of the rectus femoris muscles or hamstrings as well as the posterior hip capsule, depending on the patient. As with most knee problems, Osgood-Schlatter is ultimately caused by muscle/joint dysfunction above or below the knee. Check the quadriceps length with a modified Thomas test.

Another test that is quite helpful to isolate the problem knee is the 6" or 8" step-down. The patient lifts one foot up and off the step-down and slowly lowers it with the toes pointing up, lightly touching the heel to the floor in a smooth, coordinated manner. This is often challenging to the patient and is a good check for balance and flexibility, including at the mortise joint, and eccentric control of the glutes. With the 6" or 8" step-down, you also can see what they use to squat. Is it their quadriceps or hips, how is their balance, how does their foot handle the extra load and is there excessive valgosity of the weight-bearing knee?

Treatment Options

Treatment can include rest, lots of ice, anti-inflammatory nutrition including [essential fatty acids](#) and [anti-inflammatory herbs](#) such as ginger, Boswellia, or turmeric; adjustments of restricted joints in the foot, knee, hip and sacroiliac joints; and stretching of the shortened quadriceps or hamstring as needed. You can tape across the tibial tuberosity, which is often helpful for patients' daily walking activities, but they will often need a knee brace for more intense activities.

The use of soft-tissue techniques, such as ART or Graston, to help reduce and eliminate muscular adhesions around the knee is also helpful for Osgood-Schlatter. This will help allow for normal movement about the knee. Eventually, you will need to teach the patient proper squatting technique so they use their hips and glutes more for explosive activities such as jumping, but that is after you have gotten some of the initial irritation under control. These patients may or may not have weak quads.

Good for Patients and Your Practice

Osgood-Schlatter will need some time to heal, and your treatment is important. If you operate a sports-oriented practice and like to work on extremities, you will see these types of cases and enjoy providing valuable care. Because of our holistic approach, DCs are well-suited to help these patients. This helps grow your practice for all the right reasons.

To learn more about Osgood-Schlatter disease including primary causes and symptoms, visit www.mayoclinic.com.

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