The following is designed to present an overview of Chondromalacia of the Patella (kneecap) so that you may better understand what it is, how it can be treated, and what to expect.

This is the most common knee problem that I see in this office. It is a condition which affects your kneecap, or patella. The patella is part of the knee joint. It is actually a bone which is contained within the tendon which straightens or extends the knee. The muscles in front of your thigh is called the quadriceps muscle, and those muscles become a tendon just above the knee. The patella or kneecap is contained and located within the tendon which attaches to the top of the shin bone (tibia) just below the knee. The back of the patella is smooth but not flat. As you bend (flex) or straighten (extend) the knee, the patella slides (articulates) with the end of the thigh bone’s (the femur) articular surface.

Chondromalacia is a term to describe articular cartilage and the varying degrees of wear which include softening, pitting, irregularity, fissuring, roughness, and in advanced cases, wear down to the bone. Another way of thinking about this disorder is having arthritis/arthrosis of the back of the kneecap. In fact, if looked at under the microscope, it appears as approximately the same thing.

There are many different causes of chondromalacia of the patella, some of which are known and some of which are unknown. One easily understood cause would be an injury, such as hitting a dashboard in a car in an automobile accident or in a fall. Another cause is a patella that does not track, or glide normally; due to that abnormal motion, the cartilage wears abnormally and prematurely. Another is a patella which dislocates or slips out of place, either partially or completely. When we feel that the patella does not come all the way out of place, this is called subluxation. Still other patellas sit too high (patella alta), too low (patella baja) or over to the outer, lateral side. Others have no known injury and no known obvious visible abnormalities either on examination or x-ray. We just do not now the exact cause in every case of chondromalacia of the patella.

The knee that is symptomatic with this problem hurts, swells, and grinds. However, a lot of patients have chondromalacia of the patella that had no symptoms other than a grinding sensation when they squat or climb stairs. This grinding sensation is often not painful.

Treatment options will obviously vary depending on the cause, severity, patient’s desires, etc. The vast majority can be treated with conservative or nonsurgical methods.
Option 1:
The first, and probably the most effective treatment, is to modify your activities and try to eliminate or decrease exposure to known aggravating activities. There are, unfortunately, many aggravating activities, and these include repetitive stair climbing, squatting, running (especially up and down hills), hiking, strenuous bicycle riding (especially a stationary bicycle), weight lifting with free weights, Nautilus and other machines, and even wearing high heels. Any activity which is done to stress a bent or flexed knee can be aggravating in patients that are symptomatic with this problem.

Option 2:
The second thing to do is to do some exercises designed to strengthen the quadriceps muscle and stretch out the hamstring. Most patients with chondromalacia have a relative (usually not absolute) weakness of the quadriceps and tightness of the hamstrings. The physical therapist will show you how to do these simple exercises.

Option 3:
The next treatment is the use of an anti-inflammatory drug of one kind or another. Taking aspirin in the form of Bufferin or Ecotrin (which may be easier on the stomach) or Advil or Aleve, two tablets two to three times a day with meals is very effective. I recommend that taking this for about two weeks and then stop taking it. If the symptoms return, take it again for another two weeks, and then use it when you need it for ten days or two weeks at a time. This problem does tend to be a bit cyclic, sometimes coming and going without any apparent reason. If over-the-counter medications do not help, then one of the several prescription anti-inflammatory drugs such as Lodine, Voltaren or Celebrex can be prescribed, as these may help. All have side effects, the most common being irritation of the gastrointestinal tract, in particular, the stomach. Aspirin also diminishes the ability of the blood to clot and should not be taken for at least ten days prior to any surgery. These three things will be very helpful to most patients with this problem.

For those that fail to respond satisfactorily to the above, then surgery is a consideration. The most frequently recommended surgery would be an arthroscopic examination to look at the back of the patella and smooth it if possible. We would consider release of some of the structures on the outside, or the lateral side, of the knee to try to improve abnormal tracking. Other surgeries possibly include open procedures done through a larger incision to realign the kneecap. These specific procedures will be discussed with you only if felt indicated.

It is very important that you understand that chondromalacia of the patella cannot be totally cured. Most can be improved with appropriate conservative and/or surgical treatment.

The information contained in this patient education packet is intended to help you and your families/caretakers better understand a particular diagnosis and/or the treatment options available. If you have any questions after reading this, please don’t hesitate to contact Dr. Longobardi’s office at 201.343.1717 for a further explanation or you can also go to www.universityorthopaedic.com and click on Patient Education to gather more information. Thank you.