

## PLICA SYNDROME

A synovial plica is a residual band of developmental tissue in the knee. Technically, the shelf or band is a residual fold of what's called mesenchymal tissue. However, the easiest way to think of this structure is to understand that during fetal development we all have bands of tissue in our knees. As we get closer to birth, the bands resorb or melt away in most people. However, some do not, and form thick bands that slide over the knee bones like a band of scar tissue. These bands can become thick or irritated as one grows older, through use or overuse of one's knees or following an injury such as a direct blow to the front or side of the knee. As these bands stiffen, they can rub on the femur (thigh bone) on the inside of the knee. They can become inflamed and subsequently painful, or even catch or pop like a guitar or bowstring. This can cause swelling, popping or even a sense of giving way in some people. It is not uncommon to have siblings with this problem arise at about the same age. In my experience, there is a strong family predisposition or genetic relationship in these bands becoming symptomatic.

### SIGNS AND SYMPTOMS:

You might experience "popping" or a feeling of "instability" with activity. Most people can still walk on the injured knee and many athletes keep playing. When symptoms of inflammation set in, your knee feels painful and tight. For several days you may have:

- Stiffness and swelling.
- Tenderness around the knee (mostly on the inside but can be everywhere)
- Collection of fluid ("water on the knee")

### DIAGNOSIS-

A careful history or telling your story will usually alert us to the possibility of a plica. X-rays are almost always performed to rule out osteoarthritis, fractures or other possible causes of your knee pain. A careful physical examination will rule out a meniscal or ligamentous injury. Sometimes we may order an MRI or magnetic resonance imaging scan to get a better look at the soft tissues around and in your knee joint. Surgery can also be used to confirm the diagnosis by using a miniature telescope (arthroscope) to see into your knee joint, especially if your knee locks.

### CONSERVATIVE TREATMENT-

Initial treatment of a plica follows the basic R.I.C.E. formula: rest, ice, compression and elevation, combined with nonsteroidal anti-inflammatory medications such as ibuprofen for pain. If your knee is stable, this conservative treatment may be all you need. Rest or change of activity, non-steroidal anti-inflammatory medicine, and physical therapy can be used to control symptoms. I have found that once these bands become symptomatic, and these simple interventions are unsuccessful, surgery is often necessary. Cortisone shots have been suggested by some as a treatment alternative, but I have found this quite unsuccessful in most patients. If one's knee pain becomes so significant that it interferes with sports, work, play or even day to day living, removing the plica surgically would be appropriate.





#### SURGICAL REMOVAL-

We use an arthroscope to remove this band of tissue. This procedure is known as arthroscopy. The procedure allows us to diagnose and treat knee disorders by providing a clear view of the inside of the knee with small incisions, utilizing a pencil-sized instrument called an arthroscope. The scope contains optic fibers that transmit an image of your knee through a small camera to a television monitor. The TV image allows us to thoroughly examine the interior of your knee and determine the source of your problem. During the procedure, we can insert surgical instruments through other small incisions in your knee to remove damaged tissues.

Modern or contemporary arthroscopy of the knee was first performed in the late 1960's. With improvements of arthroscopes and higher-resolution cameras, the procedure has become highly effective for both the accurate diagnosis and proper treatment of knee problems. Today, arthroscopy is one of the most common orthopedic procedures in the United States.

Recovery from this type of surgery is usually very short, however, some surgical patients require many weeks before they feel improved. Unfortunately not all patients get complete relief from their symptoms due to other problems found at the time of surgery such as osteoarthritis. Happily however, most patients recover fully and are pleased with their results with a very short time.

