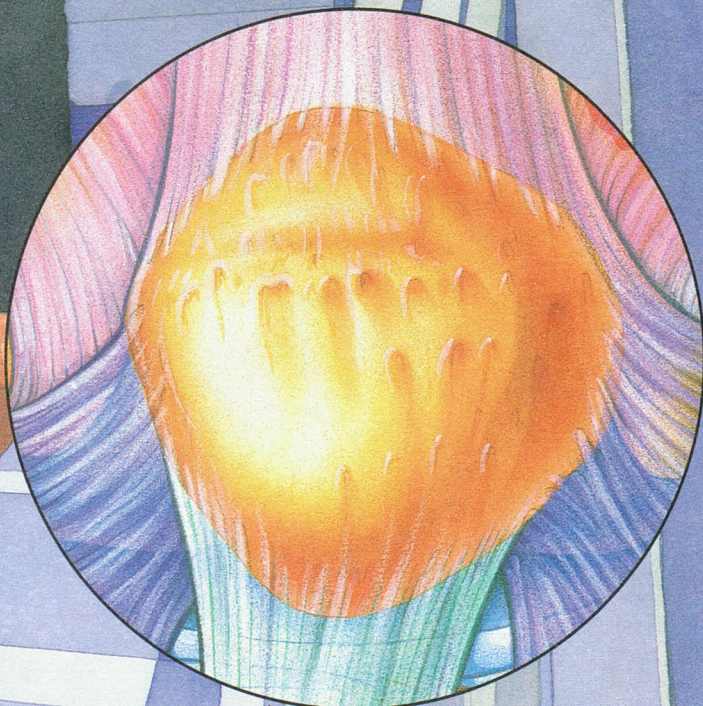


PATELLA PAIN



Treatment and Rehabilitation
for Kneecap Problems

THE PATELLA: YOUR KNEE'S PROTECTIVE SHIELD

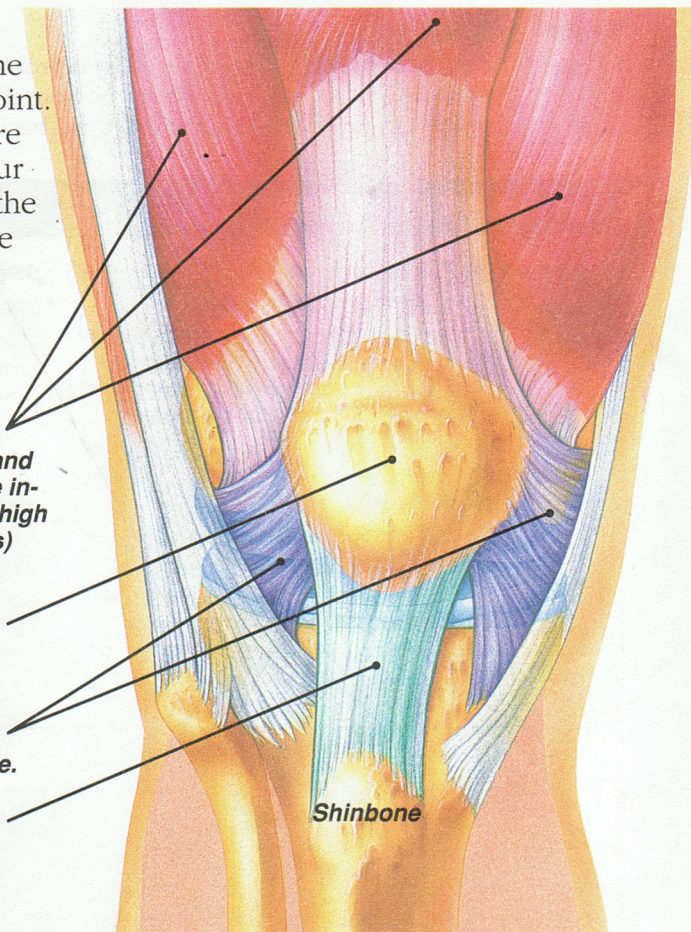
The patella, a flat, triangular bone about two inches wide, is just one of the many parts that make up your knee joint. Some of the other parts of this joint are muscles, tendons, and leg bones. Your patella plays a special role: it protects the knee joint and gives your muscles the extra leverage they need to straighten your leg more efficiently.

Quadriceps muscles at the front of your thigh hold the patella against the thigh bone and help straighten your leg. Other muscles at the inside of your thigh (**adductors**), back of your thigh (**hamstrings**), and back of your shin (**calves**) assist your quadriceps in moving your leg.

The patella anchors your quadriceps muscles as they contract, and protects the bones and other tissues underneath it.

Retinacula are fibrous bands on the sides of the knee. They help hold the patella in place.

The patellar tendon is a fibrous cord that connects the patella to your shinbone.



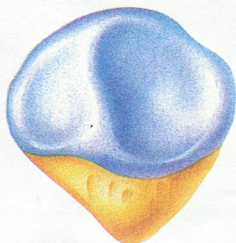
Your Patella Up Close

Take a closer look at this small bone to see why it provides such great protection and movement for your knee.

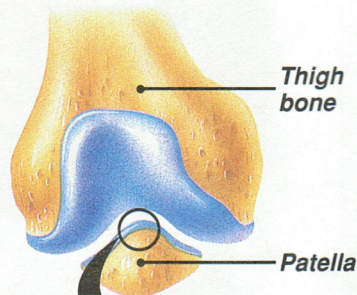
From the front, you can see the patella's slightly rounded, protective, shield-like shape.



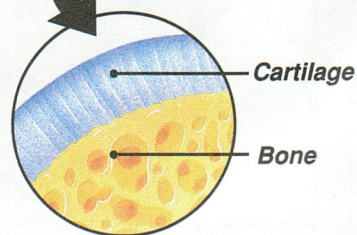
From the back, you can see cartilage, tough tissue covering the bone, which helps the patella slide easily against the thigh bone and distributes pressure caused by movement.



From the top, you can see that the patella sits in a groove or "track" in the thigh bone.

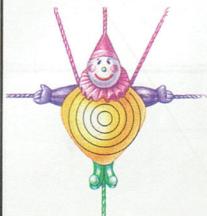


Inside the patella, you can see the difference between the smooth, tough cartilage covering and the rougher, more fragile bone underneath.



Your Patella on the Move

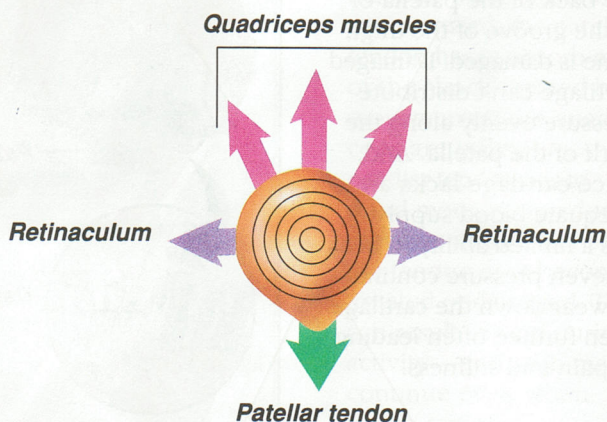
When your leg is on the move, your patella's on the move, too, sliding up and down its track on the thigh bone. But if your patella slides "off track"—even just a little bit—it can result in pain and damage to your patella.



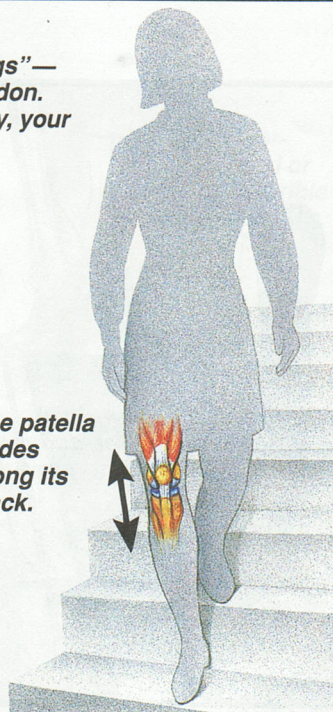
When Your Patella's "On Track"

Think of your patella as a puppet controlled by "strings"—your quadriceps muscles, retinacula, and patellar tendon. As long as all of these strings pull in just the right way, your patella stays in place and glides easily in its track.

All "strings" pull correctly, distributing pressure evenly on the back of the patella.



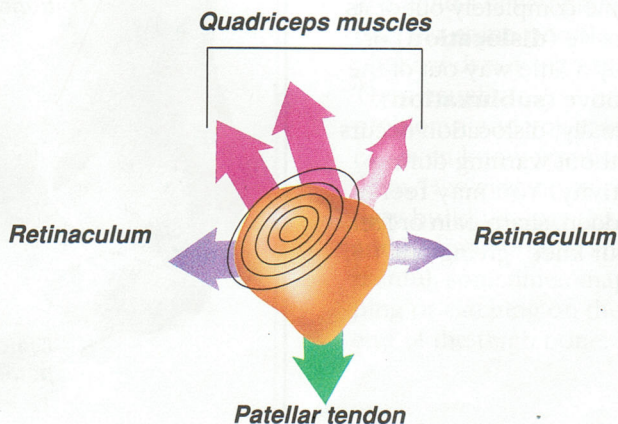
The patella glides along its track.



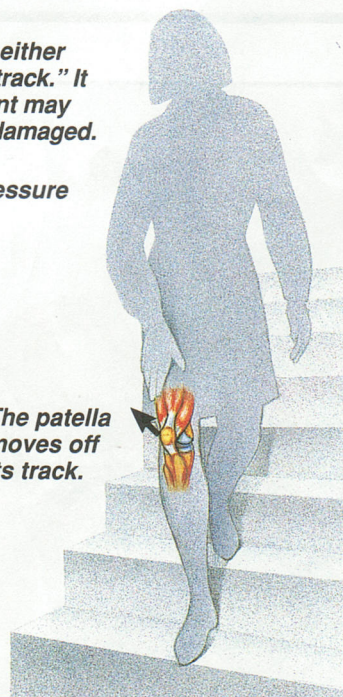
When Your Patella Gets "Off Track"

If any of your patella's "strings" pulls incorrectly—either too hard or not hard enough—your patella gets "off track." It doesn't glide easily against the thigh bone. Movement may become painful and difficult, and the patella may be damaged.

Some "strings" pull incorrectly, distributing pressure unevenly on the back of the patella.



The patella moves off its track.



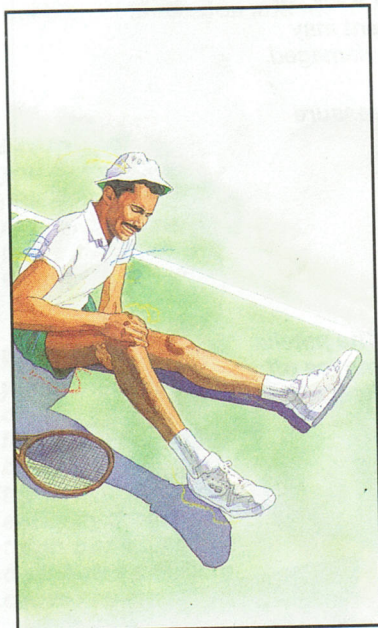
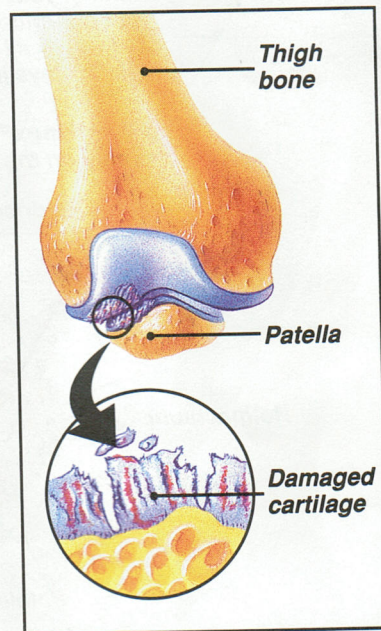
RUNNING INTO PATELLA PROBLEMS

Because you move so much throughout your day, even a slight problem with tracking and the resulting uneven distribution of pressure on the patella can lead to pain and difficulty in movement. Arthritis, dislocation, and tendinitis are commonly associated with patella problems. Plica bands may create symptoms that are similar to patella problems.



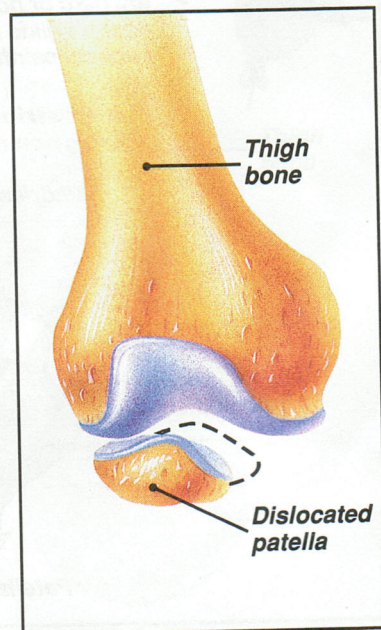
❑ Arthritis

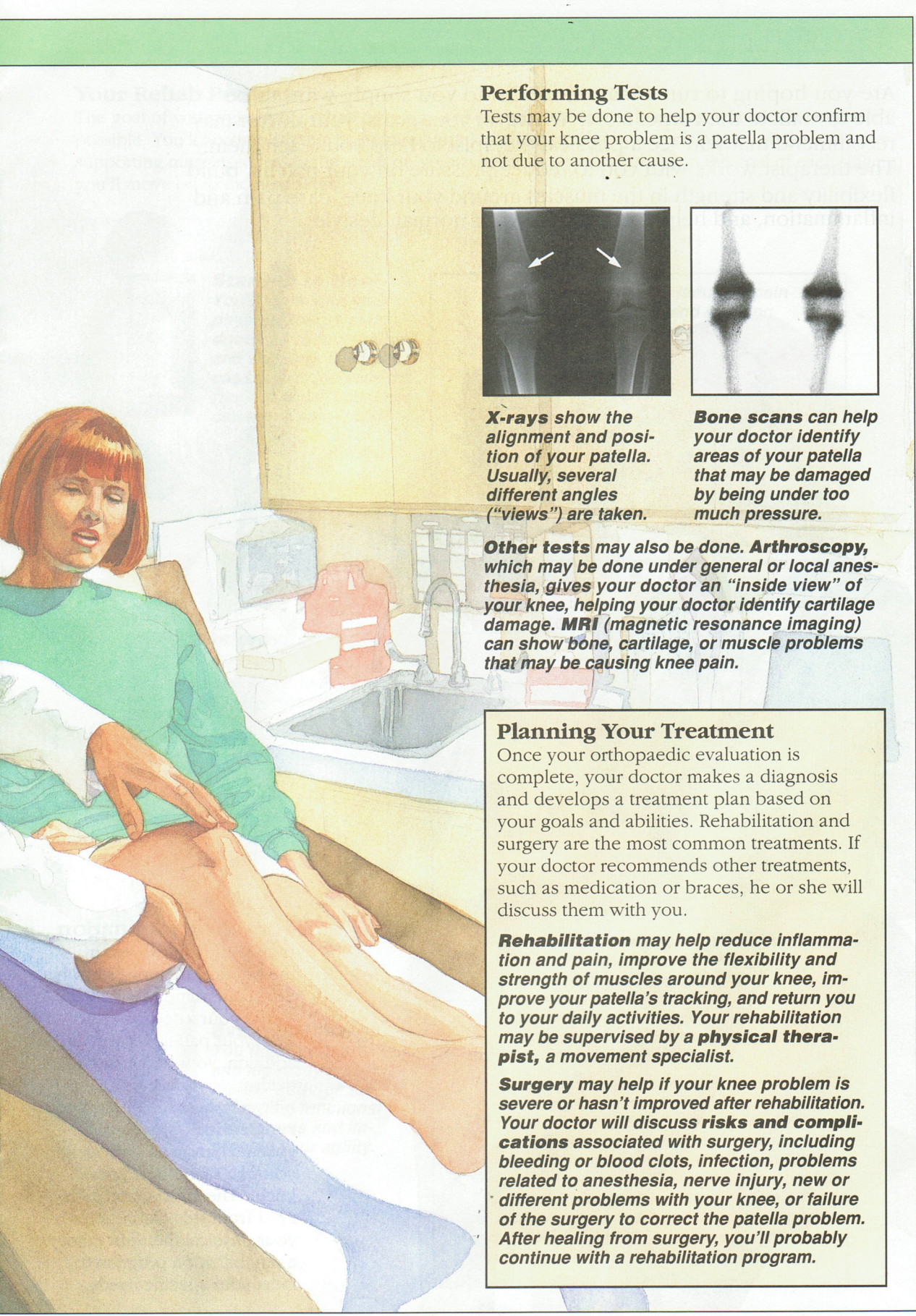
Arthritis (also called **chondromalacia** or **patellofemoral disease**) occurs as the cartilage on the back of the patella or in the groove of the thigh bone is damaged. Damaged cartilage can't distribute pressure evenly along the back of the patella. And, since cartilage lacks an adequate blood supply, it has a limited ability to heal. Uneven pressure continues to wear down the cartilage even further, often leading to pain and stiffness.



❑ Dislocation

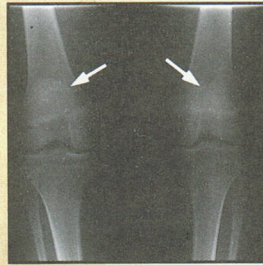
If one of the patella's "strings" pulls too hard, the patella may come out of its groove. The patella may come completely out of its groove (**dislocation**) or only a little way out of the groove (**subluxation**). Usually, dislocation occurs without warning during activity. You may feel sudden, sharp pain or feel your knee "giving out."



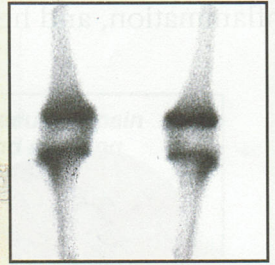


Performing Tests

Tests may be done to help your doctor confirm that your knee problem is a patella problem and not due to another cause.



X-rays show the alignment and position of your patella. Usually, several different angles ("views") are taken.



Bone scans can help your doctor identify areas of your patella that may be damaged by being under too much pressure.

Other tests may also be done. **Arthroscopy**, which may be done under general or local anesthesia, gives your doctor an "inside view" of your knee, helping your doctor identify cartilage damage. **MRI** (magnetic resonance imaging) can show bone, cartilage, or muscle problems that may be causing knee pain.

Planning Your Treatment

Once your orthopaedic evaluation is complete, your doctor makes a diagnosis and develops a treatment plan based on your goals and abilities. Rehabilitation and surgery are the most common treatments. If your doctor recommends other treatments, such as medication or braces, he or she will discuss them with you.

Rehabilitation may help reduce inflammation and pain, improve the flexibility and strength of muscles around your knee, improve your patella's tracking, and return you to your daily activities. Your rehabilitation may be supervised by a **physical therapist**, a movement specialist.

Surgery may help if your knee problem is severe or hasn't improved after rehabilitation. Your doctor will discuss **risks and complications** associated with surgery, including bleeding or blood clots, infection, problems related to anesthesia, nerve injury, new or different problems with your knee, or failure of the surgery to correct the patella problem. After healing from surgery, you'll probably continue with a rehabilitation program.