

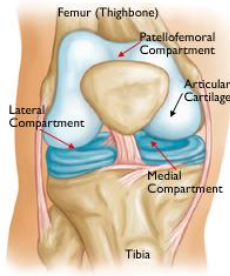


YPO_Video storyboard_Patellofemoral Instability

Voice Over text	Images/videos	Additional Comments
<p>Your Practice Online presents Patellofemoral Instability.</p>	<p>Graphical text drops in with image on the background</p>  <p>http://skishoulderknee.com/patellofemoral_instability_noida_delhi_india.html</p>	<p>Suggest for</p> <ul style="list-style-type: none"> • Text Display (If text needs to be shown on video) • Label in the images/videos (If some body part/implant/surgical instrument needs to be labelled) • Highlight key feature (Such as some muscle/nerve/body part need to be highlighted in the process of surgery)
<p>The knee can be divided into three compartments: patellofemoral, medial and lateral compartment. The patellofemoral compartment is the compartment in the front of the knee between the knee cap and thigh bone. The medial compartment is the area on the inside portion of the knee, and the lateral compartment is the area on the outside portion of the knee joint. Patellofemoral instability means that the patella (kneecap) moves out of its normal pattern of alignment. This malalignment can damage the underlying soft structures such as muscles and ligaments that hold the knee in place.</p> <p>http://www.orthosports.info/multimedia/pfemoral-Instability/Patello Instability.swf</p> <p>http://www.turner-</p>	 <p>Knee joint (File #: 15950774)</p>  <p>Image 1: Patellofemoral, medial and lateral compartment</p> <p>(http://orthoinfo.aaos.org/topic.cfm?topic=A00585)</p>	<p>Image 1:Label patellofemoral compartment</p> <p>Text display: Patellofemoral instability (along with image 2)</p>

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white.com/pdf/brm_OSM_pre2_4.pdf



Image 2:Patellofemoral instability
http://skishoulderknee.com/patellofemoral_instability_noida_del_hi_india.html



Young active individuals (File #: 17673496)

Causes

Patellofemoral instability can be caused because of variations in the shape of the patella or its trochlear groove as the knee bends and straightens. Normally, the patella moves up and down within the trochlear groove when the knee is bent or straightened. Patellofemoral instability occurs when the patella moves either partially (subluxation) or completely (dislocation) out of the trochlear groove. A combination of factors can cause this abnormal tracking and include the following:

- Anatomical defect- Flat feet or fallen arches and congenital abnormalities in the shape of the patella bone can cause misalignment of the knee joint.
- Abnormal Q angle-The high Q angle (angle between the hips and knees) often results in mal tracking of the patella such as in



Image1 :Patella
<http://www.empowher.com/media/reference/patella-fracture>)

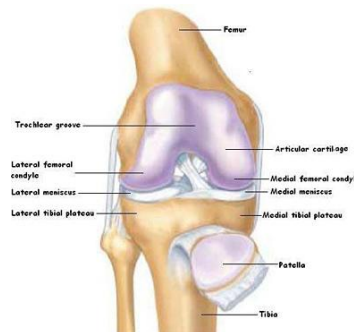


Image 2:Trochlear groove
<http://www.azcartilagerestoration.com/cartilage.htm>)

Image 1:Label patella
Image 2: Label trochlear groove
Image 3: Label Q angle
Image 4:Label Quadriceps

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patients with knock knees.

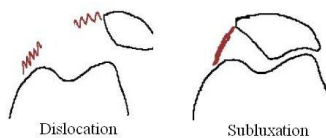
- Patellofemoral arthritis- Patellofemoral arthritis occurs when there is a loss of the articular cartilage on the back of the kneecap. This can eventually lead to abnormal tracking of the patella.
- Improper muscle balance- Weak quadriceps (anterior thigh muscles) can lead to abnormal tracking of the patella, causing it to subluxate or dislocate.

Young active individuals involved in sports activities are more prone to patellofemoral instability.



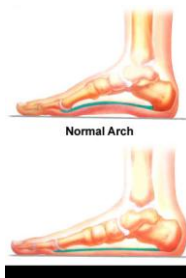
Normal patella

(<http://www.vetwest.com.au/luxating-patella>)



Subluxation and dislocation

(<http://www.trainerschoice.ca/injury-patellar-dislocation.php>)



Flat feet or fallen arches

(<http://www.millerfoot.com/flatfeet.html>)



Congenital abnormalities

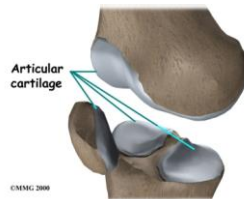
(<http://img.bmj.com/content/37/7/520.full>)

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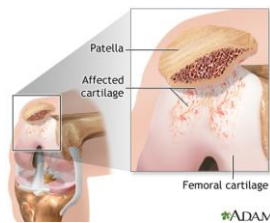
Image 3: Abnormal Q angle

(<http://www.jmaxfitness.com/2011/11/20/reduce-your-knee-pain-dont-run-so-much/>)



Articular cartilage

(http://www.orthoandsportspt.com/article.php?preview_aid=342)



Patellofemoral arthritis

(<http://www.nlm.nih.gov/medlineplus/ency/imagepages/8892.htm>)



Weak quadriceps

(<http://www.osteoarthritisblog.com/tag/quadricep/>)

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Symptoms

Patellofemoral instability causes pain when standing up from a sitting position and a feeling that the knee may buckle or give way. When the kneecap slips partially or completely you may have severe pain, swelling, bruising, visible deformity and loss of function of the knee. You may also have sensational changes such as numbness or even partial paralysis below the dislocation as a result of pressure on nerves and blood vessels.

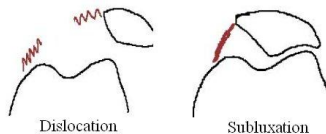


Pain(File #: 14839882)



Knee buckle or give way

(http://sports.yahoo.com/tennis/blog/busted_racquet/post/Aussie-Open-Day-9-Roddick-loses-marathon-Rafa?urn=ten-215661)



Subluxation and dislocation

(http://www.trainerschoice.ca/injury-patellar_dislocation.php)



Severe pain(File #: 15950774)

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Swelling(<http://kneeswelling.org/>)



Bruising(<http://smokeythemagnificent.com/tag/ice-skating/>)



Visible deformity
[http://skishoulderknee.com/patellofemoral instability noida delhi india.html](http://skishoulderknee.com/patellofemoral%20instability%20noida%20delhi%20india.html)



Loss of function
<http://www.elcaminoinnovates.org/innovations/knee-ligament-repair>)

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Numbness

(<http://www.healthline.com/health-slideshow/multiple-sclerosis>)

Diagnosis

Your doctor evaluates the source of patellofemoral instability based on your medical history and physical examination. Other diagnostic tests such as X-rays, MRI and CT scan may be done to determine the cause of your knee pain and to rule out other conditions.



Medical history (File #: 18675202)



Physical examination (File #: 18292828)



X-rays

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MRI scan



CT scan

Conservative treatment

If your kneecap is only partially dislocated (subluxation), your physician may recommend non-surgical treatments, such as pain medications, rest, ice, physical therapy, knee-bracing, and orthotics. If the kneecap has been completely dislocated, the kneecap may need to be repositioned back in its proper place in the groove. This process is called closed reduction.

[http://www.orthosports.info/multimedia/pfemoral-Instability/Patello Instability.swf](http://www.orthosports.info/multimedia/pfemoral-Instability/Patello%20Instability.swf)

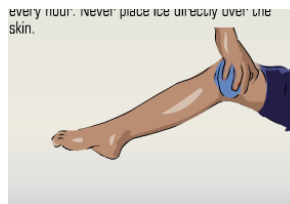
<http://orthopedics.about.com/cs/patellofemoral-disorders/a/kneecapdisloc.htm>



Pain Medications(File #: 15566280)



Rest



Ice

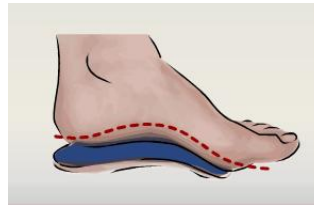
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Physical therapy



Knee bracing



Orthotics



Closed reduction

[http://www.orthosports.info/multimedia/pfemoral-Instability/Patello Instability.swf](http://www.orthosports.info/multimedia/pfemoral-Instability/Patello%20Instability.swf)

Surgical treatment


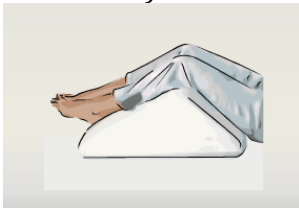
Surgery is sometimes needed to help return the patella to a normal tracking path when other non surgical treatments have failed. The aim of the surgery is to realign the kneecap in the groove and to

(Creative directions: Refer this link for the procedure
[http://www.orthosports.info/multimedia/pfemoral-Instability/Patello Instability.swf](http://www.orthosports.info/multimedia/pfemoral-Instability/Patello%20Instability.swf)

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<p>decrease the Q angle.</p> <p>Patellar realignment surgery is broadly classified into proximal re-alignment procedures and distal re-alignment procedures.</p> <p>Proximal re-alignment procedures: During this procedure, structures that limit the movements on the outside of the patella are lengthened or ligaments on the inside of the patella are shortened.</p> <p>Distal re-alignment procedures: During this procedure, the Q angle is decreased by moving the tibial tubercle towards the inner side of the knee.</p> <p>The surgery is performed under sterile conditions in the operating room under spinal or general anaesthesia. The surgeon will make two or three small cuts around your knee. The arthroscope, a narrow tube with a tiny camera on the end is inserted through one of the incisions to view the knee joint. Specialized instruments are inserted into the joint through other small incisions. The camera attached to the arthroscope displays the image of the joint on the monitor. A sterile solution will be pumped into your knee in order to stretch the knee and provide a clear view and room for the surgeon to work. With the images from the arthroscope as a guide the surgeon can look for any pathology or anomaly and repair it through the other incisions with various instruments. After the evaluation is completed, a larger incision is made over the front of the knee. Depending on your situation, a lateral retinacular release may be performed. In this procedure, the tight ligaments on the outer side of the knee are released, thus allowing the patella to sit properly in the femoral groove. Your surgeon may also tighten the tendons on the inside, or medial side</p>)	
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<p>of the knee to realign the quadriceps.</p> <p>In cases where the malalignment is severe, a procedure called a tibial tubercle transfer (TTT) will be performed. In this procedure a section of bone where the patellar tendon attaches to the tibia is removed. This bony section is then shifted and properly realigned with the patella and reattached to the tibia using screws. Once the malalignment is repaired and confirmed with arthroscopic evaluation, the incisions are closed with sutures.</p> <p>http://www.orthosports.info/multimedia/pfemoral-Instability/Patello_Instability.swf</p>		
<p>Postoperative care</p> <p>Your doctor will recommend pain medications to relieve pain. To help reduce the swelling you will be instructed to elevate the leg and apply ice packs over the knee. Crutches are necessary for the first few weeks to prevent weight bearing on the knee. A knee immobilizer may be used to stabilize the knee. You will be instructed about the activities to be avoided and exercises to be performed for a faster recovery. A rehabilitation program may be advised for a speedy recovery.</p> <p>http://www.orthosports.info/multimedia/pfemoral-Instability/Patello_Instability.swf</p>	 <p>Pain Medications(File #: 15566280)</p>  <p>Elevate the leg</p> <p>(http://www.orthosports.info/multimedia/pfemoral-Instability/Patello_Instability.swf)</p>	

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Ice packs

(<http://www.painreliever.com/employ-ability-ankle-ice-packs-instrucold.html>)



Crutches(File #: 2213167)



Knee immobilizers


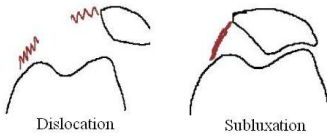
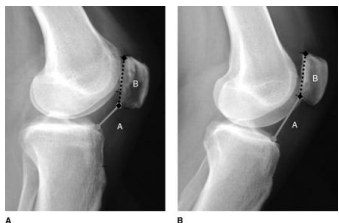
([http://orthotape.com/Knee braces support.asp](http://orthotape.com/Knee_braces_support.asp))



Rehabilitation program

(http://www.ehow.com/how_2056235_start-rehabilitation-

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	program-after-knee.html)	
<p>Risks and complications</p> <p>Possible risks and complications associated with the surgery include:</p> <ul style="list-style-type: none"> • Loss of ability to extend the knee • Recurrent dislocations or subluxations • Arthrofibrosis (thick fibrous material around the joint) • Persistent pain 	 <p>Loss of ability to extend knee</p> <p>(http://www.elcaminoinnovates.org/innovations/knee-ligament-repair)</p>  <p>Dislocation Subluxation</p> <p>Recurrent subluxation and dislocation</p> <p>(http://www.trainerschoice.ca/injury-patellar-dislocation.php)</p>  <p>Image 1: Arthrofibrosis (http://www.jaaos.org/content/15/11/682/F5.expansion)</p>	<p>Text display: Arthrofibrosis (along with image 1)</p>

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Continued pain

(File #: 14839882)

Patients with patellofemoral instability have problems with the alignment of the knee cap. Therefore, treatment is necessary to bring the knee cap back into normal alignment. Your surgeon will decide which procedure is appropriate for your particular situation.