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## **Knee pain: treatment based on individual evidence**

A common injury which runners suffer is knee pain. A large percentage of knee problems are called patella femoral arthralgia. This mysterious sounding name basically means knee cap thighbone joint pain. Recognize the other joint about the knee is the joint between the thigh bone and the leg bone.

There are an assortment of non surgical interventions for patella femoral arthralgia found in the medical literature including, exercise, braces (elastic sleeve, knee brace, cho-pat strap), strapping/taping, orthotic shoe inserts, heat/cold modalities, injections, acupuncture, laser, biofeedback re-education, and medications.

There are many different approaches using exercise including: stretching exercises, strengthening exercises, closed kinetic chain exercises (foot on the ground), open kinetic chain exercises (foot not in contact with ground), isometric strengthening exercises, exercises focused at the pelvis and hip, exercises focused on the quadriceps muscles, exercises focused on the vastus medialis oblique muscle, short arc knee extension exercises, and straight leg raises. There is promising research that has shown that correcting faulty running form alleviate patella femoral arthralgia.

Many of these interventions have not been well defined through research and also are lacking in evidence and clinical efficacy. Several experts have published critical reviews of the available research and concluded that no single intervention has been demonstrated to be more effective than another in allievating patella femoral arthralgia.

If you are suffering with pain around the kneecap and it is not responding treatment it suggests either the treatment selected was faulty or perhaps the diagnosis is faulty or both the diagnosis and the chosen treatment are faulty.

Using a single classification and putting all the problems around the kneecap into one category or diagnosis is not very precise. Perhaps there are sub-groups of problem with the patella femoral joint. If we can identify a more specific diagnosis, with measurable criteria, more specific and focused interventions can be identified. The more specific the intervention should lead to a effective and efficient intervention.

Diagnostic classification of patella femoral arthralgia is an area where many investigators are beginning to explore. Kevin Wilk (2002) suggests there are 8 major sub-groups of patella femoral problems classified as follows: compression problems; instability; biomechanical dysfunction; direct trauma; soft tissue lesions; overuse injuries; bone

disease; and neurological problems. Wilk has also identified different treatment strategies for the different sub groupings. This classification system needs more research to validate the groupings.

In the meantime while research is being done to clarify the sub-groupings of diagnostic categories and delineating treatment options individuals with pain around the kneecap who are not improving need help. General guidelines are to choose treatment based on good clinical observations of the specific problem.

If your health care professional prescribes a protocol or recipe to alleviate your patella femoral arthralgia, ask what is the reason or justification for the chosen treatment and what specific signs are the chosen interventions addressing. If your knee pain is on only one side of the body you should be able to see or feel evidence that the injured side is different than the uninjured side. You should be able to see or feel a smaller or softer weaker muscle if the chosen treatment is strengthening exercises. You should be able to see or feel the muscle on the injured side is short if the chosen treatment is stretching exercises. You should see evidence that there is excessive or prolonged pronation occurring about the foot if the chosen treatment is orthotic shoe inserts. You should see evidence that there is a logical connection between the excessive pronation and movement at the knee if shoe inserts are prescribed. You should see that the kneecap is out of alignment if taping or strapping is prescribed. You should see or feel that the kneecap is unstable if bracing or strapping is prescribed. You should see swelling, increased skin temperature, skin color changes if ice is recommended.

Until more research provides definitive answers to which is the best non-surgical treatment for problems around the knee cap, treatment needs to be based on good clinical observations, and not dogma and recipes.