KNEE ARTHRITIS PAIN TREATMENT

THE KNEE JOINT

The bones of a normal knee joint are covered by a thin layer of slippery cartilage designed to reduce the friction associated with movement. There is also a separate cartilage “washer”, (the meniscus), which helps stabilise and cushion the joint. The knee is held together by four major ligaments that provide support whilst the overlying muscles move the joint. There is a small amount of natural oily fluid in the knee joint, called synovial fluid, to help further reduce friction.

KNEE OSTEOARTHRITIS

Knee joints undergo cumulative wear-and-tear degeneration over time. This tends to happen quicker if there has been damage to either the knee ligaments or the meniscus of the knee. Obesity and smoking are modifiable risk factors for knee arthritis. Painful osteoarthritis is the process that occurs when the lining cartilage wears through and there is bone-on-bone wear. Even though it is very common, we don’t fully understand how osteoarthritis occurs. What we do know is there is an increased release of inflammatory chemical messengers into the synovial fluid of the joint. Abnormal changes in the bone under the cartilage seem to be important.

MEDICATIONS / SUPPLEMENTS

Degenerative knee joint pain is a common, debilitating condition with limited treatment options. We have learnt recently that paracetamol (Panadol) is not effective for most arthritis pain. Anti-inflammatory tablets (e.g. Nurofen) can be moderately helpful in many patients but have significant side-effects, particularly when taken regularly (stomach ulcers, increased heart attacks, etc). Opioid medications (codeine, endone, morphine) are controversial in arthritis pain because of the tendency for escalating dose requirements and the risk of drug dependency. A few nutritional supplements, such as fish oil (omega-3’s) and turmeric/curcumin, have some evidence to support their use.

EXERCISE / WEIGHT LOSS

Physical therapy / exercise, aimed at maintaining supportive muscle bulk around the knee, has a role but is paradoxically often limited by the pain. Water-based activity (hydrotherapy) or cycling can be useful options. Weight loss can have benefits beyond that expected from simple reduced mechanical loading by reducing body-wide inflammation.

SYNTHETIC INJECTIONS

Synvisc and Durolane are two brands of synthetic oil (hyaluronic acid) injections. These have been shown to have some role in reducing pain in mild to moderate knee arthritis (not advanced). They can reduce pain for up to
Other studies have confirmed that Glucose Prolotherapy within a few weeks and keep increasing out to 12 months. Other studies have demonstrated significant improvement in pain and function with Platelet Rich Plasma injections for knee arthritis. However, a cortisone injection can be a useful option for someone with a specific commitment such as an overseas trip. Recent studies have suggested that there is an increased risk of post-operative infection if a steroid injection is given within 3 months of knee replacement surgery.

**Steroid (Cortisone) Injections**

Steroid injections are literally "good for a holiday". Cortisone has a strong anti-inflammatory action that damps down inflammation in the knee for 3-4 weeks. It does not change the medium- or long-term experience with arthritic knee pain. There are concerns about having repeated steroid injections because of a tendency to accelerate cartilage loss with no overall benefit in pain. However, a cortisone injection can be a useful option for someone with a specific commitment such as an overseas trip. Recent studies have suggested that there is an increased risk of post-operative infection if a steroid injection is given within 3 months of knee replacement surgery.

**Regenerative Injection Therapy**

Regenerative knee joint injections offer an effective therapeutic option for patients with mild, moderate or even severe knee joint arthritis. The regenerative injections that I offer are Platelet Rich Plasma (PRP) from the patient’s own blood and Glucose Prolotherapy using a strong sugar solution. Both of these injections aim to stimulate an enhanced healing response in the knee joint to reduce pain and improve function. In many ways, Platelet Rich Plasma injections might be thought of as a modern refinement of Glucose Prolotherapy. Although both treatments are effective, I tend to recommend PRP injections over Prolotherapy because significantly fewer treatments tend to be required (2 v’s 4-6 injections) and the results seem to be a little better as well. Studies have demonstrated significant improvement in pain and function with Platelet Rich Plasma injections for knee arthritis. These improvements tend to be evident within a few weeks and keep increasing out to 12 months. Other studies have confirmed that Glucose Prolotherapy produces lasting pain relief superior to either exercise or saline injections. Improved cartilage coverage in severely arthritic knees has also been demonstrated in a recent double-blinded arthroscopic trial of prolotherapy.

**Arthroscopy**

Over the years, millions of knee arthroscopies have been performed in an effort to reduce degenerative knee pain. Recent large studies have demonstrated that arthroscopic surgery in degenerative knee joints results in no net benefit, (although mechanical locking symptoms are the probable exception). Recent clinical guidelines published in the British Medical Journal strongly discourage knee arthroscopy for knee pain in patients over the age of 35.

**Joint Replacement Surgery**

Total knee replacement surgery can be a life-changing intervention for severe arthritis but will always be an “end of the road” option. Knee replacement surgery requires a 12 month commitment to rehabilitation. There is a strong argument for not having joint replacement surgery too early, with minimal quality of life improvement for patients with less severe disability before the operation.

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This information sheet is designed as general advice only and does not take into account specific patient circumstances. It should not replace individual assessment by a health practitioner.

References: