# Managing Your Arthritic Knee

Mild to moderate arthritis of the knee can often be managed without surgery. Patients frequently ask “What can I do to minimize the pain and prolong the life of my knee?” Here are some suggestions that have stood the test of time and have some scientific credibility.

**Weight Loss**

For patients who are carrying extra weight, pain can often be managed with losing a few extra kilos. Your knee is a transmission system for the smooth transfer of energy. Like the transmission in your car, the less load placed on your knee, the longer it will last. For many patients with arthritis exercise can be difficult. More on this later.

**Non-Steroidal Anti-inflammatory Drugs.**

Many patients will already e familiar with the likes of Naprosyn, Voltaren, Ibuprofen etc. The newer “COX2 inhibitors like Vioxx, Celebrex, Mobic and Bextra were developed to lessen the unpleasant gut/ stomach side effects of the older drugs.

Many patients do not like the idea of taking tablets every day for years on end. Although there are few problems associated with this for most patients, others choose to save the NSAID’s for days when they know they will be more active than usual.

**Glucosamine**

This is sold across the counter as “joint food” by chemists, health food shops and supermarkets, often in combination with chondroitin sulphate. Carefully controlled studies have shown that for some patients the pain-relieving effect is similar to the NSAID’s. As this is a normal component of some foods there are almost no side effects or long term problems associated with its use. Glucosamine is a component of healthy cartilage and, although the mechanism of action is unclear, most surgeons will now advocate its use. Although it does not reverse the arthritic process, it may prove to slow it down. The recommended dose is 1500mg daily.

**Exercise**

Weight-bearing exercise that involves running or jarring is not encouraged. Although running does not cause arthritis, it will speed up the process in a predisposed knee. Our genetic inheritance or previous injury are much more important factors. It is as simple as wearing out the tires on your car: the more miles you do, the sooner the tires will wear through. It is difficult for a surgeon to say "You must never run!" The final choice rests with the patient, as long as he or she understands that an arthritic knee has a finite number of steps remaining before being completely worn. It remains up to the individual to choose how and when those steps are used.

Conversely, Non-weightbearing exercise can be beneficial. Swimming is ideal as there is almost no load on the knee. To lessen the load even more it is possible to swim with a "pull buoy". This is a small flotation device designed to rest between the thighs, keeping the legs afloat without needing to kick. Most patients do not have a problem with gentle kicking though.

Cycling is perhaps the best exercise of all. There are almost no "shear" forces on the knee during the pedal stroke. Most people have access to a bicycle or an exercycle. The biggest problem is that poor technique can actually make the knees hurt more. Here are a few suggestions

Bike Fit. A bicycle comes in multiple sizes and needs to fit the rider like a shoe must comfortably fit our foot. Start with a reputable bike shop to be "sized" The frame must be the right size as well as the handlebar stem, seat post and cranks.

Seat Height. Many people ride with the seat too low. This will place extra strain on your kneecaps and quite possibly make you pain worse. The easiest way to get it right is to sit square on the saddle and place the pedal at the very bottom of the pedal stroke. You should just be able to "tip" the pedal with the heel of your fully-extended leg. You should then pedal with your FOREFOOT on the pedal. The joint at the base of your big toe (the bump of a bunion) should line up with the pedal axle.

Cadence. Most novice cyclists pedal with a very slow cadence (the number of times per minute the pedal goes in a full circle) of around 50 revolutions per minute. This also puts a huge strain on the knee. It is much better to select an easy gear with almost no resistance and spin your legs around at around 80 rpm. Professional cyclists choose a cadence of around 90-100rpm! This feels strange at first but will quickly become second nature.

Road cycling verses the exercycle. It makes no difference whether you choose to ride on the road, trails or in your living room on an exercycle. One of the problems with the exercycle is boredom. It helps to distract yourself by watching

TV or a video, listen to music or read a book. If exercise is unpleasant or boring it will soon disappear from your schedule.

Intensity. The saying “no pain, no gain” does not apply here. You should be able to carry out a conversation while exercising. If you are so breathless that all you can manage is “yes” or “no” then you are going too hard. After 10 minutes or so you should notice a deep, steady comfortable breathing rhythm and perhaps a light sweat.

How Long? Start with 10 minutes per session. Build up to 30-45 minutes. Twenty minutes should be a minimum. If you become enthusiastic there is no reason why you cannot ride for one, two or more hours. Many cyclists have found that their arthritic knee copes comfortably with ten or fifteen hours of riding per week over many years with no worsening of symptoms.

How Often? Try for a minimum of three times per week. If you enjoy the activity there is no (medical) reason why you cannot ride every day. Often having a rest day at least once per week can keep you mentally fresh.