

“Anterior Knee Pain”

This phrase refers to any pain at the front (anterior) of your knee and in that respect is very similar to the generic term “Shin Splints” which refers to any pain in the lower part of your leg! The pain can therefore come from a variety of origins but would still fall under this generic title. I would therefore urge any patients who have been given the diagnosis of “Anterior Knee Pain” from a medical professional to push for a more specific diagnosis.

Establishing the origin of pain should always be the first priority at a Physiotherapy assessment and that involves a discussion on topics including how/when the pain started, what the pain actually feels like and what activities in particular bring the pain on. Often a Physiotherapist may be able to identify a structure such as a muscle tendon or fat pad that is causing your pain. If a structure can be identified then treatment can be targeted on the relevant tissues and surrounding area to aid your recovery back to full function.

The difficulty comes when a specific structure can't be identified and this presents a significant challenge to the medical world. The pain is often labelled “patella-femoral pain” or “syndrome” which describes a region of pain between the patella (or knee cap) and the femur which is the long bone running from your hip to the knee. This often presents as on-going pain at the front of the knee in the absence of any identifiable cause on clinical examination, and often X-Rays and scans will also show nothing of significance. Some people attend our clinic after being told that their cartilage might be a “little roughened” on the back of the patella but if may be of interest to those people to know that this cartilage isn't “innervated” which means it doesn't have a nerve supply to enable you to feel pain. Therefore you would have to wear this cartilage significantly to have an effect on the bone below it from which pain can be felt.

So where is your pain from?

We will spend time with an article discussing “non-specific” anterior knee pain and the thoughts of Scott Dye who wrote an article in 2005 discussing exactly this problem.

Scott Dye discusses what is known as “homeostasis” within the knee and how disruption to this could cause pain. In this article we will try to simply explain his theories.

“Homeostasis” is the maintenance of a constant condition and in this instance it's the maintenance of constant conditions within the knee. If something disrupts Homeostasis then we have an abnormal environment and in this instance could cause pain.

There is a structure that lines the knee joint called “synovium” and this has large numbers of nerves supplying it. It is believed that the normal Homeostasis of this structure could be altered by a direct injury OR repetitive overload to name two examples. Unfortunately it is believed that the knee joint (and more specifically the joint between your knee cap and femur) is one of the most heavily loaded joints in the body. It is estimated that the joint reaction forces that occur in your knee are equivalent to x3 times body weight when going up stairs, x7.6 your body weight with squatting and up to x20 times your body weight with certain jumping activities. In turn it is believed that these loads can prevent normal homeostasis being returned in the area, and can therefore be responsible for on-going pain.

Can Physiotherapy Help?

The simple answer is yes! We will appropriately off load the knee to a level appropriate to each individual using activity modification and sometimes taping techniques. (In my experience Kinesio-taping has proved very effective in reducing pain in patients.)

The patient is then treated with an individually tailored exercise programme designed to gradually increase their load and return back to full function. Our staff will look at your biomechanics and offer advice to correct any problems that may be influencing the overload of the Synovium structures.

On certain occasions Electrotherapy or Acupuncture may be used to aid symptom relief where the pain can't be easily settled and the progression back to Sport is very much dependent on the individual and how diligent they are with the programme that they are set.

This article is very much a simplified view of a disruption to Homeostasis causing your knee pain. It is there to illustrate a theory as to why you might get your knee pain in the absence of a significant injury or why this pain might continue beyond what you might consider normal healing times. It does not present the full detailed picture but offers an outline.

For more information please contact Advance Physiotherapy on 0115 945 5232 or visit www.advance-physiotherapy.com.

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