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Cortisone injection (under ultrasound)

What is cortisone?

Cortisone is the name used to describe a group of drugs commonly known as corticosteroids. The types of cortisone used at the Sports Clinic include Celestone (Betamethasone), Kenacort (Triamcinolone) and Depomedrol (Methylprednisolone). Cortisone is commonly used as an injection for pain in medicine, and has positive and negative effects (which will be explained below). Cortisone is not an (illegal) anabolic steroid medication and does not increase muscle strength, although its use in some sports is restricted.

What are the benefits of injecting cortisone?

With respect to the musculoskeletal system, cortisone injections inhibit growth of new tissues, which has the effect of shrinking the amount of tissue in the region injected. This can eliminate pain associated with a variety of disorders, such as:

- Impingement syndromes caused by soft tissue impingement, for example subacromial impingement or frozen shoulder (shoulder region), iliotibial band syndrome (knee) and ankle impingements.
- Nerve impingement (for example carpal tunnel syndrome, Morton's neuroma or other nerve entrapments)
- Inflammatory joint conditions like gout and flare-ups of inflammatory arthritis (e.g. sacroiliac joint) respond well to cortisone injections.
- For joint osteoarthritis and tendon pain, cortisone is sometimes used, but because of the possibility of making the problem worse in the long-term, the benefits plus harms should be weighed up.

What are the harms and risks of injecting cortisone?

- There are some injury types, previously considered 'safe' to inject where cortisone is either now known or thought to cause long-term harm to tissues, even if it helps relieve pain in the short-term. Tennis elbow is a condition where it is now proven by 5 good quality studies that pain is reduced in the short-term (2-4 weeks) but worsened in the medium term (3-12 months) compared to not injecting anything. Although the data is less clear, it is possible for knee arthritis that a short-term benefit may be a trade-off with long-term deterioration.
- In the first 24-48 hours after an injection, patients may experience increased pain at the site of injection, generalised symptoms (such as poor sleep, heart racing, emotional change) and in diabetics increased blood sugars. The symptoms can be quite common (e.g. 1 in 10 people may suffer them)

- Although quite rare side effects (e.g. 1 in 100 to 1 in 1000), infection at the injection site and allergic reactions can occur. If pain at the site persists beyond 48-72 hours then please return for medical review to make sure neither of these complications has occurred.
- Although fairly minor (and mainly cosmetic) localised skin and subcutaneous fat atrophy (thinning resulting in dimpling) or hypopigmentation (whitening of the skin) can occur at the injection site (risk approximately 1 in 100 but dependent on site and skin colour with darker skinned patients more likely to notice skin lightening).
- In theory side effects such as osteoporosis, joint damage and weight gain can occur with any cortisone, but the risk with low numbers of injections is very low and much lower than if taking cortisone tablets

Are there any alternatives to a cortisone injection?

- There are definitely options that can be used instead – cortisone is never compulsory. Since a cortisone injection is generally used for treating pain, the first option is no treatment if you are comfortable putting up with the pain.

Can a cortisone injection help even if it doesn’t cure me?

- There is some value of an injection of cortisone (+ local anaesthetic) even if it doesn’t permanently relieve pain. If the short-term effect of local anaesthetic (for 1-6 hours) or cortisone (1 day to 4 weeks) is excellent pain relief, it does tend to strongly suggest that the symptoms (including pain) are arising from the body part that was injected (scans can’t always prove which body part is causing pain, as scan abnormalities don’t necessarily mean that this area is the one causing pain). The reverse of this is also true – if an injection of cortisone and local anaesthetic provides no or minimal pain relief in the hours and weeks after injection, it strongly suggests that the area injected is NOT responsible for most of the symptoms (including pain).

How is cortisone administered?

- The skin is prepared using an antiseptic agent to reduce risk of infection
- The degree of discomfort during the procedure is generally mild as the needle used is fine (thin) and local anaesthetic is usually mixed in with cortisone.
- The needle is then guided into the relevant body part using an ultrasound (unless the area being injected is very close to the skin and ultrasound wouldn’t help to prove the exact location of the injection). The guidance allows the cortisone to be accurately delivered into the area of suspected/proven pain without the same degree of generalised side effects of taking cortisone or other anti-inflammatory tablets.
- A greater degree of discomfort may occur if:
  – the area to be injected is severely painful
  – the needle tip requires to be repositioned several times in order to distribute the cortisone effectively
  – a previous bad experience has resulted in a fear of needles, or there is a general anxiety/phobia of needles and other medical procedures.

How many cortisone injections are permitted?

- It used to be said that three injections into the same body part are permitted over a twelve month period. However this is a very rough guide only. If cortisone injections are definitely helping (both in your opinion and given that the condition being injected has evidence of help being greater than harm) then more than 3 injections can be a good idea. If you have a condition where there is evidence of cortisone being harmful, then 2 injections can be too many (i.e. stop after one if there is poor evidence of benefit and it hasn’t been associated with a fix of the problem).