

## CORTISONE INJECTIONS

### What is Cortisone?

Cortisone is a synthetically manufactured drug which mimics certain functions of the natural hormones that appear in the body. These natural hormones include glucocorticoids which regulate sugar metabolism within the body, adrenal corticoids which regulate fluid balance within the body, and androgenic hormones which are one class of sex hormones within the body. Thus Cortisone has widespread effects throughout the body but its main effect is as a powerful regulator of the immune system, reducing inflammation.

Inflammation is an important body function that triggers a repair or healing response in the body. The healing response may be required in order to fight infection from foreign agents such as viruses and bacteria, and also against internal invasion by abnormal cells such as cancer cells. Thus inflammation is an important body defence mechanism. It is important therefore that Cortisone is not used in times of suspected infection or weakness in the immune system.

### Inflammation:

Inflammation is the body's response to trauma or injury. A simple example is when the skin is cut or broken: initially the cut edges of the skin are not painful for the first few seconds or minutes, but then as the body reacts to the injury certain chemicals are released at the skin edges, leading to increased sensitivity of the nerve endings, local swelling and redness of the area. Within a few minutes the skin edges become very sensitive to touch, and over the next 48 hours the whole area becomes red and swollen and we coin the term "inflamed". This inflammatory process leads to activation of cells within the body that help to join together the skin edges. Once the skin edges have been joined together over a period of 7-10 days, inflammation is no longer required and the swelling and redness subside, the skin edges are no longer sensitive, and by 3 or 4 weeks the whole area has healed up and no longer causes any pain.

In some conditions in the body the acute inflammatory process never really settles down, and it continues on beyond the time that would normally be expected for healing. In these cases, this excessive prolonged inflammation leads to ongoing swelling, discomfort and pain in the region. Swelling within the tendons or joints is usually painful and restricts movement, and can delay return to normal activities.

### When is Cortisone indicated?

When inflammation is excessive or detrimental to the ongoing healing of tissues, then Cortisone may help. Cortisone medication may be given in tablets or by injection. The advantage of tablets taken by mouth are that the effects spread throughout the body. This is useful in the case of widespread inflammation such as that associated with widespread inflammatory joint disease, such as rheumatoid arthritis, or widespread muscle pains in conditions such as polymyalgia rheumatica. Cortisone is also used in non-musculoskeletal conditions where inflammation is excessive, such as in asthma. The disadvantage of oral Cortisone is that it does cause other general side-effects related to the other hormonal effects mentioned above.

## Comprehensive spinal and joint care

**These side-effects include:**

- Fluid retention and weight gain
- Thinning and weakening of the skin, bones and ligaments
- Raised blood pressure
- Raised blood sugar and increased risk of diabetes
- Raised blood cholesterol
- Menstrual irregularities
- Depression and insomnia

**Cortisone Injections**

The main advantage of using Cortisone via injection is that the drug can be deposited locally and most of the effects are concentrated locally with minimal general side-effects. Being able to use a higher concentration of the drug locally at the site where the condition is present, means that the drug is more effective locally at the site with fewer side-effects elsewhere in the body. The main disadvantage of a local injection is that there may be bruising caused at the time of the injection and the discomfort involved with the injection.

**How many injections are required?**

For certain simple conditions, like tennis elbow or shoulder impingement, often a single injection can provide long-lasting relief of the pain. One injection continues to have the effects for up to six weeks afterwards and so, at times, there may be some recurrence of the pain after a few weeks, and a second or third injection may be given. Generally, we do not recommend that more than three injections be given in the one region within a 12-month period. The main reason for this is the potential for weakening of the tendon or ligament tissues as a result of repeated injections.

**What are the side-effects from a single injection?**

Typically, the Cortisone is given together with local anaesthetic into the tender region. There may be some initial bruising following the injection, which can be minimised by the application of ice within the first hour. If swelling and bruising does occur, then repeated applications of ice over the first 24 hours are usually helpful. Other common side-effects include temporary flare-up of the pain for 24 hours following the injection, and this usually relates to trauma to the site as a result of the needle and not a specific property of the Cortisone.

A small amount of the Cortisone does escape into the general systemic circulation, and about 1 in 10 people can experience some facial flushing or redness for the first 24 hours, a temporary rise in blood sugar for 24 hours, sleeplessness or euphoria on the night of the injection, and occasionally mild nausea. These general side-effects usually subside within 24-48 hours.

**When is relief expected?**

If the injection is successful, usually relief is felt within 3 or 4 days, with maximal relief felt at 1-2 weeks. Thereafter the effect slowly subsides over the following month.

**If you have any further questions please ask.**