

# ORTHOSPORTS

QUESTION FOR PHYSIOTHERAPISTS



**QUESTION | MY PATIENTS ARE OFTEN CONCERNED BY THE SIDE-EFFECTS OF CORTISONE INJECTIONS THAT MAKES THEM RELUCTANT TO USE THIS OPTION IN THEIR TREATMENT. COULD YOU PLEASE PROVIDE ME WITH AN OUTLINE OF POTENTIAL SIDE EFFECTS FROM CORTISONE INJECTIONS?**

**ANSWER |** In my experience cortisone is one of the most poorly understood medications in the general community, with lots of myths and misunderstanding surrounding it. It seems everyone has an opinion on the pros and cons of cortisone injection, and particularly the cons!

Oral cortisone was first developed in 1944 and for their efforts, Hench and his co-workers were given the Nobel Prize for physiology. Whilst initially seen as a wonder drug, especially for inflammatory conditions, it was eventually associated with significant adverse effects. These include hypertension, diabetes, osteoporosis, facial fat deposition (the so called 'moon facies') and even steroid psychosis. It is important to note that the majority of these side effects are related to the long term use of oral steroids in conditions such as rheumatoid arthritis, and are not related to the periodic use of cortisone in an injectable form. It would seem that many in the lay community have extrapolated the oral side-effects to the use of injectable corticosteroids.

So what are the side-effects of injectable corticosteroids? The main comment I hear from patients is that they are very painful. It is true that a small percentage of patients will develop a 'steroid flare' where their pain may worsen for a period of 2-3 days post injection. This seems to have been more common in years gone by when injectable steroids were a less water soluble preparations, and more likely to produce this side-effect. This has been alleviated by the more water soluble modern preparations. All patients need to be counselled about this possibility. It can be managed simply with ice and simple analgesics. Local tenderness and bruising at the site of the injection may also occur. In my experience the cortisone injection itself produces only minor discomfort if given by a practitioner who gives these injections regularly.

The most potentially catastrophic side effect could be local infection, especially in the use of intra-articular cortisone injection. The risk of this, however, is extremely low. It is stated to be somewhere around 1 in 20,000 cases. As long as appropriate aseptic techniques are used, which include a 'prep and no touch technique', then the risk is minimal

Skin manifestations may also occur around the injection site. These may include depigmentation and loss of subcutaneous fat. This is uncommon, occurring in less than 1-2% of injections. It happens most commonly around the common extensor origin at the elbow (the tennis elbow injection). Whilst not a permanent problem, it may take a few years to resolve and patients need to be aware of this.

Other side-effects of cortisone injection may reflect those seen from oral medication, just on a short term scale, generally not lasting more than 2-3 days. The most common of these is the 'steroid flush'. This is a mild reaction to the cortisone which may make the patient feel red, flushed and hot in the face. It happens to around 1 in 20 patients. It is an unpleasant but not a dangerous reaction. The injection may also cause some patients to feel mildly anxious or agitated, and they may develop difficulty with sleep for the first 1-2 nights after the injection. A true allergic reaction to cortisone is very rare, but may occur due to other components of the injection, such as the local anaesthetic.

Cortisone may raise blood sugar levels, and this is a very common side-effect in diabetic patients. It is important that diabetics are counselled to monitor their blood sugar levels for the first 3-4 days and adjust their insulin dose accordingly. Likewise a cortisone injection may cause a mild rise in blood pressure, and hypertensive patients need to be made aware of this.

The most unusual side effects I have witnessed have included a young girl with a significant acne skin reaction and 2 patients who developed intractable hiccups. Both of these side-effects are described in the literature.

From this discussion, it is reasonable to suggest that a cortisone injection is a 'safe' procedure. In terms of risk/benefit ration and the potential upside of improvement in pain, inflammation and function, a cortisone injection should always be considered in the management of joint and soft-tissue conditions as an adjuvant to manual therapy and a rehabilitation program.

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