



Figure 1

What is it?

Fundamentally, iontophoresis is the introduction of ions into the skin by means of electrical current. Figure 1 provides a representation of the principle while figure 2 through to 4 provides a representation of how it might be applied in practice to assist in recovery of a range of injuries. It is clinically used as a non-invasive means of delivering an anti-inflammatory drug. The principle involves placing the ionic compound under the like-charged electrode i.e. a negative compound such as dexamethasone is placed under the negative electrode, with the forces of electrical repulsion driving it through the skin.



Figure 2



Figure 3



Figure 4

Why is it used?

It is used because it:-

- is non-invasive and eliminates the risk of infection
- reduces the concentration of medication lowering the risk of adverse systemic reactions
- does not further traumatise inflamed tissue as can happen with the increased pressure caused by delivery of a fluid bolus
- eliminates training downtime
- does not hurt
- is less invasive than an injection

What is the evidence?

There is evidence that iontophoresis can facilitate the transmission of dexamethasone into subcutaneous tissue in humans. There is however conflicting results in clinical trials, as well as inconsistency in research design, resulting in no consensus regarding clinical efficacy of iontophoresis. Anecdotally some athletes have a good response while others do not.

The iontophoresis is performed on at least three occasions separated by one to two days. A Monday, Wednesday, Friday treatment week is common.

What are the risks?

The risks are minimal if at all with iontophoresis. Although possible there is rarely any skin irritation at the site of the patch.

Pre iontophoresis advice:

No specific changes need to be made to your current lifestyle or training regimen. An appropriate rehab program for your injury should suffice.

Post iontophoresis advice:

The iontophoresis sometimes takes a while to take effect. Usually only after the third treatment is a benefit noted. As there is no trauma to the skin it is safe to train on the same day as iontophoresis is performed. It is important though to respect the injury and continue any recommended training modifications that were made irrespective of the iontophoresis treatment.

