

Background

Ligaments help to provide passive stability in the joints. In other words, they prevent the joint from moving more than it should.. When ligaments become lax, they become inefficient at providing stability for the joint and we refer to the joint as being unstable. Some people are simply born with lax ligaments whereas in other cases, ligaments can be overstretched, or even torn (as in a sprained ankle). Stretched/lax ligaments can lead to joint movements which are beyond the normal range and this can cause pain. Instability can occur in any joint but the most common cases involve:

Spinal instability

In the spine there is a complex arrangement of ligaments which allows flexibility of the spine in some directions whilst producing restraint in other directions. When ligaments become inefficient in the spine, this may put abnormal stresses on the joints and on the intervertebral discs in the spine.

Pelvic Instability

In women, the pelvic joints need to be supple for child bearing, and so the ligaments soften and stretch more readily. Occasionally they do not tighten up after childbirth which can lead to pain problems.

How does Prolotherapy work?

The treatment works by encouraging the body to make new fibres which are laid down in the substance of the ligaments to strengthen them. The treatment involves injecting a slightly irritant substance (usually a solution containing phenol 2%/ dextrose 30% and glycerol 30% or alternatively a 50% dextrose solution. The solution is mixed with local anaesthetic and a small amount is injected into each end of the ligament, close to the attachment to the bone. This initially causes inflammation which attracts the cells that make collagen to the area, Over the following weeks, the new fibres are organised into the existing ligament.

Each ligament has to be stimulated 3 to 4 times (and occasionally up to 6 times) at intervals of 1 to 2 weeks in order to produce a good clinical effect, so the injections are given as a course of treatment.

The solution used for the injection is used in other treatments so it is known to be safe. However, because prolotherapy for ligaments is not widely practised, it has not as yet been licensed for this particular type of treatment. Because the organic compounds in the solution are rapidly disposed of by the body, it is safe to have a repeat course of treatment - should it be necessary.

Prolotherapy does NOT create scar tissue but healthy collagen fibres in the lax ligaments.

What does the procedure involve?

First the skin is cleansed with an antiseptic solution and the sclerosant solution will be injected into the ligaments under an aseptic technique as described above. When receiving these injections, ENTONOX analgesia may be offered (Nitrous oxide and oxygen, as used in labour) to relieve the discomfort of the injection – particularly if multiple points are being injected during the treatment (e.g. in low back prolotherapy).

Please report any known allergies (drugs, elastoplast etc) to the doctor prior to the procedure.

Before and After Your Injection:

- Driving after an injection: The **site of injection, type of local anaesthetic used, the dose administered and the patient's individual response** are all factors which must be considered. We tend to use very low doses of local anaesthetic and for most injection sites in most people, this would not be expected to impair your ability to drive. However it is best to check with your practitioner and to also remember that patients are all individual in their response. On very rare occasions, a patient may experience more widespread temporary numbness or weakness as a result of the local anaesthetic than expected. Should this be the case, if your practitioner feels that this will impair your driving abilities, you will need to wait for the anaesthetic effects to wear off before you can drive. In an extreme case, this may take up to four hours.
- These injections do cause some aching and stiffness for two to three days following their administration. If this occurs, paracetamol can normally be taken for pain relief, but you should avoid taking anti-inflammatory medications such as ibuprofen or aspirin since this will work against the intended effect of treatment. **We normally recommend that you do not take anti-inflammatory medications for at least 24 hours prior to your injection and for at least 72 hours following injection.**
- Whilst some activity modification may be suggested following prolotherapy injection, you should not aim to rest as such because a certain level of activity is actually helpful. Your doctor will be able to advise on this.
- The effects of prolotherapy are not instant but build up gradually, with full clinical benefit taking approximately three months to achieve following a course of treatment.

In some cases, e.g. with spinal instability, prolotherapy is often used in conjunction with exercises such as core stabilising exercises, particularly when core stabilising exercises alone have not been effective at stabilising the back. Where the prolotherapy is designed to strengthen the ligaments to increase the stability of the joint, core stabilising exercises are used to strengthen the muscles surrounding the joint to provide additional support to the joint.

Are there any other risks or complications?.

Whilst as with any medical or surgical treatment, there is a risk that the treatment might not work, complications are very rare since the injection is not placed into the spinal canal or near spinal nerves. (Infection occurs in 1 in 17,000 cases, this being the main complication).

Allergy to the local anaesthetic is also an extremely rare possibility and for that reason, we ask that you remain in the clinic for about 20 minutes following any injection procedures.

Some individuals are susceptible to fainting during medical procedures. Faints result from a sudden short term fall in blood pressure. Please inform the doctor in advance if you feel this may be likely so that precautions can be taken.