



WHAT CONDITIONS CAN BE TREATED?

Perineural Injection Treatment is effective in treating many painful musculoskeletal conditions, including:

- shoulder impingement and tennis elbow
- hip and knee osteoarthritis
- neck-related headaches
- groin pain and low back pain
- Achilles tendinopathy, and many more.

PIT can be particularly effective for treating scars from injuries or surgery that stay red, swollen and tender.

A series of glucose injections into the scar helps to mature the scar, decreasing redness and tenderness.

Recent soft tissue injuries, such as calf strains and ankle sprains, also seem to respond particularly well to PIT.

These injuries often only require 1-2 treatments to settle.



OTHER TREATMENTS

Perineural Injection Treatment is ideally part of a whole treatment plan. You can continue your general exercises, strengthening and rehabilitation and can have massage, acupuncture and physical therapy, if required.

Behavioural and psychological therapies can play a valuable role in helping you manage pain and adjust to any changes in function.

Your doctor may provide PIT in conjunction with other regenerative treatments such as PRP (Platelet Rich Plasma) or prolotherapy.

Lyftogt

Perineural injection treatment

A safe and effective treatment for painful musculoskeletal conditions caused by sensitised nerves.

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WHAT IS PERINEURAL INJECTION TREATMENT?

Lyftogt Perineural Injection Treatment (PIT) is a safe, effective technique used to manage the pain from a wide range of conditions.

The technique was developed by Dr John Lyftogt in New Zealand, and involves multiple injections of small amounts of 5% glucose solution under the skin in painful areas where nerves are irritated and sensitive.

The treatment aims to restore movement and reduce pain in the area treated, by reducing neurogenic inflammation (inflammation created by irritated nerves).

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HOW DOES PIT WORK?

Growing research is helping us understand exactly how this remarkable treatment works. We are discovering that glucose plays many important roles in the body.

All cells, including nerve cells, require glucose as an energy source. If a nerve is injured, compressed or stretched anywhere along its path, the blood supply and nerve supply to that nerve becomes compromised. This reduces the delivery of nutrients, including glucose to the nerve and it becomes distressed at that location.

A distressed nerve becomes swollen, irritable and hypersensitive and starts to fire more rapidly, causing pain. The nerve also generates inflammation in an attempt to heal itself. These inflammatory substances further irritate the nerve if the compression and swelling persists.

Injecting 5% glucose around these sensitised, irritable nerves, provides the fuel needed to reduce the swelling and abnormal firing and restore normal nerve function and healing.

The result is an immediate decrease in pain and improvement in range of motion and function.

Research has shown that glucose is:

- **Analgesic** - pain relieving
- **Neuromodulatory** - changes the way that nerves fire and send messages, restoring normal firing and signalling
- **Neuroregenerative** - promotes and regulates healing and regeneration. Also, provides the energy required for these processes.



TECHNIQUE & TREATMENT SCHEDULE

Following a detailed discussion and examination to determine if the treatment is suitable for you, tender points in the field of the irritated nerve are identified and marked on the skin.

A small amount (typically 0.2ml - 1ml) of buffered 5% glucose solution is injected at each of these points. The number of injections per treatment varies from just a few to more than twenty, depending on the condition being treated.

The technique aims to improve movement and reduce pain in the area treated to the lowest possible (ideally no pain) at the time of treatment. This analgesic, pain relieving effect can last from a few hours to a few days.

When pain returns, it is often substantially less severe. On average, patients notice a 15-20% improvement following each treatment, with some reporting gains of up to 80%.

Treatments are repeated every 1-2 weeks until the pain has resolved.

Typically, patients require between 4-8 treatments in total.



WHAT ARE THE SIDE EFFECTS OF TREATMENT?

Side effects are minimal, as glucose is a molecule required and used in the body constantly. It is not a drug or medication.

The injections are given with a very small needle, just under the skin in the subcutaneous tissue.

The injections themselves are usually very well tolerated. As with any injection, there can be discomfort, bleeding/bruising or infection. The skin will be cleaned with alcohol prior to injection to reduce the risk of infection.

A very small proportion of patients with particularly sensitised nerves or who are taking opioid pain medications may experience an increase in pain or not much benefit from this treatment.