**Neural Prolotherapy**

Neural Prolotherapy (NPT) is different to traditional prolotherapy. It involves the treatment of inflamed nerves that are adjacent to a region of chronic pain (pain present more than 2 months). For example, with an osteoarthritic knee, there will be inflamed nerves that are near, above or below the joint. Glucose injections are performed near these nerves. This may involve multiple injections just under the skin with very fine short needles. Traditional prolotherapy involves treating deeper structures and into the joint itself. Both techniques are often combined.

 It was developed by New Zealand Sports & Musculoskeletal Physician Dr John Lyftogt. The concept of NPT was developed from the understandings of **Hilton’s Law** that states that the nerve that supplies sensation to a joint also supplies sensation to the skin over that joint and the muscle that move that joint. This law states that if a nerve is irritated that supplies sensation over a joint it may affect (cause pain and change function) in the joint or muscles around the joint.

Dr Lyftogt found that when he injected near inflamed nerves just under the skin he found that local swelling improved in the area and pain reduced and function improved. The reason for abnormal nerve function is thought to be a kinking or other change in the nerve as it penetrates muscle or fascia. Then the nerve begins to develop abnormalities all along its length.  There is some indication, although not yet proven, that improper nerve functioning promotes degeneration in ligaments and tendons in the region and causes blood vessels to leak, leading to swelling.

**Treatment Frequency.**  Anywhere from 3 to 6 treatments 1-2 weeks apart may be necessary.

Treatment may be combined with a technique called sonophoresis whereby Vitamin D3 and glucose is transported through the skin to an area of pain using therapeutic ultrasound.