

## All about Prolotherapy

Chances are you might have heard of this treatment. If not, please read on, as prolotherapy is something that all runners should know about, in the event one has a tendon or ligament injury. Prolotherapy is a straightforward technique for healing ligaments and tendons. Tendons attach muscles to bone and assist in the movement of a joint-think of the achilles tendon. Ligaments connect bones to bone, and keep joints stable-think of the ACL (anterior cruciate ligament) in the knee. A strain is defined as an injured tendon and a sprain is defined as an injured ligament; there are several grades, or degrees of severity of both types of injury.

When injured, the body does its best to heal these structures. However, due to the general poor blood supply to tendons and ligaments, incomplete healing can be a common occurrence. Incomplete healing may result in once strong and taut connective tissues becoming more lax and weak. Loose, weak tendons and ligaments are theorized to be a source of chronic weakness and pain.

The most common area of injury to a ligament or tendon is where it attaches to the bone. This area, known as the periosteum is a highly sensitive area. Similarly, tendons and ligaments can become quite painful as well when injured. When cartilage is damaged, it rarely causes pain directly. More often in cartilage injuries, the nearby ligaments may be the cause of pain. Treating damaged tendons and ligaments (and even some cartilage injuries) with prolotherapy can eliminate the cause of pain. Once repaired, tendons and ligaments are stronger and quite often the person is able to return pain-free to their sport.

Here's how it works: a substance is injected into a damaged tendon or ligament, which leads to local inflammation. The injected solution is referred to as a "proliferant", or mildly irritating solution. Quite often this solution is comprised of dextrose (sugar water) and a local painkiller. This localized inflammatory response triggers the body to begin the healing process, which results in the creation of new collagen, the substance from which tendons and ligaments are made. This results in a repaired, stronger tendon or ligament. Prolotherapy mimics exactly how the body tries to repair tissue on its own-by creating inflammation. While inflammation is typically given a bad rap, it is also a very necessary and beneficial process for healing and repair.

Shortly after receiving a prolotherapy injection, a localized inflammatory reaction will occur which then diminishes over a few days. Patients should not take any type of anti-inflammatory medication, as this defeats the purpose of creating the inflammatory action for healing. Typically, injections are given every 2 to 3 weeks, depending on patient responses. Over the course of the treatment period, pain will diminish in the affected area and may continue to decrease over the next several months as normal function returns to the previously injured tissue.

Prolotherapy is useful for a number of conditions involving tendons and ligaments, depending on their nature. Thus, getting a proper diagnosis of the issue is important in order to determine if prolotherapy is indicated. Treatment responses can vary from person to person, depending on their healing response. Typically, one may need 4 to 6

treatments per area; often this is determined during the course of therapy depending on how the person is responding.

Prolotherapy has been around for the past 100 years, with a variety of solutions being used. More recently, Prolotherapy is experiencing resurgence in popularity because of its simple, safe approach, as well as its benefits in resolving pain and keeping people active. In many cases prolotherapy can keep people from undergoing surgery, or taking anti-inflammatory medications for the rest of their lives.

Prolotherapy is a specialty procedure that many different types of physicians can perform. Naturopathic doctors (ND), medical doctors (MD) and osteopathic doctors (DO) can all perform prolotherapy. Typically, prolotherapy is not covered by insurance, so it is an out of pocket expense. Not all doctors have heard of it, so you may need to ask around for a qualified provider.

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