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What is prolotherapy?

Prolotherapy is an injection technique that facilitates and accelerates the natural process of healing of the body. Dr. Emad believes that "inflammation" is the process of the body healing itself.

Prolotherapy is the introduction of an inflammation inducing substance to a targeted area where there is an injury or defect such as a tear in a muscle, ligament or cartilage. The inflammatory process includes formation of fibroblasts that are the building blocks for rebuilding of damaged ligaments and tendons. The fibroblasts along with collagen fibers will "patch" the area of defect.

Prolotherapy dates back to the time of Hippocrates when he first used cautery to irritate tissue and promoted wound healing while, a French surgeon, Pare't, first used a chemical irritant to promote healing in 1500s.

The prolotherapy philosophy aligns with physiotherapy technique of ultrasound or laser treatment. These two modalities introduce deep heat into the tissue to increase blood flow and immune cell migration and, therefore, accelerated healing process. This is the opposite of application of ice that causes reduced blood flow and constriction of the vessels.

Prolotherapy must be used in context of a well-designed rehabilitation program with specific exercises that include range of motion, strengthening and conditioning for a particular individual. This will allow the new proliferated tissue to align itself in the natural direction and length of its original fibers.

Prolotherapy is in contrast to the traditional treatment of musculoskeletal injury that is been to reduce the inflammatory processes by using anti-inflammatory medications such as steroids (cortisone).

Is inflammation bad?

Today we believe that the process of inflammation is a healthy response of the body to heal its injury. During this period of healing pain management methods with opiates (narcotics) and physiotherapy assist in maintaining quality of life and function. Therefore, the process of inflammation in many situations is helpful and is not to be disrupted.

Attempt to reduce inflammation is to reduce swelling and, therefore, reducing pain. However, we believe that the process of inflammation is necessary to heal the injured tissue and that the pain can be better managed with alternate methods other than anti-inflammatory substances.

M.E.A.T. vs. R.I.C.E.:

Traditionally medical practitioners have treated all injuries by reducing the inflammation in the area. R.I.C.E.: Rest, Ice, Compression and Elevation has been the method of choice in sports medicine. I agree with the above only for the first phase of an injury (acute phase) and for a very short period of time. However, once this process is subsided the goal of therapy should be to assist the body to heal itself, hence, M.E.A.T.: Movement, Exercise, Analgesic, Treatment.

Prolotherapy vs. steroid injection:

Steroid is a very strong anti-inflammatory substance. It is an effective agent that has the potential to abort or significantly reduce inflammation within hours of administering it. Some of the conditions that may benefit from steroid injection may include: Inflammatory arthritis, disc herniation causing inflammation of the nerves (i.e., sciatica), Carpal Tunnel Syndrome due to inflammation of the tendons or ligaments of the hand. In these conditions inflammation may cause further tissue damage. Once the initial inflammatory process is subsided, then prolotherapy may be indicated to assist in strengthening the weak ligaments and tendons and, therefore, reducing hypermobility of the joints.

Opiates vs. N.S.A.I.D.'s:

Opiate medications (narcotics) have almost no adverse effect on the kidney, liver or stomach. If they are prescribed by a trained physician in pain management, they are much safer than Non-Steroidal-Anti-Inflammatory-Drugs (such as aspirin, advil, aleve) that may cause kidney and/or liver and stomach damage.

Indications for prolotherapy injection:

Prolotherapy is indicated in sub-acute and chronic (later phase) stages of an injury to a ligament, tendon or cartilage. Some practitioners even use prolotherapy for acute phases of an injury.

Neck and back injury sprain, strain, T.M.J., shoulder rotator cuff tear, acromioclavicular sprain, cartilage tear, "Tennis Elbow", sacroiliac dysfunction, muscle tear such as hamstring or biceps, Achilles tendon tear. Knee meniscus tear, anterior and posterior cruciate tear, median or lateral collateral ligament tear, meniscus tear. Ankle ligament tear and many more.

Related terminology:

Prolo: Short for proliferation (growth, formation)

Tendon: Tissue that connects muscle to bone.

Ligament: Tissue that connects bones together.

Cartilage: Tissue that covers the surface of bones in a joint.

Strain: Injury to the tendon.

Sprain: Injury to the ligament.

How safe is prolotherapy?

Prolotherapy is an injection and has the same risk as any injection that may include local pain, infection, ..., however, this technique done by a specialist is generally a safe procedure.

Consequences of chronic pain:

Chronic pain causes over-activation of the adrenal glands and increased cortisol levels that may ultimately become depleted. The consequences of chronic pain are insomnia, depression, fatigue, irritability, which may lead to disruption of relationships at home and work. Therefore, these issues must be addressed by a specialist.

Behzad Emad, M.D.:

Dr. Emad is a Physical Medicine and Rehabilitation, Neuromuscular and Electrodiagnostic Medicine, as well as, Pain Medicine specialist. He is in private practice at his clinics Southland Injury Medical Center, Inc. His practice entails diagnosis and treatment of the disorders of muscles, nerves and joints, non-surgically. His treatment plan begins with the most conservative with the goal of functional restoration, pain control and avoiding surgery. He addresses quality of life issues such as insomnia, pain, depression, immobility and disability during the natural healing process of the body.

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