

## GOzone Therapy

### What is GOzone and how did it Develop?

Historical review shows that healing stimulation techniques have been used as far back as Hippocrates who used fire heated irons to cause excessive scarring in the front of soldier's shoulders after dislocations and it would then miraculously heal with stability. Of course, hot poker are not in use today, but the principles of forced healing can be similar. Injection agents first began in the 1830's, when potent chemical irritants were used to treat hernias non-surgically. "Prolotherapy", preponderantly using dextrose as the chemical agent to induce a healing or "proliferative" response was successfully pioneered by the Germans in the 1930's. "Prolozone", using ozone as a direct tissue proliferation stimulant has been used in Europe for over 40 years and over the past 10 years has been studied and improved in the US to its current level most notably by Dr. Shallenberger. "GOzone" is a hybrid of these approaches, providing the synergistic benefits of both therapies, coupled with the most accurate delivery methods possible and therefore, presumably, enhanced clinical success rates.

### What is Prolotherapy and Prolozone?

Prolotherapy is the use of a chemical that is biologically safe to stimulate local tissues to heal via the theoretical combination of inflammation and increased blood supply, the resulting nutrients, and the recruitment of specialized healing cells (circulating stem cells) to the area treated to enhance a healing response. Prolozone is derived from the word ozone and the Latin word "proli" which means to regenerate or rebuild. This literally means rebuilding tissues with ozone hyperoxygenation enhancement. Prolozone involves the injections of nutritional and B-12 augmented ozone into soft tissues, ligaments tendons, and joints changing them transiently from a state of low oxygenation to a growth stimulated high oxygenation state.

### How does GOzone work?

When the ozone is injected into the proliferant saturated involved area, hyperoxygenation of the tissues causes a metabolic stimulation of the local tissues in these weak areas, which then increases the blood supply and flow of nutrients, the blastic (or "growth") proliferation of anabolic cells such as fibroblasts, osteoblasts, and chondroblasts. These effects cause the tissue to repair itself, strengthening and tightening and thereby stabilizing the area. When delivered with high accuracy guided techniques, the effects are maximized.

Following the injection, the patient may be a little sore for a few days. **Because there may be inflammation produced that is imperative for the healing process, it is very important that the patient does not use any anti-inflammatory medications during the 5 days prior to the injections and refrain from their use until 2 weeks after the treatment protocol is discontinued.** For the same reason, areas that have been previously treated with a steroid or cortisone injections should not be treated with Prolozone until these injections have worn off.

The injection process is typically repeated every 2 weeks. Patients with milder problems may see some positive results after the first or second treatment. Typically 3-6 treatments are needed but as many as 10 are common. We usually discontinue the treatments if there is no improvement after 3 injections or if the improvement plateaus or if the patient becomes pain free, With GOzone therapy we expect an 85% chance for the chronic pain sufferer to have dramatic (greater than 50%) pain reduction.