

Prolotherapy's role in healing

MSU's Osteopathic Manipulative Medicine is here to help. *by Peter J. Blakemore, DO*

At the MSU department of Osteopathic Manipulative Medicine our primary specialty is Osteopathic Manipulation Treatment (OMT) that we use to treat many musculoskeletal and physiological problems. In addition to OMT there are several other integrative procedures and approaches our doctors use that can help in the healing process to promote decreased pain, increased function and improved health. One of these procedures is Prolotherapy. Prolotherapy, also called regenerative injection therapy, is a procedure that involves a series of injections to stimulate regrowth and healing of primarily soft tissue injuries, especially injured ligaments and tendons and to treat joint instability. Ligaments are the thick, rubber band-like tissues that hold the joints together. Tendons are the tissues that attach muscle to the bone. Both are important components of joint stability. Injuries to these structures can be from acute trauma, like a sprained ankle, or whiplash neck injury or from a chronic buildup of smaller injuries from

things like poor posture. Often the problem is a combination of an initial acute injury that did not heal fully and over time developed into a larger chronic injury. When ligaments and tendons are injured, pain can come from the injured tissues as well as from the joints they are stabilizing and from muscle spasm in the overworked muscles that are trying to compensate for the injured tissues.

When an injury occurs to soft tissue in the body, an acute inflammatory response is usually the first reaction. This inflammatory response is what causes the initial pain and swelling associated with acute injuries, but it is also the stimulus that starts the healing process. The acute inflammatory response stimulates a cascade of reactions to occur, one leading to the next, called the wound healing cascade, that eventually leads to the growth of new tissue and the area healing. The wound healing cascade process requires the stimulation of growth factors at the site of injury and the migration of cells to the area to build new tissue. Though the process is well designed, sometimes the injuries do not heal back

to full strength, leaving a weakened and partially injured ligament or tendon or an unstable joint and causing the injury to become chronic. Prolotherapy re-stimulates the wound healing cascade to encourage full healing.

The procedure consists of injecting a solution into the damaged tissue and stimulating a small inflammatory response that activates the healing. The standard solutions often include dextrose, an extract of corn, to stimulate the inflammatory response and an anesthetic like lidocaine. For more significant injuries Platelet Rich Plasma (PRP) may be used. PRP is made by drawing a patient's own blood and then processing it to concentrate the growth factors and then re-injecting that into the injured areas. Most injuries require several treatments about a month apart to give full healing.



Written by Peter J. Blakemore, DO, Assistant Professor, Department Of Osteopathic Manipulative Medicine at MSU College of Osteopathic Medicine.



Our providers

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Whether it's back pain, neck pain or chronic headaches, your body is trying to tell you something. We're here to listen. In fact, it's the foundation of the medical approach we teach and the research we conduct at Michigan State University's Department of Osteopathic Manipulative Medicine.

Our board-certified physicians are currently accepting patients from adult to adolescents and children.

Ask your physician to refer you to Osteopathic Manipulative Medicine, then give us a call. We're listening. 517-432-6144

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