Prolotherapy Has Not Become Part of Mainstream Medical Care. Why Is This So?

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What is prolotherapy? Ligaments are the supportive rubberbands that hold joints in place. When the ligaments are in good health they allow joints to operate at optimal mechanical advantage for muscular driven activities. When ligaments are torn or stretched, the mechanics of the joint are altered. This leads to less than optimal performance, and in the case of a weight-bearing joint, leads to abnormal strain on joint and adjacent soft tissues. Injections of irritants such as dextrose into the supportive ligaments are thought to cause localized inflammatory responses that stimulate deposition of collagen which strengthens ligament. In a sense, the injections that stimulate collagen deposition tighten the rubberbands holding the joint and thus help improve performance which directly and indirectly decreases pain.

Prolotherapy has become increasingly popular over the past few years. Its popularity stems from reported success in various sports injuries; particularly ligament injury. It has been theorized that injury to ligament (tear/stretch) not only causes pain from the ligament but from abnormal mechanical performance of a joint. Conditions reported to respond well to prolotherapy include Achilles tendon tears, tennis elbow, sacroiliac joint dysfunction, facet joint arthropathy, and many others.

Prolotherapy has earned in its 50 years of practice many staunch supporters both as providers and recipients, but **has not become part of mainstream medical care.** *Why is this so?* There are several good reasons for this and they all begin with research and teaching. First of all, one has to look at how medical research gets done in the United States. There has to be money directed into a project from either industry, government, hospital, or university to produce scientific research. In the case of government it takes executive decision or act of congress or an individual with strong conviction. Industry sponsors research within government, at universities, or at their own facilities if there is potential profit. Prolotherapy, which uses simple and readily available compounds has never attracted the interest of pharmaceutical companies or device manufacturers, since there are unlikely to be patent positions to protect. Without serious financial ramifications, no lobbies, or PACs, it has not been clear to government that further study is necessary. Universities cannot afford to be involved without industry sponsorship. Thus the convictions of the individual become the heart and soul of prolotherapy. Unfortunately, single individuals, even if there are dozens or hundreds, working feverishly in the field cannot produce large scale studies that have the mathematical impact to catch the attention of mainstream medicine.

There are now hundreds of reports, papers, textbooks, and Internet media that tout the virtues of prolotherapy. But this research and information is criticized for study design, lack of controls, and openness of data collection (not blinded). This is understandable, since prolotherapy in this context is provided as part of clinical practice and there is little in the way of money available to perform the needed scientific studies. *In the trenches, the doctors' office, the physician is thrust daily into situations where patients with intractable symptoms beg for help. In such situations it is difficult for clinicians to perform research with placebo controls and blindness, the standards of allopathic medicine.*

Prolotherapy has not made it into mainstream western medicine not just because of lack of funding, but also because few students are exposed to it during their formative years of career choice, medical school.

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Allopathic medical schools pride themselves on adherence to scientific methodology and tend to emphasize the science of medicine, not its clinical delivery. Prolotherapy, and other nonscientific but clinically useful pursuits, chiropractic, osteopathic, acupuncture, etc. are generally not touched upon. Also problematic for prolotherapy, a program of treatments directed at soft tissues, is the traditional breakup of medicine into body parts and systems; orthopedics, rheumatology, neurosurgery, etc. There is no one curriculum given the responsibility of teaching or ministering to the soft tissues, the largest potential source of body ache and pain.

At this point in time one can say that there is a preponderance of nonscientific literature and testimonia that support the use of prolotherapy. There is no body of scientific literature that shows prolotherapy to be ineffec tive. Thus, I conclude that: 1) There needs to be funded research; 2) Clinicians familiar and trained in the practic should continue to provide such therapy to selected patients; and 3) The naysayers should help form a body of literature that either supports or condemns the practice.

Remember... Keep an open mind! **An open mind is an important asset in medicine. There is far more we do not understand about the body than is written in all the collective libraries of the world.**