

thopedic physical therapy provides benefit to patients who otherwise are told the must "live with their pain" and continue to take medications which provide modest symptom control.

Acknowledgement and thanks to Beverley Padfield PT, CAFCI, FCAMT for her review of this paper on page 27.

References

1. Hart LG, Deyo RA, Cherkin DC. Physician office visits for low back pain: Frequency, clinical evaluation, and treatment patterns from a U.S. national survey. *Spine* 1995;20:11.
2. White K, Williams F, Greenberg B. The ecology of medical care. *N Engl J Med*. 1961;265:885.
3. Frymoyer JW, Cats-Baril WL. An overview of the incidences and costs of low back pain. *Orthop Clin North Am*. 1191;22:263.
4. Deyo RA, Phillips WR. Low back pain: A primary case challenge. *Spine* 1996;21:2826.
5. Klich, B. Sport Med 2006 Symposium: back pain, exercise and pregnancy, diabetes, common bracing for shoulders, knees and ankles. *Ontario Medical Review April 2006*;43-47.
6. <http://fapm.med.new.net/Prolotherapy.htm>
7. Ongley MJ, Klein RG, Dorman TA, Eck BC, Hubert LJ. A new approach to treatment of chronic low back pain. *Lancet* 1987;18: 143-146.
8. Reeves Kd. Randomized prospective double-blind placebo-controlled study of dextrose prolotherapy for knee osteoarthritis with or without ACL laxity. *Ther health Med* 200;6(2):68-74, 77-80.
9. Dechow E, Davies RK, Carr AJ, et al. A randomized, double-blind, placebo controlled trial of sclerosing injections in patients with chronic low back pain. *Rheumatology* 1999;38:1255-1259
10. Klein RG, Dorman TA, Johnson CE. Proliferant injection for low back pain: histologic changes of injected ligaments and objective measurements of lumbar spine mobility before and after treatment. *J Neurol Orthop Med Surg* 1989;10:123-126.
11. Klein RG, Eck BC, DeLong WB, et al. A randomized double-blind trial of dextrose-glycerine-phenol injections for chronic, low back pain. *J Spinal Disord* 1993;6:23-33.
12. Hackett GS, Hemwall GA, Montgomery GA. Ligament and tendon relaxation treated by Prolotherapy. Oak Park, Illinois.
13. Edwards SG, Calandruccio JH. Autologous blood injections for refractory lateral epicondylitis. *J Hand Surg (Am)* 2003;28:272-8.
14. Oh JH, Ha H, Yu MR, Lee HB. Sequential effects of high glucose on mesangial cell transforming growth factor-beta 1 and fibronectin synthesis. *Kidney Int* 1996;54:1872-8.
15. Di Paolo S, Gesualdo L, Ranieri E, Grandalano G, Schena FP. High glucose concentration induces the overexpression of transforming growth factor-beta through the activation of a platelet-derived growth factor loop in human mesangial cells. *Am J Pathol* 1996;149:2095-106
16. Murphy M, Godson C, Cannon S, et al. Suppression subtractive hybridization identifies high glucose levels as a stimulus for expression of connective tissue growth factor and other genes in human mesangial cells. *J Biol Chem* 1999;274:5803-4.
17. Fukuda K, Kawata S, Inui Y, et al. High concentration of glucose increased mitogenic responsiveness to heparin-binding epidermal growth factor-like growth factor in rat vascular smooth muscle cells. *Arterioscler Thromb Vasc Biol* 1997;17:1962-8.
18. Ohgi S, Johnson PW. Glucose modulates growth of gingival fibroblasts and periodontal ligament cells: correlation with expression of basic fibroblast growth factor. *J Periodontol Res* 1996;31:579-88.
19. Pugliese G, Pricci F, Locuratolo N, et al. Increased activity of the insulin-like growth factor system in mesangial cells cultured in high glucose conditions. Relation to glucose-enhanced extracellular matrix production. *Diabetologia* 1996;39:775-84.
20. Woo S, Hildebrand K, Watanabe N, Fenwick J, Papageorgiou C, Wang J. Tissue engineering of ligament and tendon healing. *Clin Orthop* 1997;Oct(367 Suppl):312-4.
21. Marui T, Niyibizi C, Georgescu H, Cao M, Kavalkovich K, Levine R, Woo S. Effect of Growth Factors on Matrix Synthesis by Ligament Fibroblasts. *J. Orthop Res* 1997;15(1):18-23.
22. Deganais S, Ogunseitan O, Haldeman S, Woolley J, Newcomb R. Side Effects and Adverse Events Related to Intraligamentous Injection of Sclerosing Solutions (Prolotherapy) for Back and Neck Pain: A Survey of Practitioners. *Arch Phys Med Rehabil* 2006;87:909-913.
23. Dosch, Peter. *Manual of Neural Therapy According to Huneke*. 1st English ed. (translation of 11th German ed., revised). Lindsay A, translator. Heidelberg, Germany: Karl F. Haug publishers; 1984.
24. Cyriax, James. *Textbook of Orthopedic Medicine, Vol I and II*, Publisher Bailliere Tindall, 1985.
25. Bonica, John. *The Management of Pain Vol I and II*, Publisher Lea & Febiger, 1990.
26. Upledger and Vredevoogd, *Craniosacral Therapy*, Eastland Press, Seattle Washington, 2005.
27. Dosch, Mathias. *Facts About Neural Therapy*, Haug Publishers.
28. Kidd, Robert F. *Neural Therapy: Applied Neurophysiology and Other Topics*. Custom Printers of Renfrew Ltd. 2005.
29. Klinghardt D. *Neural Therapy*. *J Neurol Orthop Med Surg* 1993;14:109-114.
30. Gin RH, Green BN. George Goodheart, Jr., D.C. and a history of applied kinesiology. *J Manipulative Physiol Ther* 1997;20(5):331-7.