## **Cold laser for knee pain:**

Here are just a handful studies that show how effective cold laser treatment can be for knee pain:

There are over 35 years of worldwide clinical success, 2,500 published papers and 120 randomized, controlled trials for cold lasers. It is the only therapeutic modality with a cumulative effect on cells and tissues. Both NASA and the US Defense Advanced Research Projects Agency have engaged in cold laser therapy research over the last decade, with noteworthy success.

The Influence Of Low Level Infra Red Laser Therapy On The Regeneration Of Cartilage Tissue.

P. Lievens, Ph. Van der Veen. Abstract from Laser Florence 2002. Laser in Medical Science. 2002:17(4).

This study concerns the influence of Laser treatment on the regeneration process of cartilage tissue. There is no need saying that the regeneration of cartilage tissue is a very big problem in rheumatic diseases for example. The lack of blood supply is one of the most important factors involved. Lots of previous publications give us proof of the regeneration capacities of Laser Therapy. In this study we have chosen to experiment on cartilage tissue of the ear of mice....Microscopic as well as histological evaluations were performed on the cartilage regeneration of both ears... After the second day, only in the irradiated group there is a clear activation of the perichondrium (the connective tissue surrounding cartilage).

The Effect of Low Power Laser Therapy (Cold Laser) on Osteoarthritis of the Knee

Basirnia A., Sadeghipoor G., Esmaeeli Djavid G. et al. Radiol Med (Torino).1998 April; 95 (4):303-9.

...We achieved significant improvement in pain relief and quality of life in 70% of patients.

Positive Outcomes for Infrared diode laser in low reactive-level laser therapy (cold laser) for knee osteoarthritis.

M.A. Trelles, J.Rigau, P. Sala, G. Calderhead, T. Ohshiro. Laser Therapy, (1991): 3(4): 149-153.

82% reported significant removal of pain and recovery of joint mobility. Cold Laser Therapy is concluded to be a safe effective and noninvasive alternative to conventional surgical and medical treatment modalities for DJD patients.

Beneficial Effects of Laser Therapy in the early stages of Rheumatoid Arthritis onset

Ailioaie C, Lupusoru-Ailioaie LM. Laser Therapy (1991) 11(2); 9-87

The purpose of this study was to determine the effects of laser therapy in pain reduction and /or recovery of patients at the onset of Rheumatoid Arthritis, comparatively with the traditional non-steroidal anti-inflammatory drugs (NSAIDS). Group 1 received laser therapy, Group 2 received placebo laser therapy, Group 3 was treated with only NSAIDS....The overall efficacy rate in these studies was 86% in the first group (who just had laser), 50% in the placebo group, and 40% in the NSAIDS treated group. After 4 months of treatment, our investigations showed the laser therapy group promoted the restoration of function, relieved pain and limited the complications of Rheumatoid Arthritis.

Improvement of Pain and disability in elderly patients with degenerative osteoarthritis of the knee treated with low power light therapy (cold laser therapy)

Stelian J, Gil I, Beni-Habot, Rosenthal M, Abramovici I, Kutok N, Khalil A. Journal American Geriatric Society. (January 1992) 40 (1); 23-26.

Low power light therapy (Cold laser therapy) is effective in relieving pain and disability in degenerative osteoarthritis of the knee.

Cold Lasers, Electrical Stimulation Curb Knee Pain

Boggs, Will MD. BMC Musculoskeletal Disorders. (June 22, 2007).

People with knee pain caused by osteoarthritis may find relief with... electrical nerve stimulation, (and) low-level laser therapy (cold lasers), research shows.

...Electrical stimulation and low-level laser therapy have fewer and less severe side-effects than NSAIDS, and unlike oral drugs they seem to... maintain the positive effect for some weeks after treatment has stopped...

Dr. Bjordal, MD said, "In our opinion, there is currently more short-term potential in refining these safe treatment methods for osteoarthritis than there are for drugs."

Laser Therapy More Effective than Medication?

...From the findings of a recent Norwegian Health Technology Assessment Report, laser therapy was given the potential of becoming at least twice as effective as NSAIDS(non-steroidal anti-inflammatory drugs), if applied with optimal dose and energy... Although the number of laser trials is still smaller than for NSAIDS, the unequivocal scientific findings so far, has earned cold laser therapy a top spot in levels of evidence and treatment recommendations for knee osteoarthritis issued by the Norwegian Drug Agency.

Non-Drug Alternative for the Management of Chronic Pain

Chow RT, David MA, Armati PJ. 830nm laser irradiation induces varicosity formation, reduces mitochondrial membrane potential and blocks fast axonal flow in small and medium diameter rat

dorsal root ganglion neurons: implications for the analgesic effects of 830nm laser: J Peripher Nerv Syst. 2007 Mar; 12(1):28-39.

Most dramatically and recently, Australian researchers have identified a direct effect on the flow of cellular materials down the long axon that makes up the "wiring" of nerve cells. Researchers have discovered that laser-induced neural blockade is a consequence of such changes and provides a mechanism for...laser induced pain relief. The application of low level laser therapy for chronic pain may provide a non-drug alternative for the management of chronic pain.

Breakthrough in the Relief of Chronic Pain Without Drugs!

Goepp, Julius MD. Life Extension. October 2008: 63-70.

Dr. Norquist discusses his clinical outcomes for patients that received low-level laser treatments. "Out of 300 patients more than 90% have reported total pain relief. And more than half the others have experienced at least partial relief of their pain after 10 full treatments. Only about 2-3% of patients have truly had no beneficial effects."