



NEUROMUSCULAR • MASSAGE
CHIROPRACTIC • LOW LASER

Laser News

Winter 2007

www.bayswater.ca

604-732-4665



*Today's
health care
professionals
have a
challenge*

*Tomorrow's
health care
leaders have
the solution...
today !*

Laser Therapy – so what is it?

Laser pointers, hair removal, high tech surgery? No. We are only the 3rd office in Vancouver to offer a revolutionary, non-invasive (no needles), non-toxic, easily applied and highly effective alternative to curative therapy.

Make no mistake about it however. I have searched for some time to find a therapy that compliments our structural Neuromuscular therapy, having an effect at the cellular level to produce changes and healing in conjunction with biomechanics, posture and soft tissue manipulation. This includes conditions such as;

- Osteoarthritis
- Tendonitis
- Bursitis
- Ligament & Tendon tears

- Soft tissue injuries
- Plantar fasciitis
- TMJ disorders

But what is it you ask? Well let me tell you. Laser therapy (also known as Low Level Laser, Cold laser or Photobiotherapy) is the use of monochromatic light emission from a low intensity laser diode or an array of high intensity Super Luminous Diodes to treat musculoskeletal injuries, chronic and degenerative conditions and to heal wounds. The light source is placed in contact with the skin allowing the photon energy to penetrate tissue, where it interacts with various intracellular biomolecules resulting in the restoration of normal cell function and enhancement of the body's healing processes.

(continued on page 2)

Look who's using Photobiostimulation (Laser)

General Motors offers Low Level Laser Therapy to injured workers in its in-plant medical clinics. **Lance Armstrong** and the US Postal Service Team has been using phototherapy for the past 7 years during the Tour de France. Countless hospitals are using laser for burn and wound healing. Canadian and US pro sports teams are using this technology to repair tissue in their athletes. Since 1999, **NASA** has published research

demonstrating that Low Level Laser's are optimal in promoting "wound healing and human tissue growth" and are used in the medical care to astronauts on long-term space Missions. **Tiger Woods** has used Low Level Laser for Golfer's Elbow (tendonitis). So why not use this non-invasive technology? You may be surprised.

Peter J. Roach, RMT, CNMT



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*Our body will
predictably
follow a path
towards health
or disease.*

*Which path are
you on?*

Laser Therapy – so what is it? (con't)

Absorption as a result of photon bombardment of various bio-molecules in the cell results in the transformation of light into biochemical energy. This is a cumulative effect and requires sufficient stimulation in order to initiate response. Typically 5-20 treatments varying from 15-30 minutes in duration are required. The end result of low intensity laser irradiation is the restoration of normal function of the cell unit.

Short Term Effects

- Production and release of beta-endorphins (these are morphine like substances produced by various cells in the body that inhibit the sensation of pain)
- Cortisol production is increased (cortisol is the precursor of cortisone). This enables the body to combat the stress associated with trauma or the disease process
- The short-term effect is significant in 5-10% of cases during or after the conclusion of the initial treatment, but is not as important as the long term or cumulative effect

Long Term or Cumulative Effect

- ATP (adenosine triphosphate) production is increased resulting in improved cellular metabolism

- DNA (deoxyribosenucleicacid) production, the protein building block of tissue is substantially increased
- Neurotransmission is facilitated due to elevated levels of serotonin and acetylcholine
- Mitochondrial activity is stimulated resulting in cell replication etc.
- Modulation of macrophages, fibroblasts and other cells
- Angiogenesis (formation of new blood vessels)
- Regulates cell membrane potential, essential in NA, CL and K ion transfer (electrolyte balance)
- Cytokines and other chemicals enhancing cellular communications are released

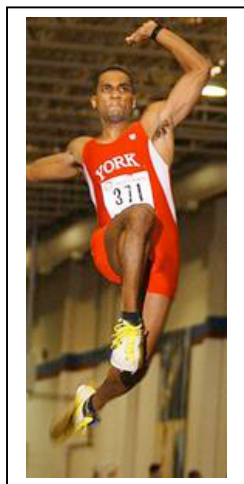
Other Effects

- The immune response is stimulated
- Lymphatic drainage is improved
- The histamine response is positively altered
- Production of growth hormone is increased
- Stimulation of the healing processes is accompanied by relief of symptoms

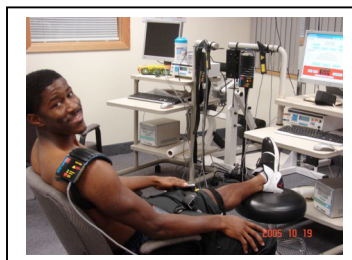
Next Issue: Medical application

Peter J. Roach, RMT, CNMT

Professional Athletes Recently Treated with the Bioflex Laser System



Patrick Russell
Canadian National
Track and Field Team
Decathlete



Nate Burleson
NFL Wide Receiver
Minnesota Vikings



Joe Smith
NBA Forward
Milwaukee Bucks