

Low-Level Laser Therapy (LLLT)

Pain-Free Cell Rejuvenation



Centre for Chiropractic & Sports Rehabilitation

An integrative, biomechanical approach to the everyday sports and spinal injuries.

The result of any treatment for injury, disease, or a condition, is completely dependent on the way that your body performs at a cellular level. To repair bodily injury or disease, healthy cells in your body reproduce over and over, replacing unhealthy cells with lots of new, healthy cells. If groups of cells in your body are damaged or sluggish, they are unable to reproduce at the rate needed for healing. As such, your progress through treatment can plateau. Low-Level Laser Therapy (LLLT) is a non-invasive, pain-free, and highly effective way to stimulate your cells, causing higher rates of cellular regeneration and thus faster healing!

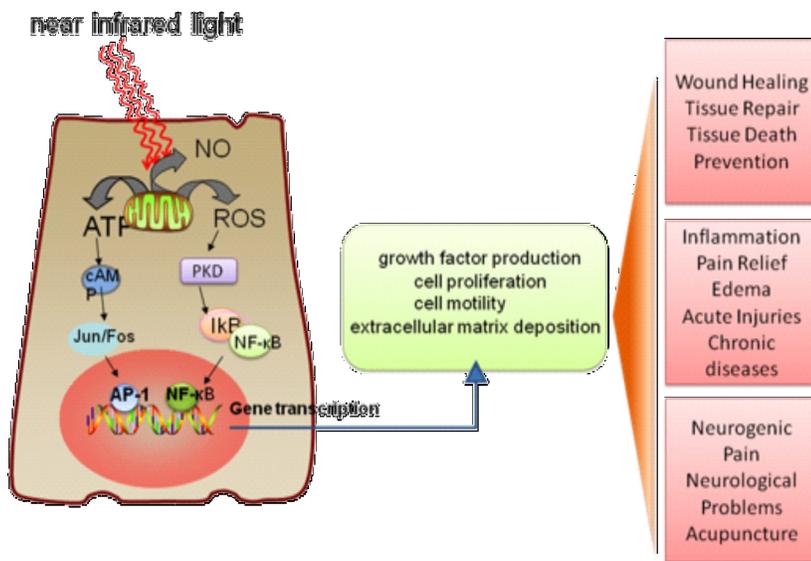


Figure 1: Low-Level Laser Therapy in Action

Low-Level Laser Therapy: How it Works

Every cell contains an engine called the *mitochondria*. The mitochondria converts glucose molecules into energy (ATP), giving the cell enough energy to regenerate (split in half). In sluggish or damaged cells, the mitochondria does not produce enough ATP for regeneration to occur. The low-level laser stimulates the mitochondria into hyperactivity and affected cells generate more energy than usual. Damaged cells are able to function as if normal, and normal cells are temporarily overactive, causing the cells to reproduce faster. Now-energized cells will interact with one another in a chain-like reaction, rebuilding damaged areas and healing a condition on a cellular level. And, mitochondrial stimulation from the low-level laser encourages more than just cell reproduction! LLLT also promotes collagen production for tissue repair, increases blood flow for improved circulation, and encourages the production of natural pain relievers.

An extra boost of energy from the low-level laser causes cells to perform better, faster, and more effectively. The end result is enhanced (and sometimes faster) wound and injury healing. Some studies have also shown that low-level laser therapy can increase a cell's ability to combat infection and restore blood circulation at the site of injury.

What Conditions Does the Doctor Treat with LLLT?

The low-level laser therapy is used to promote healing on a cellular level, which means that we can treat a significant number of conditions. LLLT is frequently used to treat neurological, dermatological, and degenerative conditions, but our practitioners utilize it most often in treating inflammatory conditions: Tendinitis/Tendinosis, Bursitis, Plantar Fasciitis, Rheumatoid Arthritis, TMJ, Repetitive Stress Syndrome, and a number of soft tissue injuries.