

Many studies show that PBM can assist in athletic performance:

- Provides an [advantage in sports performance](#) (Massachusetts General Hospital, Harvard Medical School, Harvard-MIT Division of Health Sciences and Technology, Universidade do Sagrado Coração)
- The effectiveness in [improving muscle performance and recovery suggest applicability for high performance sports and in training programs](#) (Harvard Medical School, Massachusetts General Hospital, Harvard-MIT Division of Health Science and Technology, Federal University of Sao Carlos, University of São Paulo)
- [Improves performance and accelerates recovery of high-level rugby players](#) (Universidade Nove de Julho, Vrije Universiteit Amsterdam, Universidade Cidade de São Paulo)
- [Significantly reduced return-to-play in injured university athletes](#) (Lehigh University)
- [Twin exposed to PBM performed better than twin not exposed in terms of reduced muscle damage, pain, and atrophy, increased muscle mass, recovery, and athletic performance](#) (Harvard Medical School, Harvard-MIT Division of Health Sciences and Technology, Massachusetts General Hospital, Federal University of São Carlos, University of São Paulo)
- [Accelerates post-exercise recovery](#) (University of Bergen,, University of Caxias do Sul, University of São Paulo)
- [Improves muscular performance and accelerates recovery if applied before exercise](#) (University of Bergen, Universidade Nove de Julho)
- [Improves muscle performance, reduces muscle fatigue during exercises and benefits muscle repair](#)(Massachusetts General Hospital, Federal University of São Carlos)
- [Enhances physical performance, stamina, and provides prophylactic benefits to skeletal muscle](#)(University of Florida)
- [Decreases muscle injury](#) (Tel-Aviv University)
- [Helps all phases of muscle recovery process, including anti-inflammatory, antioxidative properties and bio-stimulation](#) (University Paulista, Methodist University of São Paulo)
- [Reduces loss of strength after resistance exercise, may be beneficial for improving muscle function during rehabilitation after musculoskeletal injury](#) (University of Calgary, University of Florida, Troy University)
- [Promotes muscle regeneration](#) (Massachusetts General Hospital, Harvard Medical School, Harvard-MIT Division of Health Sciences and Technology, Federal University of São Carlos, Universidade de São Paulo)
- [Promotes skeletal muscle regeneration and accelerates tissue repair](#) (Soochow University, Fudan University, South China Normal University)

- [May modulate metabolic and renal function to achieve better performance](#) (Harvard Medical School, Massachusetts General Hospital, Harvard-MIT Division of Health Science and Technology, Federal University of Sao Carlos, University of São Paulo)
- [Significantly increases performance, decreases muscle soreness, and reduces to skeletal muscle damage](#) (Universidade Nove de Julho)
- [Decreases muscle fatigue](#) (Nove de Julho University)
- [Reduces muscle inflammation](#) (Universidade Luterana do Brasil)
- [Helps with Achilles heel](#) (University of Bergen)
- [Strenghtens knee muscles and quickens recovery from exercise](#) (Universidade Federal de Ciências da Saúde de Porto Alegre, Brazil)
- [Assists with muscle fatigue and muscle injury](#) (Harvard University, Federal University of São Carlos)

Increases Testosterone

Studies from [North Carolina State University](#), [U.S. National Cancer Institute](#), [College of Medical Sciences in Nepal](#), [NRS Medical College](#) and [Dankook University, and the Wallace Memorial Baptist Hospital](#) show that PBM may significantly increase testosterone levels in males.

Helps Prevent Macular Degeneration

- Studies from the [State University of New York](#), [University of Wisconsin at Milwaukee](#), and [Austalian National University](#) show that PBM can help reduce macular degeneration and other causes of blindness

Good for the Skin

- It's [good for the skin](#) (Massachusetts General Hospital, Harvard Medical School, Harvard-MIT Division of Health Sciences and Technology, Defence Institute of Physiology & Allied Sciences, India, Aripam Medical Center, Israel):

“In dermatology, LLLT has beneficial effects on wrinkles, acne scars, hypertrophic scars, and healing of burns. LLLT can reduce UV damage both as a treatment and as a prophylaxis. In pigmentary disorders such as vitiligo, LLLT can increase pigmentation by stimulating melanocyte proliferation and reduce depigmentation by inhibiting autoimmunity. Inflammatory diseases such as psoriasis and acne can also benefit.”

- [Stimulates, heals and restores skin](#) (Harvard Medical School, Massachusetts General Hospital)
- [Protects skin against wrinkles](#) (Dankook University, Yonsei Wonju College of Medicine)
- [Reduces wrinkles](#) (Medical Light Consulting, Heidelberg, Germany, International GmbH, Windhagen, Germany)
- [Helps in healing wound from Staph infection](#) (Baqiyatallah University of Medical Sciences)

- [Speeds healing of diabetic wounds](#) (King Faisal Specialist Hospital and Research Centre)
- [Hastens wound healing by promoting fibrous tissue, epidermal and endothelial cell proliferation](#) (Chinese Academy of Medical Sciences, Peking Union Medicine College)

Photobiomodulation therapy (PBMT) improves performance and accelerates recovery of high-level Rugby players in field test: A randomized, crossover, double-blind, placebo-controlled clinical study.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=27050245>

Using Pre-Exercise Photobiomodulation Therapy Combining Super-Pulsed Lasers and Light-Emitting Diodes to Improve Performance in Progressive Cardiopulmonary Exercise Tests.

CONTEXT: Skeletal muscle fatigue and exercise performance are novel areas of research and clinical application in the photobiomodulation field, and positive outcomes have been reported in several studies; however, the optimal measures have not been fully established. **OBJECTIVE:** To assess the acute effect of photobiomodulation therapy (PBMT) combining superpulsed lasers (low-level laser therapy) and light-emitting diodes (LEDs) on muscle performance during a progressive cardiopulmonary treadmill exercise test. The combination of lasers and LEDs increased the time, distance, and pulmonary ventilation and decreased the score of dyspnea during a cardiopulmonary test.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=26930372>

The effect of low-level laser therapy on oxidative stress and functional fitness in aged rats subjected to swimming: an aerobic exercise.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=26861983>

Effects of photobiomodulation on the fatigue level in elderly women: an isokinetic dynamometry evaluation.

Aging is responsible by a series of morphological and functional modifications that lead to a decline of muscle function, particularly in females. Muscle tissue in elderly people is more susceptible to fatigue and, consequently, to an increased inability to maintain strength and motor control. In this context,

therapeutic approaches able of attenuating muscle fatigue have been investigated. Among these, the photobiomodulation demonstrate positive results to interacts with biological tissues, promoting the increase in cell energy production. Thus, the aim of this study was to investigate the effects of photobiomodulation (808 nm, 250 J/cm², 100 mW, 7 J each point) in the fatigue level and muscle performance in elderly women. Thirty subjects entered a crossover randomized double-blinded placebo-controlled trial. Photobiomodulation was delivered on the rectus femoris muscle of the dominant limb immediately before the fatigue protocol. In both sessions, peripheral muscle fatigue was analyzed by surface electromyography (EMG) and blood lactate analysis. Muscle performance was evaluated using an isokinetic dynamometer. The results showed that photobiomodulation was able of reducing muscle fatigue by a significant increase of electromyographic fatigue index (EFI) ($p = 0.047$) and decreasing significantly lactate concentration 6 min after the performance of the fatigue protocol ($p = 0.0006$) compared the placebo laser session. However, the photobiomodulation was not able of increasing muscle performance measured by the isokinetic dynamometer. Thus, it can be conclude that the photobiomodulation was effective in reducing fatigue levels. However, no effects of photobiomodulation on muscle performance was observed.

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<http://www.ncbi.nlm.nih.gov/pubmed/?term=26714981>

Evaluation of the Proliferative Effects Induced by Low-Level Laser

<http://www.ncbi.nlm.nih.gov/pubmed/?term=26580583>

Low Level Laser Therapy Reduces the Development of Lung Inflammation Induced by Formaldehyde Exposure.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=26569396>

Effect of low-level phototherapy on delayed onset muscle soreness: a systematic review and meta-analysis.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=26563953>

No Effect of Acupuncture in the Relief of Delayed-Onset Muscle Soreness: Results of a Randomized Controlled Trial.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=26540600>

Effects of low-intensity non-coherent light therapy on the inflammatory process in the calcaneal tendon of ovariectomized rats.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=26507001>

Dose-responses of Stem Cells from Human Exfoliated Teeth to Infrared LED Irradiation.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=26312982>

Pre-exercise low-level laser therapy improves performance and levels of oxidative stress markers in mdx mice subjected to muscle fatigue by high-intensity exercise.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=26076829>

Effects of exercise training and photobiomodulation therapy (EXTRAPHOTO) on pain in women with fibromyalgia and temporomandibular disorder: study protocol for a randomized controlled trial.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=25993067>

Light-emitting diode therapy (LEDT) before matches prevents increase in creatine kinase with a light dose response in volleyball players.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=25722067>

Time response of increases in ATP and muscle resistance to fatigue after low-level laser (light) therapy (LLLT) in mice.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=2570076>

Photobiomodulation therapy in skeletal muscle: from exercise performance to muscular dystrophies.

Leal-Junior EC

Laboratory of Phototherapy in Sports and Exercise, Nove de Julho University , Sao Paulo, Brazil .

Photomed Laser Surg 2015 Feb 33(2) 53-4

<http://www.ncbi.nlm.nih.gov/pubmed/?term=25654277>

The action of pre-exercise low-level laser therapy (LLLT) on the expression of IL-6 and TNF-alpha proteins and on the functional fitness of elderly rats subjected to aerobic training.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=25647393>

Miei

Low-level laser (light) therapy increases mitochondrial membrane potential and ATP synthesis in C2C12 myotubes with a peak response at 3-6 h.

<https://www.ncbi.nlm.nih.gov/pubmed/25443662>

MicroRNA Expression Analysis of Human Skin Fibroblasts Treated with High-Fluence LED Red Light.

<https://www.ncbi.nlm.nih.gov/pubmed/30182520>

Light emitting diode (LED) therapy reduces local pathological changes induced by Bothrops asper snake venom.

<https://www.ncbi.nlm.nih.gov/pubmed/30081063>

Photobiomodulation of the microbiome: implications for metabolic and inflammatory diseases.

<https://www.ncbi.nlm.nih.gov/pubmed/30074108>

Photobiomodulation therapy (PBMT) on acute pain and inflammation in patients who underwent total hip arthroplasty-a randomized, triple-blind, placebo-controlled clinical trial.

<https://www.ncbi.nlm.nih.gov/pubmed/29909435>

Low-Level Light Therapy Protects Red Blood Cells Against Oxidative Stress and Hemolysis During Extracorporeal Circulation.

<https://www.ncbi.nlm.nih.gov/pubmed/29904353>

Illumination with 630 nm Red Light Reduces Oxidative Stress and Restores Memory by Photo-Activating Catalase and Formaldehyde Dehydrogenase in SAMP8 Mice.

<https://www.ncbi.nlm.nih.gov/pubmed/29869529>

Differential response of human dermal fibroblast subpopulations to visible and near-infrared light: Potential of photobiomodulation for addressing cutaneous conditions.

<https://www.ncbi.nlm.nih.gov/pubmed/29665018>

Mechanisms and applications of the anti-inflammatory effects of photobiomodulation.

<https://www.ncbi.nlm.nih.gov/pubmed/28748217>

Low-level laser therapy on skeletal muscle inflammation: evaluation of irradiation parameters.

<https://www.ncbi.nlm.nih.gov/pubmed/25200395>

Effects of neuromuscular electrical stimulation and low-level laser therapy on neuromuscular parameters and health status in elderly women with knee osteoarthritis: A randomized trial.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=26871692>

Positive effects of low level laser therapy (LLLT) on Bouchard's and Heberden's osteoarthritis.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=26833862>

Does addition of low-level laser therapy (LLLT) in conservative care of knee arthritis successfully postpone the need for joint replacement?

<http://www.ncbi.nlm.nih.gov/pubmed/?term=26420240>

Can combined use of low-level lasers and hyaluronic acid injections prolong the longevity of degenerative knee joints?

<http://www.ncbi.nlm.nih.gov/pubmed/?term=26346122>

Aerobic exercise training and low-level laser therapy modulate inflammatory response and degenerative process in an experimental model of knee osteoarthritis in rats.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=26254236>

Comparative evaluation of low-level laser and systemic steroid therapy in adjuvant-enhanced arthritis of rat temporomandibular joint: A histological study.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=26005460>

Effectiveness of low-level laser therapy in patients with knee osteoarthritis: a systematic review and meta-analysis.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=25914044>

[Comparison of the effect of laser and magnetic therapy for pain level and the range of motion of the spine of people with osteoarthritis lower back].

<http://www.ncbi.nlm.nih.gov/pubmed/?term=25763584>

Current Understanding of Pathogenesis and Treatment of TMJ Osteoarthritis.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=25744069>

10 Effect of low-level laser therapy in an experimental model of osteoarthritis in rats evaluated through Raman spectroscopy.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=25714387>

Low Level Laser Therapy for chronic knee joint pain patients.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=25705083>

Laser therapy reduces gelatinolytic activity in the rat trigeminal ganglion during temporomandibular joint inflammation.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=25704205>

Monochromatic Infrared Photo Energy versus Low Level Laser Therapy in Patients with Knee Osteoarthritis.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=25653818>

Effect of low-level laser on healing of temporomandibular joint osteoarthritis in rats.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=25628667>

Healing effects and superoxide dismutase activity of diode/Ga-As lasers in a rabbit model of osteoarthritis

<http://www.ncbi.nlm.nih.gov/pubmed/?term=25398806>

Musculoskeletal Atrophy in an Experimental Model of Knee Osteoarthritis: The Effects of Exercise Training and Low-Level Laser Therapy.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=25299541>

Effects of neuromuscular electrical stimulation and low-level laser therapy on the muscle architecture and functional capacity in elderly patients with knee osteoarthritis: a randomized controlled trial.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=25261425>

Synergic effects of ultrasound and laser on the pain relief in women with hand osteoarthritis

<http://www.ncbi.nlm.nih.gov/pubmed/?term=25239030>

Magnetoletherapy in the treatment of wounds after surgical procedures of the knee joint.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=25214792>

A Meta-analysis of Clinical Effects of Low-level Laser Therapy on Temporomandibular Joint Pain

<http://www.ncbi.nlm.nih.gov/pubmed/?term=25202201>

Clinical effectiveness of laser acupuncture in the treatment of temporomandibular joint disorder.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=25037758>

Therapeutic Effect of Irradiation of Magnetic Infrared Laser on Osteoarthritis Rat Model.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=24962501>

Effectiveness of phototherapy incorporated into an exercise program for osteoarthritis of the knee: study protocol for a randomized controlled trial.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=24919587>

Effects of laser treatment on the expression of cytosolic proteins in the synovium of patients with osteoarthritis.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=24909318>

Effects of low-level laser therapy on joint pain, synovitis, anabolic, and catabolic factors in a progressive osteoarthritis rabbit model

<http://www.ncbi.nlm.nih.gov/pubmed/?term=24890034>

Comparison of low level laser, ultrasonic therapy and association in joint pain in Wistar rats.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=24878785>

The effect of low-level laser therapy on knee osteoarthritis: prospective, descriptive study.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=24733283>

Low-level laser therapy for management of TMJ osteoarthritis.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=24660645>

Comprehensive treatment of temporomandibular joint disorders.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=24660643>

High-intensity versus low-level laser therapy in the treatment of patients with knee osteoarthritis: a randomized controlled trial.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=24487957>

Efficacy of low-level laser therapy applied at acupuncture points in knee osteoarthritis: a randomised double-blind comparative trial.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=24418801>

Effects of phototherapy on cartilage structure and inflammatory markers in an experimental model of osteoarthritis.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=24343447>

Can osteoarthritis be treated with light?

<http://www.ncbi.nlm.nih.gov/pubmed/?term=24286607>

Evaluation of anti-nociceptive and anti-inflammatory activity of low-level laser therapy on temporomandibular joint inflammation in rodents.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=24231378>

Comparative analysis of two low-level laser doses on the expression of inflammatory mediators and on neutrophils and macrophages in acute joint inflammation.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=24173911>

Patterns of traditional chinese medicine diagnosis in thermal laser acupuncture treatment of knee osteoarthritis.

http://www.ncbi.nlm.nih.gov/pubmed/?term=24069060
Effect of Low Level Laser Therapy on the expression of inflammatory mediators and on neutrophils and macrophages in acute joint inflammation.
http://www.ncbi.nlm.nih.gov/pubmed/?term=24028507
Effect of low-level laser therapy in patients with chronic knee osteoarthritis: a single-blinded randomized clinical study.
http://www.ncbi.nlm.nih.gov/pubmed/?term=23912778
The use of low level laser therapy in the treatment of temporomandibular joint disorders. Review of the literature.
http://www.ncbi.nlm.nih.gov/pubmed/?term=23722130
Osteoarthritis: physical medicine and rehabilitation-nonpharmacological management.
http://www.ncbi.nlm.nih.gov/pubmed/?term=23519486
Comparative evaluation of the direct analgesic efficacy of selected physiotherapeutic methods in subjects with knee joint degenerative disease - preliminary report.
http://www.ncbi.nlm.nih.gov/pubmed/?term=23382281
The efficacy of low-level laser therapy for the treatment of myogenous temporomandibular joint disorder.
http://www.ncbi.nlm.nih.gov/pubmed/?term=23318917
Physical Therapy Management of Knee Osteoarthritis in the Middle-aged Athlete.
http://www.ncbi.nlm.nih.gov/pubmed/?term=23314262
A new treatment protocol using photobiomodulation and muscle/bone/joint recovery techniques having a dramatic effect on a stroke patient's recovery: a new weapon for clinicians.
http://www.ncbi.nlm.nih.gov/pubmed/?term=22967677

Therapeutic effects of short-term monochromatic infrared energy therapy on patients with knee osteoarthritis: a double-blind, randomized, placebo-controlled study.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=22960644>

Effect of laser acupuncture on disuse osteoarthritis: an ultrasound biomicroscopic study of patellar articular cartilage in rats.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=22888368>

Influence of various laser therapy methods on knee joint pain and function in patients with knee osteoarthritis.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=22764339>

Meta-Analysis of Pain Relief Effects by Laser Irradiation on Joint Areas.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=22747309>

Complementary and alternative medicine in osteoarthritis.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=22632691>

Effectiveness of Physiotherapy and GaAlAs Laser in the Management of Temporomandibular Joint Disorders.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=22551049>

Physiotherapy in the management of disorders of the temporomandibular joint-perceived effectiveness and access to services: a national United Kingdom survey.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=22541647>

Short-Term Effects of 890-Nanometer Radiation on Pain, Physical Activity, and Postural Stability in Patients With Knee Osteoarthritis: A Double-Blind, Randomized, Placebo-Controlled Study.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=22459700>

Analgesic effect of high intensity laser therapy in knee osteoarthritis.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=22220431>

Efficacy of low level laser therapy associated with exercises in knee osteoarthritis: a randomized double-blind study.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=22169831>

Physiotherapy in hip and knee osteoarthritis: development of a practice guideline concerning initial assessment, treatment and evaluation.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=22113602>

Effects of Low-Level Laser Therapy at Wavelengths of 660 nm and 808 nm in Experimental Model of Osteoarthritis.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=22053992>

Laser Florence 2011. Abstracts of the 25th International Congress Laser Medicine & IALMS Courses, jointly with the Congress of the International Phototherapy Association. November 4-5, 2011. Florence, Italy.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=21964622>

Effects of laser irradiation on arthritic histopathology and heat shock protein 70 expression in C57 black mice with osteoarthritis.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=21749827>

Effect of light-emitting diode (LED) therapy on the development of osteoarthritis (OA) in a rabbit model.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=21658899>

Comparing different physical factors on serum TNF-alpha levels, chondrocyte apoptosis, caspase-3 and caspase-8 expression in osteoarthritis of the knee in rabbits.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=21397547>

Effects of rehabilitative interventions on pain, function and physical impairments in people with hand osteoarthritis: a systematic review.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=21332991>

[Clinical observation on acupoint irradiation with combined laser or red light on patients with knee osteoarthritis of yang deficiency and cold coagulation type].

http://www.ncbi.nlm.nih.gov/pubmed/?term=21290832
The Anti-inflammatory Effect of Low-Level Laser Therapy on Experimentally Induced Inflammation of Rabbit Temporomandibular Joint Retrodiscal Tissues.
http://www.ncbi.nlm.nih.gov/pubmed/?term=20664831
Effects of superpulsed low-level laser therapy on temporomandibular joint pain.
http://www.ncbi.nlm.nih.gov/pubmed/?term=20664343
Choice of treatment modalities was not influenced by pain, severity or co-morbidity in patients with knee osteoarthritis.
http://www.ncbi.nlm.nih.gov/pubmed/?term=20033888
Validating a Nonacupoint Sham Control for Laser Treatment of Knee Osteoarthritis.
http://www.ncbi.nlm.nih.gov/pubmed/?term=19860569
Wavelength effect in temporomandibular joint pain: a clinical experience.
http://www.ncbi.nlm.nih.gov/pubmed/?term=19565312
The Effect of Low-Level Laser in Knee Osteoarthritis: A Double-Blind, Randomized, Placebo-Controlled Trial.
http://www.ncbi.nlm.nih.gov/pubmed/?term=19530911
Treatment of neck pain: noninvasive interventions: results of the Bone and Joint Decade 2000-2010 Task Force on Neck Pain and Its Associated Disorders.
http://www.ncbi.nlm.nih.gov/pubmed/?term=19251061
Measuring physiotherapy performance in patients with osteoarthritis of the knee: a prospective study.
http://www.ncbi.nlm.nih.gov/pubmed/?term=18611250
Blood flow changes of a superficial temporal artery before and after low-

level laser irradiation applied to the temporomandibular joint area.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=18467786>

Low-level laser therapy for treatment of temporomandibular joint pain: a double-blind and placebo-controlled trial.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=18329580>

Clinical practice implications of the Bone and Joint Decade 2000-2010 Task Force on Neck Pain and Its Associated Disorders: from concepts and findings to recommendations.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=18204393>

Treatment of neck pain: noninvasive interventions: results of the Bone and Joint Decade 2000-2010 Task Force on Neck Pain and Its Associated Disorders.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=18204386>

Effect of combined laser acupuncture on knee osteoarthritis: a pilot study.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=18180980>

Physical Therapy Interventions for Patients With Osteoarthritis of the Knee: An Overview of Systematic Reviews.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=17986496>

Effectiveness of low-level laser therapy in temporomandibular joint disorders: a placebo-controlled study.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=17803388>

The effect of mastectomy and radiotherapy for breast carcinoma on soft tissues of the shoulder and its joint mobility among Egyptian patients

<http://www.ncbi.nlm.nih.gov/pubmed/?term=17722415>

WITHDRAWN: Low level laser therapy (Classes III) for treating osteoarthritis.

[The influence of laser irradiation of low-power density on an experimental cartilage damage in rabbit knee-joints: an in vivo investigation considering macroscopic, histological and immunohistochemical changes]

http://www.ncbi.nlm.nih.gov/pubmed/?term=16961456
Arthralgia of the temporomandibular joint and low-level laser therapy.
http://www.ncbi.nlm.nih.gov/pubmed/?term=16942435
Comparison in the effect of linear polarized near-infrared light irradiation and light exercise on shoulder joint flexibility.
http://www.ncbi.nlm.nih.gov/pubmed/?term=16858211
Can Cochrane Reviews in controversial areas be biased? A sensitivity analysis based on the protocol of a Systematic Cochrane Review on low-level laser therapy in osteoarthritis.
http://www.ncbi.nlm.nih.gov/pubmed/?term=16262573
Randomized controlled trial on low level laser therapy (LLLT) in the treatment of osteoarthritis (OA) of the hand.
http://www.ncbi.nlm.nih.gov/pubmed/?term=15704096
Effects of helium-neon laser on levels of stress protein and arthritic histopathology in experimental osteoarthritis.
http://www.ncbi.nlm.nih.gov/pubmed/?term=15385784
Low level laser therapy (Classes I, II and III) for treating osteoarthritis.
http://www.ncbi.nlm.nih.gov/pubmed/?term=15266461
Low-power laser in osteoarthritis of the cervical spine.
http://www.ncbi.nlm.nih.gov/pubmed/?term=15244318
Low power laser treatment in patients with knee osteoarthritis.
http://www.ncbi.nlm.nih.gov/pubmed/?term=15243853
[Evaluation of low level laser therapy in temporo-mandibular joint disorders]
http://www.ncbi.nlm.nih.gov/pubmed/?term=14966584
Efficacy of different therapy regimes of low-power laser in painful

osteoarthritis of the knee: a double-blind and randomized-controlled trial.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=14677160>

Low level laser therapy (Classes I, II and III) for treating osteoarthritis.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=12804422>

A systematic review of low level laser therapy with location-specific doses for pain from chronic joint disorders.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=12775206>

The clinical efficacy of low-power laser therapy on pain and function in cervical osteoarthritis.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=11434469>

Low level laser therapy for osteoarthritis and rheumatoid arthritis: a metaanalysis.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=10955339>

Low level laser therapy (classes I, II and III) for the treatment of osteoarthritis.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=10796460>

Clinical efficacy of low power laser therapy in osteoarthritis.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=10444763>

Effect of low-level laser therapy (LLLT) on viscoelasticity of the contracted knee joint: comparison with whirlpool treatment in rats.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=9484700>

Laser's effect on bone and cartilage change induced by joint immobilization: an experiment with animal model.

<http://www.ncbi.nlm.nih.gov/pubmed/?term=9365959>

Efficacy of arthroscopic surgery and midlaser treatments for chronic temporomandibular joint articular disc derangement following motor vehicle accident.

http://www.ncbi.nlm.nih.gov/pubmed/?term=9008994
Clinical comparative study of microcurrent electrical stimulation to mid-laser and placebo treatment in degenerative joint disease of the temporomandibular joint.
http://www.ncbi.nlm.nih.gov/pubmed/?term=8697497
Physiotherapy in the treatment of temporomandibular joint disorders: a comparative study of four treatment methods.
http://www.ncbi.nlm.nih.gov/pubmed/?term=8186034
Low level laser therapy is ineffective in the management of rheumatoid arthritic finger joints
http://www.ncbi.nlm.nih.gov/pubmed/?term=8162479
Published trials of nonmedicinal and noninvasive therapies for hip and knee osteoarthritis.
http://www.ncbi.nlm.nih.gov/pubmed/?term=8017727
Clinical analysis of mid-laser versus placebo treatment of arthralgic TMJ degenerative joints
http://www.ncbi.nlm.nih.gov/pubmed/?term=7585998
[Treatment of the inflammatory and degenerative-dystrophic diseases of the temporomandibular joint]
http://www.ncbi.nlm.nih.gov/pubmed/?term=7170780