

HANDY-CURE s™

Summary of scientific evidence

Information in this article is based on a document prepared by

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Handy-Cure 's is a medical device which combines together **low level pulse laser** radiation (Laser Class 1M (IEC 60825-1), power 0.4 to 1.4 mW, radiation 905 nm), **infrared** radiation (power 30-90mW, radiation 875nm), **visible red light** (power 2-10mW, radiation 635 nm) and **static magnetic fields** (25-45 MT).

Medical Quant LTD manufactures the only device available today, which provides the synergic therapeutic effects of those four modalities, incorporating all these radiances in one apparatus. This enables Handy-Cure to achieve rapid and efficient clinical effects within a relatively short time. GUDARO Med-Tech is Medical Quant marketing and sales spin-off in Europe and UK.

Quantum Medicine is particularly effective in situations where cell tissue has become inflamed. Inflammation of cell tissue is caused by reduced microcirculation, which changes the quantity of blood supply to the cells, resulting in ischemic injury. Any influence that can shorten the duration of the ischemic state will have a beneficial effect on the course of the disease and the accompanying pain.

Quantum Medicine improves microcirculation, which removes toxic waste products from the site, and improves the supply of oxygen to the hypoxic cells, all within a few hours of irradiation to the painful tissue. As a result, the tissue is cured and the pain disappears.

These outcomes are achieved through chemical processes in the cells that are responsive to bio-photons, leading to renewed energy production (ATP =Adenosine Tri Phosphate) and restoration of all impaired cellular functions. Quantum Medicine is a non- invasive, drug-free, pain-free and surgery-free therapy with great healing results in modern medicine.

Use of Handy-Cure's increases the speed, quality and strength of cell tissue repair, increases blood supply to the affected area, stimulates the immune system, stimulates nerve function, develops collagen and muscle tissue, helps generate new healthy cells and tissue and promotes faster wound healing and clot formation . This method can even provide significant results for the elderly, or patients suffering from long term illnesses or cell damage, even in cases which were previously considered hopeless.

It is important to emphasize that therapy with Handy-Cure does not exclude other conventional chiropractic medical treatment. On the contrary combining the two approaches may result in rapid recovery

- please see below the professional opinion of **Dr. David Jameson and Dr. Erik Jameson from 'Jameson Chiropractic Clinic' – Lakeport, CA, USA as expressed in June 2016:**

"We feel that the Handy Cure laser works well in conjunction with chiropractic treatments. It helps to relieve and reduce the inflammation and pain and it does help to speed up the recovery time in addition to chiropractic care. The Handy Cure works very well with Chiropractic care"

Handy-Cure

- Can be applied without touching the skin;
- Is easy to use, requires minimal training;
- Offers a diversity of frequencies for different clinical conditions

Safety

Handy-Cure is safe. Over 2000 studies on LLLT (Low Level Laser Therapy) have shown that it is safe. Handy-Cure is classified as a Class 1 laser device. Class 1 laser devices present minimal potential for harm to the user and are classified as NSR (Non-Significant Risk) by the FDA.

Out of additional caution, it is recommended not to direct Handy-Cure on a pregnant womb, on a pacemaker, and to use protective eyewear for treatments on face or eyes. Class 1 laser implies as well that the device can be used in non-clinical set ups and that can be used by non-professional chiro s personnel. There is no need for special training in using the device due to its simplicity of action.

Elderly Care facility, Nursing Staff – Melbourne, Australia:

“Accepted world-wide by healthcare professionals Handy Cure is a very worthwhile machine. It promotes tissue regeneration and healing of wounds,; it reduces the risk for cross infection and contamination between residents. It does not generate pain when used. It reduces the cost of dressings. It has been well accepted by DC staff. It is easily teachable, It follows the KISS (Keep It Simple Stupid) principle. Often you will hear one staff member go through the corridors asking “who has kept the machine for themselves?”

PHYSIOLOGICAL PROPERTIES

LOW-LEVEL LASER THERAPY (LLLT)

LLLT is now a well-established procedure with strong scientific evidence based physiological and clinical applications.

Basic laser physics:

Low level lasers are commonly used in today’s world: reading bar-codes on products at checkout counters, laser printers, compact disc players.

Laser means Light Amplification by Stimulated Emission of Radiation. The Laser light beam, unlike regular light, is coherent which means that the photons are synchronized. Laser light is monochromatic which means it is of one pure color (one single wavelength).

Beneficial wavelengths are in the visible (Red approximately 700 nm) and near infrared ranges (near Infrared wavelengths range from 700 nm to 5,000 nm or 5 um). Handy Cure uses Red Light radiation of 635 nm wavelength, Infrared radiation of 875 nm wavelength and Laser radiation of 905 nm wavelength, all of which are well within very safe ranges.

Visible and near infrared ranges wavelengths are safer than microwaves and radio waves that are usually considered safe. It is the wavelengths encountered with the ultraviolet, x-rays, gamma and cosmic rays that are damaging.

Power Density (PD), or light concentration is measured in watts per square centimeter (W/cm²). Low-Level Lasers (or Soft Lasers, or Cold Lasers) use a power from 1 to 3 mill watts (mW). Handy Cure has a laser Power of 1.4 mW therefore well below risk threshold.

Lasers do not even have a warming effect unless they are operated above 5 W/cm². Lasers with an ability to cut (surgical lasers or lasers used in the industry to cut steel, 'hot' lasers) have a Power Density (PD) from 300 to 10,000 W/cm².

Low-level lasers today are manufactured using semi-conductors, which are computer-like chips grown from various pure elements or combinations thereof. Combining the elements of InGaAlP makes visible light in the range of 630 to 685 nm; combining GaAlAs produces light in the range of 780 to 870 nm; and, combining GaAs produces infrared laser diodes in the 900nm range.

Combination of several light radiation modalities

Visible lights such as Red light have a shallow penetration (1 to 3 mm.) which is limiting as to their benefits. Infrared light has a deeper penetration (10 to 15 mm). However using several light modalities concurrently, such as Handy-Cure enables a much deeper penetration of the beneficial effects of all light modalities (up to 8 to 10 cm).

Main biological effects of laser light

(Extracted from the texts of a very large body of scientific evidence).

For nutrients to transfer through the cell membrane, that cell membrane needs to be polarized. An injured cell loses polarization of its membrane. Low Level Laser Therapy facilitates cell membranes to regain normal polarization and beneficial nutrients and molecules can be transferred to where they are needed. Research has shown that low level laser therapy can increase cellular ATP (body fuel) by as much as 150%.

The primary demonstrated effect of LLLT is a local time response to direct irradiation and comprises vasodilatation with increased circulatory flow; enhanced lymphatic drainage, increased macrophage and fibroblast activity, and improved metabolic function of depressed or damaged cells.

Delayed or secondary response consists of a systemic effect caused by circulating photoproducts of irradiation in the blood and lymphatic systems. Increased plasma concentration of certain types of prostaglandins, enkephalins and endorphins have all been identified and play a major role in the mechanism of reduction of inflammation, pain attenuation/ relief and wound healing.

Handy-Cure's therapeutic action operates via one of the most fundamental molecular mechanisms in the human body, Adenosine Tri Phosphate (ATP). Mitochondria of all living cells are often termed cellular "powerhouses" because of their involvement in converting chemical energy of nutrient molecules into the chemical energy of ATP. The chemical process of adding an inorganic phosphate to a molecule is called phosphorylation.

The phosphorylation process in the mitochondria is composed of cytochromes, which are chromophores, molecules that respond to light radiances such that are incorporated in the Handy Cure's. The phosphate groups of ATP, especially the terminal one, can be transferred by means of enzymes to other molecules in order to increase their reactivity. In this way, ATP links the energy-producing aspects of cellular biochemical reactions to the energy requiring aspects of biological work, such as movement, protein synthesis and active transport.

In a recent studyⁱ, brain tissue was irradiated with near-infrared laser (830 nm) in vitro, and the content of ADP and ATP were monitored in the tissues. A rise in ATP content of the brain tissue was observed, thus confirming the effect of LLLT on ATP production. Increased cellular ATP enables the ischemic cells in the damaged tissue to heal and to attain their normal functions.

PAIN MANAGEMENT

MUSCULOSKELETAL PAIN SYNDROMES (CHRONIC AND ACUTE)

SCIENTIFIC EVIDENCE

The clinical trials reported in this section have sound methodologies, at least a control group and all have been published in peer review scientific journals – see bibliography

LLLT is applied to a wide variety of acute and chronic musculoskeletal pain syndromes whose main presenting symptom is pain (back pain, muscle spasm, tendonitis, tennis elbow, carpal tunnel syndrome, fibromyalgia), dermatologic conditions (telangiectasia and low extremities ulcers).

LLLT has been shown to be effective in a variety of **musculoskeletal conditions and associated pain** presentations ⁱⁱ.

In **Rheumatoid Arthritis**, LLLT can benefit not only the pain of acute small joint inflammation but also the chronic painⁱⁱⁱ. In a review article on rheumatology (3), 18 papers were considered. All studies involved double-blind trials with LLLT in chronic rheumatoid, and reported significant improvement in pain (80% success rate in relieving pain). Upon comparing LLLT to a similar rate of pain attenuation using anti-inflammatory drugs (NSAIDs), the LLLT was free of any side-effects while 20% of patients treated with NSAIDs suffered unacceptable side-effects of medication^{iv}. In another study of 170 patients with rheumatoid arthritis using LLLT (4), pain attenuation of up to 90% was noted^v.

In a report of 1,000 treatments with LLLT (830 nm) for a wide variety of **chronic pain** syndromes, an overall reduction in pain levels of 70% was established ^{vi}.

Trellis et al (7) used LLLT for **osteoarthritis** of the **knee** in 40 patients. He reported a significant reduction of 82% of the patients with improved joint mobility.^{vii} Among 36 randomized patients, with pain caused by **cervical osteoarthritis**, those who received Infra-Red and Low Level Laser treatment improved 75% compared with the group receiving mock treatment (31%)^{viii}. Similarly, a study of 60 patients with **Cervical Osteoarthritis**, Low Pulsed Laser was successful in relieving pain and in improving function^{ix}.

The results of a study show that **cervical myofascial pain** is significantly improved with 3-months treatment with Diode laser^x. A similar successful LLLT treatment has been described for **whiplash injuries**^{xi}.

In a randomized study with 30 patients with **supraspinatus** or **bicipital tendonitis**, the results demonstrated the effectiveness of laser therapy in **tendonitis of the shoulder**^{xii}. Another study with a patient population (n = 324), with either **medial epicondylitis** (Golfer's elbow; n = 50) or **lateral epicondylitis** (Tennis elbow; n = 274), and randomly allocated, provides further evidence of the efficacy of LLLT in the management of lateral and **medial epicondylitis**^{xiii}.

Treatment with low-level laser therapy (LLLT) was shown effective in treating **Carpal Tunnel Syndrome** pain^{xiv}. Another study showed significant decreases in McGill Pain Questionnaire scores. Median nerve sensory latency, and Phalen and Tinel signs were observed after treatment series with Low Level Laser Therapy. Patients could perform their previous work (computer typist, handyman) and were stable for 1 to 3 years^{xv}.

In **acute trauma** there is a soft tissue injury comprising swelling, hematoma, pain and reduced mobility. Sporting injuries and domestic accidents usually involve damage to muscles, joint ligaments and ten class. In the absence of bone fracture or other injury demanding priority treatment, LLLT should be instituted at the earliest opportunity. Kumar reported a comparative study in 50 patients with **inversion injuries of the ankle**. He found that compared to conventional physiotherapy, the LLLT treated patients showed a more rapid resolution of symptoms and an earlier return to full weight-bearing^{xvi}.

Fibromyalgia (FM) is characterized by widespread pain in the body, associated with particular tender points. It is often accompanied by disturbed sleep patterns, fatigue, headaches, irritable bowel and bladder syndrome, morning stiffness, anxiety and depression. FM can cause a high level of functional disability and have a significantly negative effect on quality of life. One study suggests that "Laser Therapy is effective on pain, muscle spasm, morning stiffness, fatigue, depression and total tender point number in **Fibromyalgia**"^{xvii}.

A randomized controlled study with 63 patients with **non-radiating low back pain** showed that LLLT significantly improved pain and function^{xviii}

*In summary, the bulk of published work to date supports the use of LLLT for treatment of a variety of **musculoskeletal conditions and associated pain**. Moreover, the LLLT proved to be not only more effective than conventional methods, but more economical as well. The added advantage of absence of side effects, non-invasive nature of therapy and the ease of application, ensures good patient acceptance of the treatment modality.*

BONE REPAIR

In an experimental animal study, the effect of LLLT on **bone repair** was evaluated by computerized morphometric assessment^{xix}. The assessment was carried out at different time intervals following fractures. It was observed that LLLT increased bone repair primarily at early stages of the healing process. This finding is in agreement with previous study that showed **increased osteoblastic activity and increased number of blood vessels and the amount of mineralized bone at the fracture site** in response to LLLT^{xx}.

CASE STUDIES

(These case studies report treatments performed in 2011 by Prof Remi Guibert, MD, M.Sc.
And others of various musculoskeletal conditions by using Handy Cure's ^{xxi}.)

CASE # 1 Achilles Tendonitis

Age 34 - The acute injury occurred while playing basketball, which he played only occasionally. The Achilles tendon was swollen and acutely painful at palpation. The patient was walking with moderate pain. Treatment consisted in three 10-minutes sessions of Handy Cure's (10 minutes @ 50Hz) within a week combined with Non-Steroidal Anti-Inflammatory Drug (NSAID). At the end of the treatment the patient was able to walk freely, the Achilles tendon was not painful at palpation.

CASE # 2 Achilles Tendonitis

Age 78 – This patient had had bilateral Achilles tendonitis and bilateral plantar fasciitis for several weeks with increasing intensity. The pain had not been relieved with paracetamol. The injuries annoyed markedly this patient since he was responsible for the maintenance of his local bowling club and an ardent player. Treatment consisted of 6 sessions of Handy Cure's combined with NSAID. Each Handy Cure's session consisted of 10 minutes at 50Hz for each of the Achilles tendons and each of the plantar fasciitis. The Handy Cure's sessions were distributed over a two weeks period. At the end of the treatment period this gentleman was pain free and fully enjoyed his bowling again.

CASE # 3

42 year old female with right lateral epicondylitis, pain extending into the extensor area of the forearm (out cropping muscles). She was instructed in the use of a Tennis Elbow strap, massage of the extensor muscles and stretching of the muscle bellies. She also was asked to use a topical anti-inflammatory ointment. After presenting with extreme pain she reported increasing benefit after the first 4 treatments with Handy Cure's and was 90% -95% pain-free after 7 treatments. She was encouraged to continue other supportive measures.

CASE # 4 Fractures

25 year old male who sustained a mid-shaft fracture of the humerus on 20th July in Darwin whilst pitching a baseball. He was treated conservatively in Darwin. After 6 weeks he came to Melbourne and complained of pain around the upper arm and in the cubital fossa area. After investigating him for osteoporosis (neg) he was started on Handy Cure's therapy and given exercises to increase strength around the elbow and shoulder. He showed good recovery after 14 days of treatment as regards to pain but returned 1 week later requesting further treatment from which he derived significant improvement.

CASE #5 Tennis Elbow

35-year-old female with lateral epicondylitis (Tennis Elbow). She had not responded to standard treatments with NSAID and ultrasound, but did have a significant reduction in pain after a series of 6 LLLT treatments.

CASE # 6 Coccyx Pain

Age 84 - This patient had sustained a fractured coccyx several years before and remained very sore. She could not sit straight and not for long. Traveling by car was limited to a few kilometers because of the pain. Analgesics NSAID and acupuncture had had no effects. The treatment consisted of 12 sessions of Handy Cure's (10 minutes at 5 Hz) over a four weeks period. After six treatments, this patient was able to sit straight albeit with bearable discomfort. After 12 treatments, she was pain free and could walk and travel by car without restriction.

CASE # 7

73 year old female with a painful left shoulder. Ultrasound of shoulder demonstrated bursitis and fluid around the biceps tendon. Pain worse at night. Limited range of movement. Handy Cure's treatment was commenced daily for 6 days with notable improvement in level of pain. She was virtually pain free during the day with reducing night pain and with increasing range of movement of the shoulder joint.

CASE # 8

73 year old female presented with severe pain in the left calf following an episode of prolonged cramp whilst in bed. She was seen to be extremely tender over the medial head of the Gastrocnemius muscle and responded well to 4 treatments with Handy Cure's.

CASE # 9

63 year old insulin dependent diabetic with severe degenerative disease of the right knee waiting for knee replacement. Awaiting hospital admission she received daily and alternate day Handy Cure's treatment over 7-10 days on 2 occasions to buy time until surgery was carried out. Post operatively she was using an exercise bicycle during her rehabilitation and developed muscle strain of the upper anterior compartment muscles. Also post operatively she developed a pressure ulcer on her other heel. Her anterior compartment strain improved daily with 5 Handy Cure's treatments and the moderately deep pressure ulcer which had been dosing slowly showed rapid improvement from 1.5cms to 2mm in 7 days and was closed by the 12th day.

CASE # 10

32 year old male knocked right knee over upper margin of Patella. He complained of pain and weakness on extension of knee. After 3 Handy Cure's treatments pain and weakness had subsided.

CASE # 11

57 year old female had a large can of tinned fruit dropped onto dorsum of right foot. Patient on Warfarin. She developed pain, swelling (hematoma) over the dorsum of her foot. After 4 Handy Cure's treatments she was able to walk comfortably with little pain on extension of ankle joint and toes.

CASE # 12 Shoulder Bursitis

Age 28 – The injury occurred at work while digging and shoveling heavy wet earthy clay, the shovel got stuck under a rock and this patient exerted undue force to try to lift the rock, which did not move an inch. This patient is very muscular and exercises regularly, including weight lifting. The biceps tendon was painful and there was limited abduction at 60 degrees and very limited internal rotation and forward flexion. An Ultrasound showed biceps tendon inflammation and partial tear. The treatment consisted of 4 sessions of Handy Cure's (10 minutes @ 50Hz) with a prescription for NSAID and ice packs. He was assigned to light duties with a restriction on lifting no more than two kilos. The four sessions of Handy Cure's were given over a 10 day period. At the end of the treatment, the patient was pain free and there was no limitation of movement and palpation was pain free.

CASE # 13 Lateral Epicondylitis

Age 43 – This electrician patient had been suffering from lateral epicondylitis for several months with increasing intensity not only while using his forearm but also at rest and even at night. Courses of NSAID taken intermittently had provided not substantial relief. The treatment consisted of 6 sessions of Handy Cure's (10 minutes at 50 Hz) over a period of three weeks combined with 3 myotherapy treatments and a course of NSAID. After the three weeks of treatment, the patient was pain free both while using his arm and at rest and at palpation of the lateral epicondyle.

CASE # 14 Hip Bursitis

Age 72 – this retired woman was suffering from left hip pain that reduced her ability to go for long walks and also prevented her from sleeping on her left side. Getting up from a chair or her sofa was painful. Palpation of the great trochanter was painful and a left hip ultrasound confirmed a bursitis. The treatment consisted of eight treatments of Handy Cure's (5 minutes variable frequency and 5 minutes at 50 Hz) over a three weeks period. At the end of the treatment, the patient was pain free and could enjoy her walks again. There was no pain at palpation and no limited range of movement of her left hip.

CASE # 15 Superficial Thrombophlebitis

Age 54 – this patient had a superficial thrombophlebitis of the leg for several days. Treatment consisted of two Handy Cure’s sessions of 10 minutes at 1000Hz on two consecutive days.

After the second treatment, the inflammation had disappeared and the leg was not sore.

CASE # 16 Shingles

Age 24 – This patient had developed herpes zoster on a thoracic dermatome. He visited his family physician 6 days after the occurrence of symptoms. The treatment consisted of 4 sessions of Handy Cure’s (10 minutes at 50Hz) over a ten day period with a prescription of tramadol and of paracetamol 500mg and 30 mg of codeine. After the treatments, the pain had reduced markedly and an NSAID was sufficient to control it. The skin lesion had almost disappeared.

CASE # 17 Leg Ulcers

“I have a **diabetic ulcer in my leg** that until recently sis not show signs of healing. After one course of treatment my ulcer is definitely showing signs of healing and is getting smaller.”

Mr. J. Bird – Cleveland, Teesside

CASE # 18 Diabetes

63 year old- insulin dependent diabetic with severe degenerative disease of the right knee, waiting for knee replacement.

Awaiting hospital admission, she received daily and alternate day treatment over 7-10 days on 2 occasions to buy time until surgery was carried out. Post-operatively, she was using an exercise bicycle during her rehabilitation and developed muscle strain of the upper anterior compartment muscles. Also post-operatively she developed a **pressure ulcer** on her other heel. Her anterior compartment strain improved daily with 5 treatments by LLLT Handy Cures and the moderately deep pressure ulcer which had been closing slowly showed rapid improvement from 1.5 cm to 2mm in 7 days and was closed by the 12th day.

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- xxi Dr. Remi Guibert, MD - Medical Director of Nutech Health, Australia - <http://www.zoominfo.com/p/Remi-Guibert/936936949>