

Research of Low Level Laser Therapy

- 1916:** Einstein first proposed the phenomenon of stimulated emission.
- 1960:** Theodore “Ted” Maiman invented, built and patented the world’s first laser.
- 1967:** Prof. Mester – Budapest – discovers laser biostimulation.
- 1983:** UK physios first use low power laser for sports injuries treatment.
- 1987:** James Carroll raised £ for laser research at Guys Hospital London.
- 1998:** NASA conducted LED therapy wound healing study for space.
- 1999:** US Navy nerve regeneration research with THOR Laser.
- 2003:** First FDA clearance for THOR.
- 2005:** Spinal cord regeneration.
- 2006:** LLLT published in Nature and Pain.
- 2008:** World Health Organisation (Bone and Joint Task Force) 2008 recommended LLLT/PBM for neck pain.
- 2009:** The Lancet “LLLT/PBM reduces pain immediately after treatment in acute neck pain and for up to 22 weeks in patients with chronic neck pain.
- 2010:** American Physical Therapy Association guidelines recommend LLLT/PBM for Achilles Tendonitis.
- 2010:** The International Association for the Study of Pain (Global Task Force on musculoskeletal pain) recommend laser for myofascial pain syndrome.
- 2010:** BJSM, systemic review of surgical and conservative interventions for frozen shoulder found “strong evidence” for LLLT.
- 2011:** BMJ Tennis Elbow, Clinical Guidelines “Likely to be beneficial for short term pain relief & improvement of function”.
- 2012:** Multinational Association for Supportive Cancer Care (MASSC) systemic review recommends LLLT/PBM for oral mucositis.
- 2013:** Journal Applied Oral Science. TMJ systemic review “it seems clear that the use of laser brings benefits when properly applied and administered”.
- 2015:** J Cancer Survivorship LLLT confers clinically meaningful reductions in arm volume & pain in women with lymphoedema.
- 2016:** BMJ LLLT chronic non-specific low back pain: a systemic review & meta-analysis of RCTS, “moderate quality of evidence” & “clinically important benefits” in the short term.

- 2017:** American College of Physicians Guidelines include a “strong recommendation” for LLLT as non-invasive treatments for acuter, subacute and chronic low back pain.
- 2017:** Blue Cross Blue Shield reimburse for Oral Mucositis medically necessary for select patients.
- 2017:** UK NHR funded RCT on the Clinical and Cost Effectiveness of LLLT Management of Oral Mucositis in Head and Neck Cancer patients, ten NHS hospitals, 380 patients, in progress.
- 2018:** National Institute of Health and Care Excellence (NICE) guidance for the UK NHS recommends laser for oral mucositis.
- 2019:** MASCC Three Oral Mucositis recommendations PBM reduces incidence and severity of Oral Mucositis in HSCT, RT & CRT patients.
- 2019:** BMJ systemic reviews and meta-analysis PBM significantly reduces pain and disability in knee osteoarthritis.