



# Super Pulsed Laser and Trigger Points

## Take Home Points:

- ✓ Acute pain can be diminished more than 70%, chronic pain more than 60%
- ✓ Clinical effectiveness (success or failure) depends on the correctly applied energy dose--over/underdosage produces opposite, negative effects on cellular metabolism
- ✓ Applied once per day for 5 consecutive days, followed by a 2-day interval with an average 12 applications.
- ✓ The differences between these two treatments were greater after fifteen minutes of the therapy



# Chiropractic management of myofascial trigger points and myofascial pain syndrome: a systematic review of the literature. J Manipulative Physiol Ther. 2009 Jan;32(1):14-24.

Vernon H, Schneider M.

CCGPP was charged with developing literature syntheses, organized by anatomical region, to evaluate and report on the evidence base for chiropractic care.

PubMed, Excerpta Medica Database, Cumulative Index to Nursing and Allied Health Literature, and databases for systematic reviews and clinical guidelines were searched

**“A Review of 112 articles resulted in strong evidence support for laser therapy for myofascial pain syndrome and myofascial trigger points.”**

Limited evidence supports electrical muscle stimulation, high-voltage galvanic stimulation, interferential current, and frequency modulated neural stimulation in the treatment of MTrPs and MPS. Evidence is weak for ultrasound therapy.

## CONCLUSIONS:

Manual-type therapies and laser therapy have acceptable evidentiary support in the treatment of MPS and TrPs.



Chiropractic management of myofascial trigger points and myofascial pain syndrome: a systematic review of the literature. Summary of Clinical Practice Recommendations from the Commission on Chiropractic Guidelines and Practice Parameters

### Design and Methods:

The Council on Chiropractic Guidelines and Practice Parameters (CCGPP), was formed at the behest of the Congress of Chiropractic State Associations (COSA) and was formed from the American Chiropractic Association, Association of Chiropractic Colleges, Chiropractic Education, Federation of Chiropractic Licensing Boards, Foundation for Advancement of Chiropractic Sciences, Foundation for Chiropractic Education and Research, International Chiropractors Association, National Association of Chiropractic Attorneys and the National Institute for Chiropractic Research.

The CCGPP's mission is to provide consistent and widely adopted chiropractic practice guidelines to chiropractic clinicians and require these to be adopted in that consistent and uniform manner. The CCGPP was formed to address the need for evidence-based practice in the chiropractic profession. The process has been to identify the areas of the profession on the project that CCGPP has been

representing the National Association of Chiropractic Attorneys, as well as a public member. A Scientific Commission with several dozen members reports to and is supervised by the Council. The Commission's role is to identify the areas of the profession which require the development of practice guidelines. A literature synthesis is an academically rigorous analysis of all the available scientific literature on a specific topic. Reviewers use internationally accepted tools to rate each article according to specific criteria. These include the type of study (randomized controlled trial, case series, etc.), the quality of the study, size of the study and many other factors which influence the credibility and strength of the study's conclusions. Each reviewer independently rates all the available articles, and the ratings are compared among the members of the review team. When there is disagreement among the reviewers regarding the conclusions, a formal consensus process is followed to arrive at an overall conclusion upon which all reviewers can agree. The resulting conclusions do not represent the reviewers' own beliefs but rather what the literature actually supports.

For this document, team efforts in review, rating, and reporting of literature syntheses were guided, as much as possible, by the widely accepted Appraisal of Guidelines for Research and Evaluation process. The main features included (1) review by a panel of experts; (2) detailed





# Low Level Laser Therapy with Trigger Points Technique: A Clinical Study on 243 Patients



ZLATKO SIMUNOVIC

Journal of Laser Therapy

904 nm LLLT improves local microcirculation and it can also improve oxygen supply to hypoxic cells in the TP areas.

We did not observe any negative effects on the human body and the use of analgesic drugs could be reduced or completely excluded.

LLLT suggests that the laser beam can be used as monotherapy or as a supplementary treatment to other therapeutic procedures for pain treatment





# Comparison of the effects of low energy laser and ultrasound in treatment of shoulder myofascial pain syndrome: a randomized single-blinded clinical trial.



Rayegani S, Bahrami M, Samadi B, Sedighipour L, Mokhtarirad M, Eliaspoor D.  
Eur J Phys Rehabil Med. 2011 Sep;47(3):381-9.

Myofascial pain syndrome (MPS) is one of the most prevalent musculoskeletal diseases. MPS impaired quality of life in the patients. There is a lot of controversy about different treatment options which include medical treatments, physical therapy, massage, acupuncture, and laser therapy. The aim of this study was to compare the effects of laser and ultrasound in treatment of MPS.

**DESIGN:** Randomized single blinded clinical trial.  
**SETTING:** Physiotherapy department of a university hospital.

Sixty three subjects (females: 46, males: 17) (age range: 17-55 year old) who had a diagnosis of definite MPS were entered in the study.

**METHODS:** We measured the pain intensity at rest, during activity and at night using Visual Analogue Scale (VAS) questionnaire. The subjects were divided into three groups based on the randomization method. The pain intensity provoked by pressure was determined using algometric assessment. Then, the patients were categorized randomly in groups A, B and C

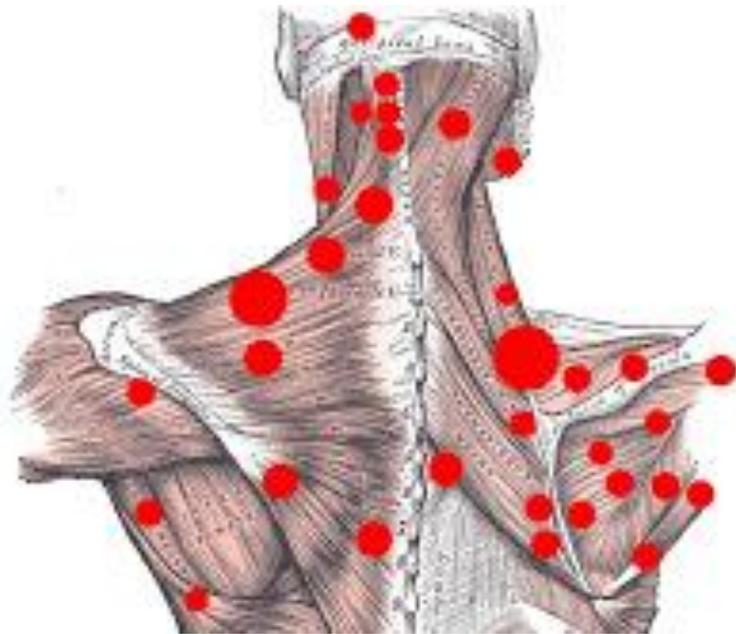
(receiving laser therapy, ultrasound and sham laser therapy respectively). Six weeks after the initial visit, they were visited again.

**RESULTS:** Ultrasound was effective in VAS improvement during activity (46%), at rest (39%) and at night (35%). It also improved NDI scores (44%) and algometric assessment (37%). Laser was effective in VAS improving during activity (54%), at night (51%) and at rest (51%) and also improved NDI scores (73%). It was also found effective in algometric assessment improvement (105%). Laser resulted in more NDI score and algometric assessment improvements comparing to ultrasound ( $p < 0.05$ ).

**CONCLUSION:** This study introduces laser as one of the preferred treatments of myofascial pain syndrome in shoulder.



# Locating Trigger Points:



Locate the points by your preferred method:

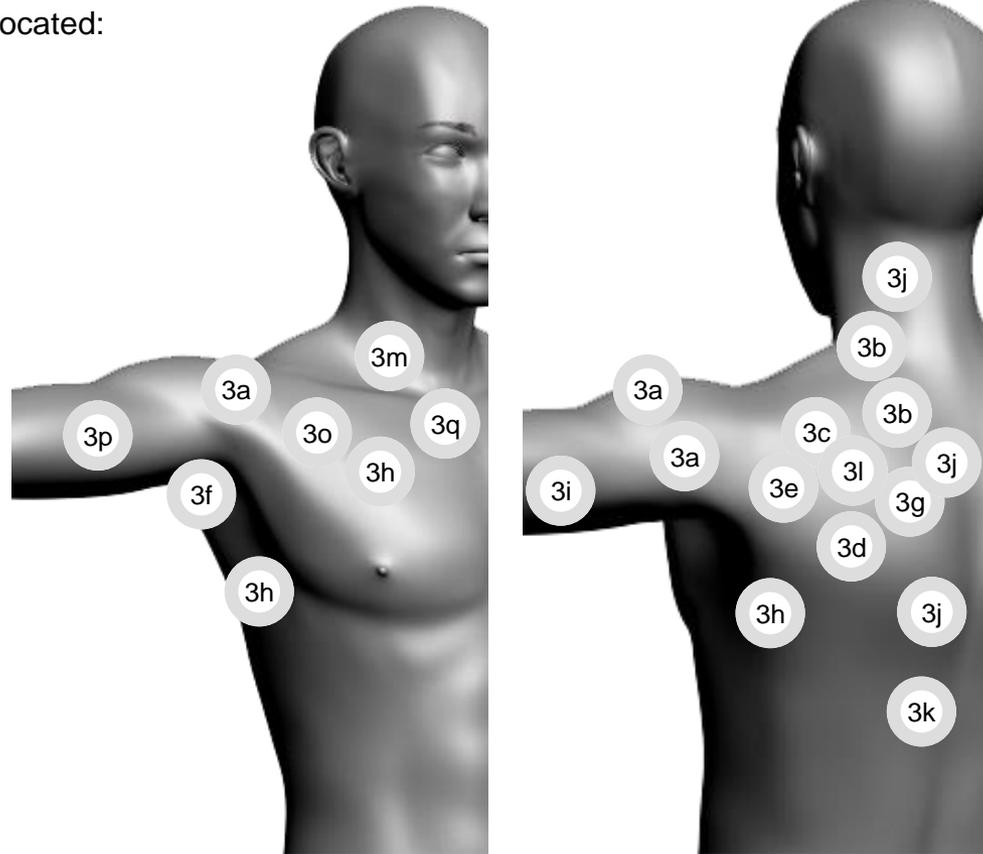
- Palpation
- LaserStim
  - TARGET
- PhotoProbe Palpation

# Priority Principle™: Shoulder Spasms/Muscular Pain

4(b)	Spasms: at palpable spasms in affected area, active and latent	1000 or 3000 Hz with Photoprobes	Pontinen's Principle
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Trigger points for the knee are commonly located:

- a. Deltoid
- b. Levator scapulae
- c. Supraspinatus
- d. Teres major
- e. Tere minor
- f. Subscapularis
- g. Serratus posterior
- h. Latissimus dorsi
- i. Triceps brachii
- j. Trapezius
- k. Iliocostalis thoracis
- l. Infraspinalis
- m. Scaleni
- n. Pectoralis major
- o. Pectoralis minor
- p. Biceps brachii
- q. Subclavius



	<p><b>Utility Probe:</b> This is an inter cavity probe designed for treatment of the mouth and ears. It may additionally be used as a point probe for patients that may find the corporal probe uncomfortable.</p>
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# Priority Principle™: Muscle Spasm and Trigger Points Referred Pain Patterns

4	(a)	Spasms: at palpable spasms in affected area, active and latent	1000 or 3000 Hz	2-5 min per location scanning
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