

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

11 Sep 2026

### Effect of low power Laser on reduction pain and trismus after third Molar.

#### Protocol summary

##### Summary

Objective: A randomized, double-blind comparative study was undertaken to assess the efficacy of low level laser therapy in the reduction of postoperative pain and trismus in patients undergoing the extraction of impacted mandibular third molar teeth. This study included 40 patients of both sexes; they were randomly selected from patients undergoing surgical extraction of impacted LTM of the same position in the jaw and had similar status with regard to the difficulty of surgical removal. Patients were randomly allocated to one of two groups: LLLT, or placebo. Subsequently to suturing, patients in LLLT group had their operation side, treated with an 810 nm, infrared laser irradiation, intraorally 1 cm from the target tissue 10 min after surgery. The other group just received routine recommendation. In the placebo group the handpiece was inserted into the operative side intraorally but laser was not activated. Inter incisal opening and pain were evaluated on second and 7th postoperative days. Patients were instructed to evaluate their postoperative pain on 2 and 7 days after surgery by means of visual analogue scale (VAS). Student's t-test or U-Mann Whitney used to analyze the data.

#### General information

##### Acronym

LPL, LTM

##### IRCT registration information

IRCT registration number: **IRCT138904134278N2**

Registration date: **2010-10-17, 1389/07/25**

Registration timing: **retrospective**

Last update:

Update count: **0**

##### Registration date

2010-10-17, 1389/07/25

##### Registrant information

##### Name

Mehrnoush Momeni

##### Name of organization / entity

Faculty of Dentistry, Tehran University of Medical Sciences

##### Country

Iran (Islamic Republic of)

##### Phone

+98 21 8163 3620

##### Email address

momeni\_m@tums.ac.ir

##### Recruitment status

**Recruitment complete**

##### Funding source

Deputy Dean for research, Faculty of Dentistry, Tehran University of Medical Sciences.

##### Expected recruitment start date

2009-05-01, 1388/02/11

##### Expected recruitment end date

2010-04-05, 1389/01/16

##### Actual recruitment start date

empty

##### Actual recruitment end date

empty

##### Trial completion date

empty

##### Scientific title

Effect of low power Laser on reduction pain and trismus after third Molar.

##### Public title

The effect of low power Laser on pain and trismus after third Molar surgery.

##### Purpose

Supportive

##### Inclusion/Exclusion criteria

Inclusion criteria: Patients with unilateral impacted lower Third molar and no systemic problem and also not used any analgesic, antibiotic, corticosteroid, and sedative drug at least for fifteen days before surgery were

registered at the surgery department of faculty of dentistry of Tehran university of Medical science.  
Exclusion criteria: Low compliant patients Not attending at the expected time of measurement.

### Age

From **19 years** old to **29 years** old

### Gender

Both

### Phase

N/A

### Groups that have been masked

No information

### Sample size

Target sample size: **40**

### Randomization (investigator's opinion)

Randomized

### Randomization description

### Blinding (investigator's opinion)

Double blinded

### Blinding description

### Placebo

Used

### Assignment

Parallel

### Other design features

## Secondary Ids

empty

## Ethics committees

### 1

#### Ethics committee

##### Name of ethics committee

Tehran university of medical sciences, vice chancellor for research

##### Street address

Faculty of Dentistry, Tehran University of Medical Sciences

##### City

Tehran

##### Postal code

##### Approval date

2010-05-10, 1389/02/20

##### Ethics committee reference number

88-03-70-8972

## Health conditions studied

### 1

#### Description of health condition studied

Trismus

#### ICD-10 code

-

#### ICD-10 code description

-

## Primary outcomes

### 1

#### Description

Pain

#### Timepoint

Before surgery-48 h after surgery-7 days after surgery

#### Method of measurement

Using VAS

## Secondary outcomes

### 1

#### Description

Trismus

#### Timepoint

Before surgery-48 h after surgery-7 days after surgery

#### Method of measurement

Using a rule that measure intra incisal.mm

## Intervention groups

### 1

#### Description

Intervention group: patients in LLLT group had their operation side, treated with an 810 nm, infrared laser irradiation, intraorally 1 cm from the target tissue 10 min after surgery.

#### Category

Treatment - Devices

### 2

#### Description

Control group: Received routine recommendation. In the placebo group the handpiece was inserted into the operative side intraorally but laser was not activated.

#### Category

Placebo

## Recruitment centers

### 1

#### Recruitment center

##### Name of recruitment center

Faculty of Dentistry, Tehran University of Medical Sciences

##### Full name of responsible person

Dr Mehrnough Momeni

##### Street address

Ghods avenue-Enghelab square

##### City

Tehran

## Sponsors / Funding sources

## 1

### **Sponsor**

#### **Name of organization / entity**

Faculty of Dentistry, Tehran University of Medical Sciences

#### **Full name of responsible person**

Dr.Fotoohi

#### **Street address**

Ghods Ave-Enghelab square

#### **City**

Tehran

### **Grant name**

### **Grant code / Reference number**

### **Is the source of funding the same sponsor organization/entity?**

Yes

### **Title of funding source**

Faculty of Dentistry, Tehran University of Medical Sciences

### **Proportion provided by this source**

100

### **Public or private sector**

*empty*

### **Domestic or foreign origin**

*empty*

### **Category of foreign source of funding**

*empty*

### **Country of origin**

### **Type of organization providing the funding**

*empty*

## **Person responsible for general inquiries**

### **Contact**

#### **Name of organization / entity**

Faculty of dentistry

#### **Full name of responsible person**

Sheida Kordi

#### **Position**

Administrator-student of professional doctor

#### **Other areas of specialty/work**

#### **Street address**

Faculty of Dentistry, Tehran University of Medical Sciences

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## **Person responsible for scientific inquiries**

### **Contact**

#### **Name of organization / entity**

Faculty of dentistry

#### **Full name of responsible person**

Mehrnoush Momeni

#### **Position**

Assistant Professor/oral and maxillofacial surgeon

#### **Other areas of specialty/work**

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## **Person responsible for updating data**

### **Contact**

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Sheida Kordi

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Student

#### **Other areas of specialty/work**

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#### **Phone**

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#### **Email**

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#### **Web page address**

## **Sharing plan**

### **Deidentified Individual Participant Data Set (IPD)**

*empty*

### **Study Protocol**

*empty*

### **Statistical Analysis Plan**

*empty*

### **Informed Consent Form**

*empty*

### **Clinical Study Report**

*empty*

### **Analytic Code**

*empty*

### **Data Dictionary**

*empty*