

## Facial Thermographic Changes

### **Evaluation of facial thermographic changes before and after low-level laser irradiation.**

Makihara E, Makihara M, Masumi S, Sakamoto E.

*Photomed Laser Surg.* 2005 Apr;23(2):191-5.

Division of Occlusion and Maxillofacial Reconstruction, Kyushu Dental College, Kitakyushu, Japan.

**OBJECTIVE:** The aim of the present study was to evaluate the facial thermographic changes before and after low-level laser irradiation applied to the temporomandibular joint in normal subjects. **BACKGROUND DATA:** Although this therapy has been reported to be effective in the pain management of patients with rheumatoid arthritis and degenerative joint disease, several researchers have stated that this therapy has no effect on pain of myogeneous origin. **MATERIALS AND METHODS:** Nine healthy subjects underwent irradiation using the continuous wave setting of a CO<sub>2</sub> laser with a power output of 1.0 W. The laser tip was positioned 10 cm above the skin over the right TMJ area for 10 min. The actual fluence on the facial surface was 7.64 J/cm<sup>2</sup>. Variation of the facial temperature was evaluated by using thermography. **RESULTS:** The facial temperature 10 min after stopping irradiation was higher than that after 10 min of irradiation applied to the opposite side. The warmer area was found not only over the TMJ area but also over the temporal area, forehead area, and eyelid area on both sides. **CONCLUSION:** These results suggested that low-level laser irradiation had a long-lasting effect on facial cutaneous tissues.