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> [Photomed Laser Surg](#), 34 (9), 389-93 Sep 2016

# The Effectiveness of Low-Level Laser Therapy in Patients With Drug-Induced Hyposalivation: A Pilot Study

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## Abstract

**Objective:** The aim of this study was to compare switched on and switched off (sham) low-level laser therapy (LLLT) in the treatment of drug-induced hyposalivation.

**Background data:** Hyposalivation is decreased salivary flow rate most frequently present in patients who take a lot of medication, suffer from Sjögren's syndrome, or were irradiated. Available therapies provide only short-term relief.

**Materials and methods:** Forty-three participants (40 females and 3 males, average age  $72.3 \pm 8.9$ ) participated in the study. Before therapy or after therapy, every participant fulfilled quality-of-life assessment scale (OHIP-CRO14). Unstimulated and stimulated salivary flow rates were measured before and after treatment. The LLLT was performed by the use of gallium-aluminum-arsenide (GaAlAs) laser (830 nm) on parotid, submandibular, and sublingual glands every day except during weekends for 14 days.

**Results:** Significant difference in unstimulated salivary flow rate after the treatment was found in the study group ( $p = 0.002$ ) compared with the sham group. No significant difference in stimulated salivary flow rate after treatment was found in the laser group ( $p = 0.626$ ) nor in the sham laser group ( $p = 0.233$ ). No significant difference in patient's quality-of-life score was found after both treatments.

**Conclusions:** The results of this study showed that the LLLT increased unstimulated salivary flow rate significantly. However, stimulated salivary flow rate did not increase significantly after the LLLT. In patients who underwent sham laser therapy, neither unstimulated nor stimulated salivary flow

rate increased significantly.

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