

Acupuncture eases radiation-induced dry mouth in cancer patients

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Twice weekly acupuncture treatments relieve debilitating symptoms of xerostomia - severe dry mouth - among patients treated with radiation for head and neck cancer, researchers from The University of Texas M. D. Anderson Cancer Center report in the current online issue of *Head & Neck*.

Xerostomia develops after the salivary glands have been exposed to repeated doses of therapeutic [radiation](#). People who have cancers of the head and neck typically receive large cumulative doses, rendering the salivary glands incapable of producing adequate saliva, said Mark S. Chambers, M.S., D.M.D., a professor in the Department of Dental Oncology. Saliva substitutes, lozenges and chewing gum bring only temporary relief, and the commonly prescribed medication, pilocarpine, has short-lived benefits and bothersome side effects of its own.

"The quality of life in [patients](#) with radiation-induced xerostomia is profoundly impaired," said Chambers, the study's senior author. "Symptoms can include altered taste acuity, dental decay, infections of the tissues of the mouth, and difficulty with speaking, eating and swallowing. Conventional treatments have been less than optimal, providing short-term response at best."

M. Kay Garcia, LAc, Dr.P.H., a clinical nurse specialist and acupuncturist in M. D. Anderson's Integrative Medicine Program and the study's first author, noted that patients with xerostomia may also develop nutritional deficits that can become irreversible.

Garcia, Chambers and their team of researchers conducted a pilot study to determine whether [acupuncture](#) could reverse xerostomia. Acupuncture therapy is based on the ancient Chinese practice of inserting and manipulating very thin needles at precise points on the body to relieve pain or otherwise restore health. In traditional Chinese medicine, stimulating these

points is believed to improve the flow of vital energy through the body. Contemporary theories about acupuncture's benefits include the suggestion that needle manipulation stimulates natural substances that dilate blood vessels and increase blood flow to different areas of the body.

The M. D. Anderson study included 19 patients with xerostomia who had completed radiation therapy at least four weeks earlier. The patients were given two acupuncture treatments each week for four weeks. The acupuncture points used in the treatment were located on the ears, chin, index finger, forearm and lateral surface of the leg. All patients were tested for saliva flow and asked to complete self-assessments and questionnaires related to their symptoms and quality of life before the first treatment, after completion of four weeks of acupuncture, and again four weeks later.

The twice weekly acupuncture treatments produced highly statistically significant improvements in symptoms. Measurement tools included: the Xerostomia Inventory, asking patients to rate the dryness of their mouth and other related symptoms; and the Patient Benefit Questionnaire, inquiring about issues such as mouth and tongue discomfort; difficulties in speaking, eating and sleeping; and use of oral comfort aids. A quality-of-life assessment conducted at weeks five and eight showed significant improvements over quality-of-life scores recorded at the outset of the study.

"In this pilot study, patients with severe xerostomia who underwent acupuncture showed improvements in physical well-being and in subjective symptoms," Dr. Chambers said. "Although the patient population was small, the positive results are encouraging and warrant a larger trial to assess patients over a longer period of time."

Garcia said that a phase III, placebo-controlled trial is planned and is currently under review. She also noted that in other studies, the M. D. Anderson

researchers are examining whether acupuncture can prevent xerostomia in patients treated for head and neck cancer, not just treat it.

"Recently, we completed a study at Fudan University Cancer Hospital in Shanghai, China that compared acupuncture to usual care to prevent xerostomia. We have now started a two-arm placebo-controlled pilot trial in Shanghai. In the prevention trials, acupuncture is performed on the same day as the radiation treatments," Garcia said.

Source: University of Texas M. D. Anderson Cancer Center ([news](#) : [web](#))

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