

Effectiveness of a spray that greatly improves dry mouth sensation caused by anti-depressants

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This is the appearance of a patient's tongue suffering from xerostomy due to anti-depressants. Credit: University of Granada

Researchers from the universities of Granada and Murcia have confirmed the effectiveness of a spray containing 1% malic acid, which greatly improves xerostomy, or dry mouth, caused by anti-depressant drugs. This product, combined with xylitol and fluorides, in a spray format, stimulates saliva production in patients with this illness, thus

improving their quality of life.

Xerostomy is a dry-mouth sensation that patients have, often caused by reduced salivary secretion or [biochemical changes](#) in the saliva itself. Patients with xerostomy often find difficulty in chewing, swallowing or even talking. It is a subjective sensation, whilst hyposalivation refers to an actual reduction in salivary flow, meaning that it is objective and, therefore, quantifiable.

As the main author of this study, University of Granada lecturer, Gerardo Gomez Moreno, explains, one of the main causes of dry mouth is the consumption of different medications. "There are over 500 drugs, belonging to 42 pharmacological groups, which can provoke xerostomy as a side effect. Those that are most related are anti-depressants, the prescription of which has increased over recent years, thus leading to a higher number of patients with xerostomy from taking anti-depressive drugs, above all in 45-50 year olds".

Clinical trial using 70 patients

The University of Granada research was carried out in a double-blind [randomized clinical trial](#) on 70 patients diagnosed with anti-depressant-induced xerostomy, split into two (2) groups. The first group of 35 patients took a sialogogue mouth spray (1% malic acid), while the second group – also consisting of 35 patients – received a [placebo](#). Both products were applied on demand over two (2) weeks. To check the xerostomy both before and after applying both the product and the placebo, the researchers used a specific questionnaire, called the [Dry Mouth Questionnaire](#) (DMQ).

Dr. Gomez Moreno points out that there are various therapeutic possibilities for treating xerostomy (sialogogues, salivary substitutes, other general treatments), "although the effectiveness of many of them are

controversial. For example, some studies have described citric and malic acid as salivary stimulants, even though, for years, their use was rejected due to the possible de-mineralizing effect on tooth enamel". However, recent research has shown that there is a reduction in the potential de-mineralizing effect of malic acid when used in the correct concentration and when combined with xylitol and fluorides.

More information: The efficacy of a topical sialogogue spray containing 1% malic acid in patients with antidepressant-induced dry mouth: A double-blind, randomized clinical trial Gomez-Moreno, G , Aguilar-Salvatierra, A., Guardia, J., Uribe-Marioni, A., Cabrera-Ayala, M., Delgado-Ruiz, R.A., Calvo-Guirado, J.L. Depression and Anxiety, Volume 30, Issue 2, February 2013, Pages 137-142. The full article can be consulted at: sl.ugr.es/03zw

Provided by University of Granada

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