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A new method to suppress human rumination



Rumination, the regurgitation of recently ingested food into the mouth, can be a minor problem or lead to severe nutritional complications. Professor Fernando Azpiroz, from the UAB Department of Medicine and Vall d'Hebron Research Institute, and his team, have developed a new method to show people suffering from rumination how to modulate their muscular activity in order to suppress it.

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Rumination is characterized by effortless recurrent regurgitation of recently ingested food into the mouth, with consequent spitting or re-chewing and swallowing. We previously demonstrated that rumination is produced by an unperceived, somatic response to food ingestion, and we developed an original biofeedback technique based on EMG-guided control of abdomino-thoracic muscular activity. Our aim was to demonstrate the superiority of biofeedback versus placebo for the treatment of rumination in a randomized, placebo controlled trial.

In 24 patients with rumination we recorded the activity of the abdomino-thoracic muscles by means of electromyography before and after a meal. The patients in the biofeedback group were shown the signal and instructed to control muscle activity, whereas the patients in the placebo group were not shown the signal and were given oral placebo. Each patient underwent 3 sessions over a 10-day period.

Looking at the electromyographic tracings, patients were taught to control abdomino-thoracic muscular activity, and this was associated with the suppression of rumination, while patients on placebo did not expressed any change.

In the present study, a fairly complex methodology was applied. Once having proved the effectivity of this technique, the next step is to develop and validate a simplified procedure for widespread application.

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References

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