Abstract

Title: Does the number of chews affect satiation and satiety?
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Background: Overweight and obesity is a growing problem worldwide. In 2008, 35% of the world's population were overweight and 11% obese, which is almost doubling since 1980, according to WHO. Recommendations on overweight and obesity is not just about what we eat but how we eat. A generally accepted recommendation is to eat slowly and chew your food properly in order to increase fullness and reduce energy intake. Is there any scientific evidence for this recommendation?

Objective: To investigate whether there is evidence that chewing affects satiation and satiety, independent eating rate.

Search strategy: Search was performed in the databases PubMed, Scopus, and Cochrane. Keywords used were "mastication", "satiation", "satiety", "energy intake" and "chew *".

Selection criteria: Inclusion criteria for the review article were randomized controlled trials written in Swedish or English. Studies must have used the same food in the control- and the intervention group and studied the number of chews in relation to satiation and satiety. Adults between 18-65 years were included. Studies conducted with chewing gum, participants with gastrointestinal disease, studies focused on dental health and guidelines were excluded.

Data collection and analysis: Three selected articles were reviewed and analyzed using the SBU:s Mall för kvalitetsgranskning av randomiserade studier and the three outcome measures satiety, hunger, and ghrelin were graded by the University of Gothenburg template Sammanfattande evidensformulär.

Main results: The three studies showed consistency that chewing does not affect satiety. Weak evidence exists that chewing nor affect hunger or ghrelin

Conclusion: The conclusion is that there at the present time is moderate evidence that the number of chews does not affect satiety. There is no evidence to recommend an increased number of chews with respect to satiety. However, it may possibly for other reasons such as reduced eating rate, not studied here, be included as part of an individual nutrition therapy to reduce energy intake and weight. There is no scientific evidence to draw conclusions about satiation. More research in this area is necessary.