Oral Responses to Fat-containing Confectionary

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Primary objective: Assess the nature and sequence of tongue and jaw movement patterns in relation to perceived confectionary properties. Secondary objective: describe the temporal dynamics of tongue/jaw movements in relation to perceived product...

Ethical review	Approved WMO
Status	Recruitment stopped
Health condition type	Other condition
Study type	Interventional

Summary

ID

NL-OMON36107

Source
ToetsingOnline

Brief title
OraCon

Condition

- Other condition

Synonym
not applicable

Health condition

factoren van invloed op perceptie van levensmiddelen

Research involving
Human

Sponsors and support

Primary sponsor: Mars Nederland B.V.
Source(s) of monetary or material Support: Mars Nederland BV (Levensmiddelenfabrikant)

Intervention

Keyword: carbohydrates, confectionary, fat, protein, texture, tongue

Outcome measures

Primary outcome

tongue and jaw movement patterns (in mm (x,y,z) with respect to the palate)

over time in relation to perceived product properties.

Secondary outcome

not applicable

Study description

Background summary

Eating confectionary requires masticatory effort. Also tongue movements are important to manipulate the product and to clear the mouth during and after mastication. For that reason, the composition of confectionary influences tongue and jaw movements to a large extent. Also the appreciation of confectionaries is influenced by their textural composition. It is, therefore, expected that the nature of masticatory and tongue movements during mastication are indicative of sensory properties of the products. This study aims at clarifying that relation.

Study objective

Primary objective: Assess the nature and sequence of tongue and jaw movement patterns in relation to perceived confectionary properties. Secondary objective: describe the temporal dynamics of tongue/jaw movements in relation to perceived product properties (e.g. fat composition).

Study design

within subject comparison (double blind, randomised, cross-over) of effects of different (commercial) confectionary compositions (food grade adjustments of protein and fat content) on perception and tongue movements

Intervention

Food composition is varied. This is not a so-called medical intervention study. However, the format of this application does not allow a distinction between these two.

Study burden and risks

Since this study does not entail any medical treatment, no intrinsic benefits are provided. Instead, participants will be compensated financially. In three phases, participants are (1) evaluating different product versions in a Quantitative Descriptive Analysis, (2) evaluating sensory key characteristics of confectionaries over time by Temporal Dominance Scaling and (3) attending three sessions for the measurement of their oral behaviours during consumption of the same products. Each session takes maximally 1.5 hours. In each session, 10 sensors are stuck with double-sided tape to the face and 2 sensors are stuck with histoacryl to the anterior dorsal tongue (bi-lateral, approximately 2 cm posterior to the tip of the tongue). Participants typically experience little or no discomfort by the facial sensors and mild discomfort by the tongue sensors. The removal of the sensors from the mucosal tongue tissue is generally easy, in spite of the fact that histoacryl is used. Post-session discomfort, if any, is characterised by the experience of a *dry spot* on the tongue area where the sensor was stuck. This feeling disappears in one or two days. If sensor release from the tongue during mastication, a wire attached to the sensors prevents these from being swallowed. Subjects are also asked to rate perceived sensory aspects of the evaluated products. This is done by use of a computer / mouse in an easy automated fashion. Total number of confectionary products evaluated is low (5 - 7 items).

Contacts

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Trial sites

Listed location countries

Netherlands

Eligibility criteria

Age
Adults (18-64 years)
Elderly (65 years and older)

Inclusion criteria

age 18-60
Normosmic
Normogeusic
Passed smell-identification tests
Passed regular QDA reference tests

Exclusion criteria

Latex allergy
Allergies for nuts, cow-milk or sucrose

Study design

Design

Study type:	Interventional
Intervention model:	Crossover
Masking:	Double blinded (masking used)

Control:	Uncontrolled
Primary purpose:	Treatment

Recruitment

NL

Recruitment status:	Recruitment stopped
Start date (anticipated):	20-09-2011
Enrollment:	18
Type:	Actual

Ethics review

Approved WMO

Date:	13-09-2011
Application type:	First submission
Review commission:	METC Wageningen Universiteit (Wageningen)

Study registrations

Followed up by the following (possibly more current) registration

No registrations found.

Other (possibly less up-to-date) registrations in this register

No registrations found.

In other registers

Register	ID
CCMO	NL35811.081.11