Repeated exposure to sweet and sweet-sour drinks: do sweet taste preferences change in toddlers?

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The aim of this study is to investigate the influence of repeated exposure to sweet and sweet-sour apple juices on sweet taste preferences of 2.5-3 years old children.

Ethical review	Approved WMO
Status	Completed
Health condition type	Other condition
Study type	Interventional

Summary

ID

NL-OMON48416

Source
ToetsingOnline

Brief title
Sweet taste project

Condition

- Other condition

Synonym
eating behavior, preference for sweet taste

Health condition

eetgedrag

Research involving
Human

Sponsors and support

Primary sponsor: Division of Human Nutrition and Health
Source(s) of monetary or material Support: European Comittee;H2020-ITN-MARIE SKLODOWSKA-CURIE ACTIONS

Intervention

Keyword: Development of sweet preferences, Repeated exposure, Sweet taste, Toddlers

Outcome measures

Primary outcome

Preferences for different intensities of sweetness in apple juices and for a

sweetened and unsweetened yoghurt will be assessed at baseline (week 1), after

the intervention (week 6) and after two month follow-up.

Secondary outcome

-Amount of apple juice consumed during the intervention

-Children and parent*s characteristics: Parents will be asked to complete a

brief questionnaire on their child*s characteristics such as age, body weight

and body height. They will also answer a couple of questions about themselves

such as age, gender and level of education.

Study description

Background summary

Only a small and heterogeneous body of research has currently studied the impact of varying exposure to sweet taste on subsequent generalized sweet taste preferences. Previous findings reveal that the taste of the diet can alter preferences for foods. Higher exposure to sweet products during infancy could increase sweet liking in the short and long term and result in a subsequent increased intake of sugar-rich foods, since preference is the most important

predictor of children*s intake. However, the opposite can also occur. Exposure to a sweet diet can lead to a decreased appetite for sweet foods. Therefore, more research is needed to address the impact of dietary exposure to sweet tasting food products on the subsequent generalized acceptance, preference or intake of these foods in the diet. It is important to carry out this intervention with children since food preferences start being developed from early infancy.

Study objective

The aim of this study is to investigate the influence of repeated exposure to sweet and sweet-sour apple juices on sweet taste preferences of 2.5-3 years old children.

Study design

Cluster randomized trial.The study will be conducted at daycares.

Classes in the day-care will be randomly assigned to one of the three possible groups. Children will receive 150 ml of a sweet (Sweet-Group) or sweet-sour (Sour-Group) apple juice (Dikap) per day at the day-care during 4 weeks. The third group will drink water. Considering that many toddler*s go 2-3 times per week to the day care, it is deemed that each participant will drink between 8-12 times the target drink during the intervention. Children will not be forced to drink everything. The leftovers will be measured by the researcher to calculate individual intake. Drinks in both groups (Sweet and Sour) will content the same energy and will only differ in the citric acid concentration. The consumption of the apple juice during the intervention will not disturb participants routine or daily schedule, since they will be offered at the day-care at the regular snack time. Before, after the intervention, and after 2 month-follow up, preference for a series of apple juices varying in sweetness will be determined. After this procedure a sweetened and an unsweetened yohurt will be tasted, taking approximately 15 minutes each session. Preference testing will be masked in game form.

Intervention

Children will receive 150 ml of a sweet (Sweet-Group) or sweet-sour (Sour-Group) apple juice (Dikap) per day at the day-care during 4 weeks. The third group will drink water. Considering that many toddler*s go 2-3 times per week to the day care, it is deemed that each participant will drink between 8-12 times the target drink during the intervention. Children will not be forced to drink everything.

Study burden and risks

The risk associated with participation in this study is negligible. The burden for the participant can be considered as low. Children have to drink approximately 8-12 times a sweet or sour apple juice within a period of 4 weeks (2-3 times per week). Preferences for different sweetness intensities in apple juices and for a sweetened and unsweetened yoghurt will be carried out 3 times in a game form. Each session will last no longer than 15 minutes.

Contacts

Public
Selecteer

Stippeneng 4
Wageningen 6708 WE
NL
Scientific
Selecteer

Stippeneng 4
Wageningen 6708 WE
NL

Trial sites

Listed location countries

Netherlands

Eligibility criteria

Age
Children (2-11 years)

Inclusion criteria

- Healthy children.
- 2.5-3 years old.
- No allergy/intolerance to products used in the study.
- Children should have permission from their parents to participate (informed

consent signed).

Exclusion criteria

-Medical problems that influence the ability to eat e.g. swallowing or digestion problems.
-Turning 4 years old before the end of the study, which means the children will leave the day-care facility

Study design

Design

Study type:	Interventional
Intervention model:	Parallel
Allocation:	Randomized controlled trial
Masking:	Single blinded (masking used)
Control:	Active
Primary purpose:	Other

Recruitment

NL

Recruitment status:	Completed
Start date (anticipated):	05-03-2020
Enrollment:	69
Type:	Actual

Ethics review

Approved WMO

Date:	31-01-2020
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

ID: 22016
Source: Nationaal Trial Register
Title:

In other registers

Register	ID
CCMO	NL71541.081.19
Other	NL8183
OMON	NL-OMON22016

Study results

Date completed: 13-03-2020

Summary results
Trial ended prematurely