Effect of sodium reduction during lunch on consumer acceptance and on sodium intake

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

Summary

ID

NL-OMON36033

Source
ToetsingOnline

Brief title
Sodium reduction during lunch

Condition

- Other condition

Synonym
sodium reduction in food

Health condition

geen; doel is onderzoek naar natrium reductie in voeding

Research involving
Human

Sponsors and support

Primary sponsor: Stichting DLO
Source(s) of monetary or material Support: Ministerie van EL&I

Intervention

Keyword: 24-hr urinary sodium, behaviour, food choice, sodium reduction

Outcome measures

Primary outcome

Number of times a food item is chosen, the consumption intake (in g and in Kcal

) and sodium intake (in mg), and 24-hr urinary total sodium measurement on

three different days.

Secondary outcome

Questionnaire perception of offered products (taste, liking) (week 2, 5, 7)

Questionnaireaim of the study (end week 5)

Questionnaire lunch food choice and lunch habits (end week 7)

Study description

Background summary

In the Dutch population, current estimations show an individual consumption of nine to ten grams of salt (sodium chloride) per day, whereas the Dutch health council recommends to lower sodium consumption to a maximum of six grams of salt per day. Sodium intake is for 75-80% determined by processed food. Reducing the sodium content in processed foods might be an effective strategy to reduce sodium intake on population basis.
However, reduced sodium contents are associated with an impaired palatability. Consumers might respond to sodium reduced foods by rejecting the foods or increase their use of table salt or intake of salted foods later during the day.
Little is known about a reduced salt level in relation to food choice behaviour. Hence, there is a need to determine the consumer*s acceptance and consumption of sodium reduced foods, with and without being informed on the

reduced salt content, in relation to daily dietary sodium intake.

This study examines the effect of salt reduction of lunch products, with and without information, on food choice behaviour and salt intake.

Study objective

The main objective is to gain insight in the impact of sodium reduced flavor compensated (reformulated) foods on the consumer*s acceptance and consumption, so industrial producers will be better motivated to reduce sodium in processed foods, which helps the consumer to make the healthy choice the easy choice.

Primary objectives are to study:
1.The effects of offering a variety of lunch foods with a reduction of 30-60% in sodium on food consumption, caloric and sodium intake and liking during lunch.
2.Whether expected reduced sodium intakes during lunch extents towards a reduced daily sodium intake measured via excreted sodium in 24-hr urines.

Secondary objectives are to study:
1.The effects of providing information about sodium reductions during lunch on food consumption, caloric and sodium intake and liking.
2.The effects of providing information about sodium reductions on daily sodium excretion.
3.The effects of offering a variety of 30-60% sodium reduced lunch foods on use of table salt and other seasonings used during lunch.

Study design

The study consists of a parallel within-subjects study design, in which the participants are blinded for the treatment for 7 weeks.
Participants in the control and intervention group can choose freely food products to consume for lunch from the allocated lunch buffet and don*t have to pay for their lunch.
After a control period of 2 weeks with regular foods for both groups, foods in the buffet of the intervention group are exchanged for sodium reduced flavor compensated foods, during 3 weeks. No information on sodium reduction is provided.
In the last 2 weeks of the study, both groups are offered sodium reduced foods but now with information on the sodium reduction.

In week 2, 5 and 7 participants of both the control and the intervention group will have to collect 24-hr urine, for a urinary total sodium measurement.

Intervention

After the run-in period, sodium reduced lunch products are offered to the intervention group and to the control group regular products are offered during 3 weeks. Then all participants are offered sodium reduced lunch products for 2 more weeks, with information about the salt reduction.

Study burden and risks

Participants will participate in thirty-two free lunches in the Restaurant of the Future that each last about 30 minutes. There are no risk associated with this set up. The burden is minimal, people have to consume come for lunch 32 times and have to fill in 3 questionnaires (and 1 inclusion questionnaire)

For collection of 24-hr urine (3 separate days) para-aminobenzoic acid (PABA) is given (tablets) to verify if all samples have been provided. Low doses of PABA, as given in methodological studies, have rarely caused any side effects and are therefore regarded as safe.

The study provides knowledge on reduction of sodium contents in diets, which can contribute to healthier food choices, with reduced sodium intake. This an contribute to a reduction of the occurrence of cardiovascular diseases. In our opinion, in the light of the minimal burden and the large challenge on sodium reduction in diets, the expected benefits justify this set up.

Contacts

Public
Stichting DLO

Bornse Weilanden 9
6708 WG Wageningen
NL
Scientific
Stichting DLO

Bornse Weilanden 9
6708 WG Wageningen
NL

Trial sites

Listed location countries

Netherlands

Eligibility criteria

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

Inclusion criteria

• age 18-35 years
• BMI between 18.5 and 25
• apparently healthy based on their own judgment
• consume at least four times a week lunch with bread and savory fillings (e.g. cold cuts, cheese)
• indicate that they are willing to collect 24-hr urine for three separate days.

Exclusion criteria

- food or sulfonamide allergy, vegetarian or specific diet
- subject is not healthy.
- BMI < 18.5 or >25
-consume lunch with bread and savory fillings less than 4 times a week.
-have participated in the breakfast study on salt reduction
-Not signing informed consent
-Student or employee of Division of Human Nutrition (Wageningen UR).

Study design

Design

Study type:	Interventional
Intervention model:	Parallel
Allocation:	Randomized controlled trial
Masking:	Single blinded (masking used)

Primary purpose: Other

Recruitment

NL

Recruitment status:	Recruitment stopped
Start date (anticipated):	16-05-2011
Enrollment:	80
Type:	Actual

Ethics review

Approved WMO

Date:	29-04-2011
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	NL35927.081.11