

Dietary fiber and satiation

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To determine the effect of different types of isolated dietary fiber on ad libitum food intake in healthy human subjects.

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

Summary

ID

NL-OMON33482

Source

ToetsingOnline

Brief title

Dietary fiber and satiation

Condition

- Other condition

Synonym

meal termination, satiation

Health condition

verzadiging

Research involving

Human

Sponsors and support

Primary sponsor: Wageningen Universiteit

Source(s) of monetary or material Support: Ministerie van OC&W

Intervention

Keyword: Dietary fibers, Eating rate, Meal termination, Satiation

Outcome measures

Primary outcome

The difference in the ad libitum intake of the different test products.

Secondary outcome

To study the eating rate of the testing products.

To study a difference in palatability of the testing products.

To study a difference in satiety parameters between the testing products.

To study a difference in cognitive awareness after eating the testing products.

Study description

Background summary

It has been suggested that dietary fibers can affect food intake and satiation. Satiation, or meal termination, can be induced by sensory properties and energy density of fiber-rich food products, but also by the chemical/physical/rheological behavior of the fibers in the stomach and/or intestine. It is not clear which properties are the key regulators of satiation by fiber sources. There are many types of dietary fiber, which have diverse sensory and chemical properties, thus these might have different effects on satiation.

Study objective

To determine the effect of different types of isolated dietary fiber on ad libitum food intake in healthy human subjects.

Study design

Six test foods with different types and amounts of dietary fiber will be offered ad libitum in a randomized crossover trial. To mimic a real life setting, the foods will be offered in randomized order to each subject during

six separate test days in a cinema-setting.

Intervention

Per test session, subjects will receive a surplus of the test food, which they consume until pleasantly satisfied. Before ad libitum consumption, subjects* individual satiety state will be standardized by means of a preload. The test foods are cookies and will be baked by a local bakery. The cookies will have equal ingredient composition, except for the added fibers, and the cookies will be equal in palatability.

Study burden and risks

The intervention is non-therapeutic to the participant. The risk associated with participation is negligible and the burden can be considered as low. Subjects have to come to the research centre once for a screening visit during which several questionnaires are filled out and anthropometrics are measured. Next, subjects have to come to the cinema 6 times, during which they have to fill out several questionnaires and have to consume a test food until pleasantly satisfied. All ingredients of the cookies, including the isolated fibers are suitable for human consumption.

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: 18-50 year

BMI: 18-25 kg/m²

Healthy: as judged by the participant

Exclusion criteria

Weight loss or weight gain of more than 5 kg during the last 2 months

Using an energy restricted diet during the last 2 months

Lack of appetite for any (unknown) reason

Having problems with chewing and swallowing

Having problems with digestion (irritable bowel syndrome)

Restrained eater

Hypersensitivity for gluten or other ingredients of chocolate cookies

Hypersensitivity for one of the fibers

Study design

Design

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

Recruitment

NL

Recruitment status: Recruitment stopped

Start date (anticipated):	28-05-2009
Enrollment:	120
Type:	Actual

Ethics review

Approved WMO	
Date:	27-05-2009
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	NL26703.081.09