

## **Short-term Effects of the Flavour of Drinks on Ingestive Behaviours in Man.**

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### **ABSTRACT**

To examine the influence of the oro-sensory properties of different beverages on spontaneous intake of drinks, and the consequence of the volume of fluid ingested on subsequent food intake, 24 subjects (12 men, 12 women), slightly dehydrated, had access *ad libitum*, during four different experimental sessions in a cross-over design, to one of four commercial beverages differed in flavour and caloric content: mineral water; the same mineral water flavoured with orange and unsweetened; the same mineral water flavoured with orange and sweetened with 100g/l sucrose; or equally sweetened with 50mg/l aspartame. *Ad libitum*: lunch was served 15 min after the subjects had access to the beverages and dinner was served when they spontaneously requested it, about 6h after the end of lunch. The nature of the beverage exerted a small but significant effect on the cumulative fluid intake of the subjects. They consumed slightly more of the two sweetened beverages than the mineral water, and slightly less of the orange-flavoured beverage. However, energy intake and macronutrient selection during lunch and dinner on the experimental days and on the following day did not differ significantly between the different conditions. This resulted in a significantly higher total energy intake when the imposed beverage contained sucrose. Moreover, in such experimental conditions, with only one type of beverage to drink, the flavour of this beverage had little influence on the amount of fluid consumed, and the volume consumed did not influence subsequent food intake. As a consequence, the energy provided by the sucrose-sweetened beverage was not taken in account in the overall energy balance by the subjects, at least in the short term.

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