

INFLUENCES OF THE SOCIAL ENVIRONMENT ON NUTRITIONAL INTAKES

Gerda Feunekes, Cees de Graaf, Annette Stafleu¹, Wija van Staveren

Department of Human Nutrition, Wageningen Agricultural University,
P.O. Box 8129, 6700 EV Wageningen, The Netherlands

¹ Current affiliation: TNO Nutrition, Zeist, The Netherlands

Background

In the Netherlands coronary heart disease is the most important cause of death. The intake of fat is almost 40% of energy intake, and declining very slowly. In the past years we have conducted research that focused on the role of the direct social environment on the fat intake of an individual. Influences of the social environment on eating behaviour are supposed to be important in determining food choice. However, knowledge is lacking on which kind of influences play a role, and their impact on nutritional intake. Our research projects have been focused mainly on resemblances in habitual intakes and determinants of intake within social networks, including family members and friends. We assumed that influences from the social environment would result in resemblance in intake. Influences from the social environment were also studied during meal occasions: does the sheer presence of others influence food intake?

Family influences

Stafleu et al. started this line of research by studying nutrition knowledge, beliefs, attitudes, and behaviour of three generations of women, who lived separately (n = 97 families). Resemblance in knowledge, attitudes and behaviour was found for mothers and their adult daughters. No resemblance in behaviour or determinants of behaviour was found between the grandmothers and their daughters, and between grandmothers and granddaughters (1,2).

Feunekes et al. studied resemblance in nuclear families in a group of about 1000 families who participated in the Dutch National Food Consumption Survey. Intake of foods eaten at home was highly associated, whereas the intake of foods eaten outside of the home was only weakly associated. A correlation of about 0.6 was found between parents and between siblings. Parent-child associations in intake were lower, around 0.4 (3).

Peer influences

Resemblance in fat intake within a social network was assessed around a group of 347 adolescent boys and girls. Fat intake, and perceived fat intake and determinants of intake were assessed for the adolescents, their best friends, and their parents. A significant resemblance was found within the nuclear family, as expected. Between friends, no resemblance in intake was found, but attitudes towards fat intake were weakly related. Qualitative work suggested that the influence of friends or classmates in general might be more important than the best friend (3,4).

Social facilitation of food intake

The sheer presence of others has been shown to influence food intake in various US studies: on eating occasions where more others were present, more was eaten. Feunekes et al. studied this phenomenon in the Netherlands and found indeed a small effect of the presence of others in enhancing meal size (kJ) ($r = 0.24$ ($n = 50$)) in a group of Dutch students. This effect was largely mediated by meal duration, which indicated that the presence of others may have increased the time spent eating and/or drinking, and consequently intake (5).

REFERENCES

1. Stafleu A, van Staveren WA, de Graaf C, Burema J, Hautvast JGAJ. Family resemblance in intake of energy, fats and cholesterol; a study among three generations women. *Prev Med* 1994; **23**:474-480.
2. Stafleu A, van Staveren WA, de Graaf C, Burema J, Hautvast JGAJ. Nutrition knowledge and attitudes towards high-fat foods and their low-fat alternatives in three generations of women. *Eur J Clin Nutr* 1995 (in press)
3. Feunekes GIJ, Stafleu A, de Graaf C, van Staveren WA. Family resemblance in fat intake in the Netherlands. *(submitted)*
4. Feunekes GIJ, de Graaf C, Meyboom S, van Staveren WA. Food choice and fat intake of adolescents and adults: associations of intakes within social networks. *(in preparation)*
5. Feunekes GIJ, de Graaf C, van Staveren WA. Social facilitation of food intake is mediated by meal duration. *Physiol Behav* 1995; **58**:551-558.