

## Nutrition Discussion Forum

### *Grain v. cereal: an impediment to public understanding of food and a study in language*

Recent findings, particularly from epidemiologic studies, suggest that eating the cereal bran and germ as well as endosperm may help reduce chronic disease (Slavin *et al.* 1997; Jacobs *et al.* 1999, 2001; Liu *et al.* 1999). Evidence was regarded by the United States Food and Drug Administration (1999) to allow a health claim and by the United States Department of Agriculture to warrant a new dietary guideline for Americans: 'Eat a variety of grains daily, especially whole grains'. The recommendation is for at least three servings of wholegrain foods per day (United States Department of Agriculture and United States Department of Health and Human Services, 2000).

Differing nomenclature regarding cereal (called grain in the USA) presents a somewhat perplexing picture to scientists; this must be all the more confusing for lay consumers (Table 1). Different forms of English and differing customs and translations in other European languages lead to confusion. I have touted 'wholegrain foods' to colleagues. Some have disagreed. One Australian colleague said that I might be correct theoretically, but most consumers will never be convinced to eat whole grains (kernels in American English). A Norwegian colleague asked me how 100% wholegrain bread would stick together, again thinking I was referring to bread made from 100% whole kernels. Americans tend to use the word 'cereal' as a synonym for 'breakfast cereal', and not to use it otherwise, whereas in British English, breakfast cereal is breakfast cereal, and cereal is a class of grasses. Norwegian has a very clear word, helpful in cereal research, lacking in English: 'sammalt', meaning, literally, milled as a whole. The closest English comes is wholemeal flour (wholegrain flour in American English), but these terms do not refer to the milling process itself. The Norwegians report the amount of sammalt cereal in their National Food Disappearance tables. In English, I have noted a tendency to group all cereal forms in which the bran and germ have been removed as 'refined'. Interestingly, Norwegians talk about refined flour with reference to the milling process:

'siktet' (sifted) cereal or 'polerte' (polished) rice. The latter term is also used in both British and American English.

Whether consumption of whole cereal grains (wholegrain kernels in American) is better or worse for health than consumption of pulverized forms such as meal or flour is unknown (Jenkins *et al.* 1988). As most cereal, apart from rice, is eaten in pulverized form, mostly flour, the epidemiologic evidence refers largely to consumption of flour.

Linguistic behaviour is difficult to change, as is any behaviour. It is unlikely that American and British speakers will soon adopt the same usages. Thus, awareness of the different usages will be helpful to communication, both between scientists and in promulgating food-related messages to the general public.

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**Table 1.** Nomenclature of cereals

British English	American English
Grain	Kernel
Cereal	Grain
Wholegrain cereal	Whole kernel grain
Wholemeal flour	Wholegrain flour
Whole cereal food	Wholegrain food
Maize	Corn
Refined cereal	Refined grain

United States Department of Agriculture and United States Department of Health and Human Services (2000) *Nutrition and Your Health: Dietary Guidelines for Americans, 2000, Home and Garden Bulletin* no. 232, 5th ed. Washington, DC: US Government Printing Office.

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