The contribution of food groups to the total fat and fat type in various diets

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A major point of interest in the study of modern diets is the quantity and type of fat consumed and the predominate food sources of this fat. In determining fat intake from various food groupings, considerable variation in results are revealed and are dependent on the manner in which the food groups are defined. For some time the term "meat" in food group terminology has often included many products and dishes rich in fat (from both meat and non-meat sources). This situation has obscured the fact that meat in its lean cut form can be low in fat (1) and may only be a minor contributor to fat intake in the Australian diet.

In the most recent National Nutrition Survey (NNS) the highest total fat contributor to the diet of adults was the meat group at 23.7% (2). A CSIRO study conducted in 1999 reanalysed data from the NNS and found "red meat cuts" contributed only 6% of total dietary fat (3). There were 19 food groups used in the NNS, which is a quite detailed categorisation, but all types of meat were placed in the same category. This meant that fast food such as KFC chicken nuggets and a lean beefsteak were in the same group. The CSIRO study further categorised meat into cuts and dishes.

The aim of this cross sectional diet study was to determine the main food groups contributing to total dietary fat and fat types in the diets of males subjects with differing meat intakes. One hundred and forty three male subjects, aged 20-55 years, completed a semi-quantitative Food Frequency Questionnaire. The subjects were divided into four habitual diet groups, vegan (n=15); ovolacto-vegetarian (n=48); moderate meat-eater (n=62, <300g meat/day); and high meat-eater (n=18, >300g meat/day). Their deitary data was analysed according to the NNS food groups, CSIRO food groups and a third criteria, which separated lean meat cuts from fast foods and meat products. Preliminary results for the mean daily total fat intake by selected food groupings for the high meat-eating group are shown in the table below.

	Fat intake[1]	NNS meat group[2]	CSIRO grouping A	CSIRO grouping B	RMIT grouping A	RMIT grouping C	RMIT grouping D	Fast foods
g/day	196.6	50.5 21.8[3]	16.0 12.1	30.6 15.3	16.0 12.1	12.9 7.7	9.9 9.0	29.4 16.5
% of fat		25.7	8.1	15.6	8.1	6.6	5.1	15.0

[1] Mean daily intake per person [2] Meat, poultry and game products and dishes [3] Mean standard deviation
A. Red meat cuts B. Red meat products and dishes C. Meat dishes D. Meat products

Using the meat grouping from the NNS the high meat eating group were obtaining 25.7% of the daily fat intake from "meat". However only 8.1% was actually derived from meat cuts with another 11.7% coming from meat dishes and products. Fast foods contributed 15.0% of fat in the diet and included pizzas, pues, chips, dim-sims and other deep fried foods.

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2. National Nutrition Survey Australia 1995: Foods Eaten. Australian Bureau of Statistics, Commonwealth Department of Health and Aged Care, 1999.
3. Record S, Baghurst K. Red meat in the Australian diet. Meat and Livestock Australia, 2000.