

Mixed human diets made up of raw and boiled foods only contained 4.5 ug oxysterols per g dry homogenate (epoxide, 0.7 ug/g). If the same foods were fried or baked before homogenization the level of oxysterols was 3.5 u/g, showing that frying of cholesterol-containing foods does not necessarily cause formation of large amounts of oxygenated sterols.

11. Longitudinal Study of the Rise of Serum Cholesterol With Age in Young Adults

ID 2-10

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In western populations, the level of serum cholesterol increases with age, whereas in developing countries this phenomenon is not found. The reasons for this rise are unknown: increases in obesity, changes in diet and in LDL-receptor activity could be involved. In order to determine which factors are responsible we are investigating several hundreds of student volunteers, who participated in dietary trials between 1974 and 1979. At that time their serum cholesterol, habitual food intake and body mass index were measured. We are now measuring their present cholesterol levels, food habits and body mass index. Multivariate analysis is used to determine to what extent changes in dietary fat, cholesterol intake and body mass index can explain changes in serum cholesterol.

In a following phase we will try to differentiate between acute effects of the present diet on serum cholesterol and chronic long term changes in cholesterol metabolism by prescribing to the subjects a diet similar to what they had 6-10 years age.

Later studies will deal with the question whether there is a relation between chronic long term increases in serum cholesterol with age and acute responsiveness to a hypercholesterolaemic diet.