

## 20.5: Diet and Health

### Learning Objectives

- Mediterranean Diet and Health



### Research conducted by

De Longerill et al

### Case study prepared by

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### Overview

Most doctors would probably agree that a Mediterranean diet, rich in vegetables, fruits, and grains, is healthier than a high-saturated fat diet. Indeed, previous research has found that the diet can lower risk of heart disease. However, there is still considerable uncertainty about whether the Mediterranean diet is superior to a low-fat diet recommended by the American Heart Association. This study is the first to compare these two diets.

The subjects, 605 survivors of a heart attack, were randomly assigned follow either

1. a diet close to the "prudent diet step 1" of the American Heart Association (control group) or
2. a Mediterranean-type diet consisting of more bread and cereals, more fresh fruit and vegetables, more grains, more fish, fewer delicatessen foods, less meat.

An experimental canola-oil-based margarine was used instead of butter or cream. The oils recommended for salad and food preparation were canola and olive oils exclusively. Moderate red wine consumption was allowed.

Over a four-year period, patients in the experimental condition were initially seen by the dietician, two months later, and then once a year. Compliance with the dietary intervention was checked by a dietary survey and analysis of plasma fatty acids. Patients in the control group were expected to follow the dietary advice given by their physician.

The researchers collected information on number of deaths from cardiovascular causes e.g., heart attack, strokes, as well as number of nonfatal heart-related episodes. The occurrence of malignant and nonmalignant tumors was also carefully monitored.

### Questions to Answer

Is the Mediterranean diet superior to a low-fat diet recommended by the American Heart Association?

### Design Issues

The strength of the design is that subjects were randomly assigned to conditions. A possible weakness is that compliance rates depended on reports rather than observation since observation is impractical in this type of research.

### Descriptions of Variables

Table 20.5.1 : Description of Variables

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Variable	Description
Type of diet	AHA or Mediterranean
Various outcome measures of health and disease	does the patient have cancer, etc.?

### Data Files

Diet.xls

### Links

More on the Mediterranean Diet

### References

- De Longerill, M., Salen, P., Martin, J., Monjaud, I., Boucher, P., Mamelle, N. (1998). Mediterranean Dietary pattern in a Randomized Trial. Archives of Internal Medicine, 158, 1181-1187.

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