

In 1951, Keys was working at Oxford when the Food and Agriculture Organization asked him to chair their first conference on nutrition in Rome. He states, "The conferees talked only about nutritional deficiencies". When he asked about the new epidemic of coronary heart disease, Gino Bergami, Professor of Physiology at the University of Naples, said "coronary heart disease was no problem in Naples".

In 1952, Keys and his wife Margaret visited Naples. Margaret measured serum cholesterol concentrations and found them to be very low except among members of the Rotary Club. Heart attacks were rare except amongst the rich whose diet included daily servings of meat. He obtained similar results in studies in Madrid.

Ancel Keys and colleagues posed the hypothesis that differences among populations in the frequency of heart attacks and stroke would occur as a result of physical characteristics and lifestyle and diet. Surveys were carried out between 1958 - 1970 in populations of men aged 40-59, in sixteen areas of seven countries. Follow-up surveys were continued until the 1990s. Most of the areas were stable and rural and had wide contrasts in habitual diet.

Women were excluded because cardiac disease was less common and because of the invasiveness of physical examinations. The *Seven Countries Study* was the first to explore associations among diet, risk, and disease in contrasting populations. Central chemical analysis of foods consumed among randomly selected families in each area, plus diet-recall measures in all the men, allowed an effective test of the dietary hypothesis. The study was unique for its time, in standardization of measurements of diet, risk factors, and disease; training its survey teams; and central, blindfold coding and analysis of data. [1]

The study areas were:

- US railway employees in the mid-west and northwest of the US.
- Two contrasting regions in east and south-west Finland - a inland rural village in North Karelia near the border with Russia and a rural village in the south-west of the country.
- Zutphen in the Netherlands
- Crevalcore in northern Italy, Montegiorgio which is more "Mediterranean" and a railway employee group from Rome.
- two areas in Croatia in the former Republic of Yugoslavia. Dalmatia which consisted of a

number of villages along the Adriatic Sea and Slavonia which consisted of villages centred on Dalj. Dalj is on the Danube River on the border with Serbia in the east of Croatia.

- three areas in Serbia, also in the former Republic of Yugoslavia - faculty members of the University of Belgrade, Zrenjanin, an agricultural-industrial cooperative north of Belgrade and Velika Krsna, a rural village south of Belgrade.
- two areas in Greece - consisting of villages along the northern coast of Crete and a northern area of Corfu.
- two contrasting areas on the island of Kyushu in southern Japan - Tanushimaru, a farming community and Ushibuka, a fishing village.

As a result of this study, Keys and his wife Margaret wrote three books extolling the virtues of the Mediterranean Diet: *Eat Well and Stay Well* (1959), *The Benevolent Bean* (1967); and *How to eat well and stay well the Mediterranean Way* (1975). [2] [3] [4]

It was Keys who devised the term the *Mediterranean Diet*. Keys specifically stated that “our version” of the *Mediterranean Diet* was based on the diets of Greece, southern Italy and the Mediterranean regions of Spain and France in the 1960s.

This is how he described the diet.

Homemade minestrone; pasta in endless variety always freshly cooked, served with tomato sauce and a sprinkle of cheese, only occasionally enriched with some bits of meat, or served with a little local sea food without any cheese; a hearty dish of beans and short lengths of macaroni (pasta e fagioli); lots of bread never more than a few hours from the oven and never served with any kind of spread; great quantities of fresh vegetables; a modest portion of meat or fish perhaps twice a week; wine [...]; always fresh fruits for desert. [5]

The heart of what we now consider the Mediterranean diet is mainly vegetarian [or lactovegetarian]: pasta in many forms, leaves sprinkled with olive oil, all kinds of vegetables in season, and often cheese, all finished off with fruit, and frequently washed down with wine. I say “leaves.” Near our second home in southern Italy, all kinds of leaves are an important part of the everyday diet. There are many kinds of lettuce, spinach, Swiss chard, purslane, and plants I

cannot identify with an English name such as lettuce, barbabietole, scarola, and rape. [6]

The people of these areas also lived very strenuous lives, living in mountainous regions that involved much walking. The sense of community was also very strong.

Footnotes

1. University of Minnesota (2012) *Keys, Ancel « Heart Attack Prevention* [online]. Available from: <http://www.epi.umn.edu/cvdepi/bio-sketch/keys-ancel/> (Accessed 26 September 2017).
2. Keys, A. & Keys, M. (1959) *Eat Well and Stay Well*. Doubleday, Garden City, NY
3. Keys, A. & Keys, M. (1967) *The Benevolent Bean*. New York: Doubleday, Garden City, NY.
4. Keys, A. & Keys, M. (1975) *How to eat well and stay well the Mediterranean way*. Doubleday, Garden City, NY.
5. Keys, Ancel, and Margaret Keys. 1975. *How to Eat Well and Stay Well the Mediterranean Way*. Doubleday, Garden City, NY. p4
6. Keys, Ancel. 1995. "Mediterranean Diet and Public Health : Personal Reflections." *American Journal of Clinical Nutrition* 61 (6):1321S-1323S.