

Men in Crete live six years longer than men in Zutphen

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Men in the Dutch city of Zutphen in the Netherlands live six years shorter than their peers on the Greek island of Crete. This has been shown by the Seven Countries Study, which involved middle-aged men from Crete and Zutphen. The study began in 1960 and followed the men for 50 years. The difference in lifespan can be attributed to the differences in diet and lifestyle between the two groups. The results were

presented on 5 December by Prof. Daan Kromhout of Wageningen University at a United Nations symposium in New York on the traditional Cretan diet and healthy ageing.

This study showed that the average age of death on Crete was 82 years and in Zutphen 76 years. The longer survival of the men on Crete was also associated with a longer [telomere length](#). Telomeres are protein structures that protect chromosomes (carriers of the genetic material in a cell) against degradation. The telomere length of the men from Crete and Zutphen was determined in 2000, when they had an average age of 84 years.

Dietary pattern

The [traditional diet](#) of Crete in 1960 consisted mainly of plant-based foods and was rich in olive oil, dark fibre breads, fruit, vegetables and legumes. Regarding animal-based foods, the diet had a moderate intake of fish and only small amounts of meat and [dairy products](#). Expressed in terms of nutrients, the diet on Crete in 1960 contained almost no trans-[fatty acids](#), a moderate amount of saturated fatty acids, a high intake of antioxidants and a low level of oxidative stress (which can damage the walls of blood vessels). The [dietary pattern](#) of this generation of Cretan men has remained largely unchanged during the past 50 years. The traditional diet of Crete, in combination with moderate wine consumption and a high level of physical activity, is associated with a low risk of death from [myocardial infarction](#) and high life expectancy.

Zutphen then and now

Smoking habits did not differ appreciably between Crete and Zutphen in the period between 1960 and 2000. In contrast to the traditional diet of Crete, the dietary pattern in Zutphen in 1960 was characterised by a low

consumption of fruit, vegetables and legumes, and a high intake of meat, dairy products and margarines made with saturated fat. In terms of nutrients, the intake of trans-fatty acids and saturated fatty acids was high and the intake of antioxidants such as beta-carotene, lycopene and Vitamin E was low. Forty years later, i.e. in 2000, the nutrition of Zutphen men was characterised by a very low intake of trans-fatty acids, and the intake of saturated fatty acids was substantially lower than in 1960. There was also an increase in the intake of fruit and vegetables as well as in the consumption of meat. The consumption of dairy products remained unchanged. Wine consumption rose sharply between 1960 and 2000. Overall, the diet of the Zutphen men became more similar to that of the Cretan men.

Seven Countries Study

In 1960, 686 men from Crete and 878 men from Zutphen aged 40-59 years were examined for the first time in the context of the Seven Countries Study. The aim of this study was to identify risk factors for coronary heart disease and to determine the role played by diet and lifestyle in the occurrence of myocardial infarction. After 1985, when the men were 65 to 84 years old, the focus of the research shifted to the importance of diet and lifestyle for healthy aging. In 2010, 32 of the men on Crete (4.7%) were still alive, compared to 16 of the men in Zutphen (1.8%). The other countries participating in the Seven Countries Study are the United States, Japan, Finland, Italy and the former Yugoslavia.

Provided by Wageningen University

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