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MEDITERRANEAN DIET: WHAT DOES IT MEAN EXACTLY?

The term 'Mediterranean Diet' is a popular shorthand for a selection of foods claimed to reduce the risk of cardiovascular disease and several other health conditions. But does the term relate to geography? Or history? Or science?

The geographer would observe that there are 23 countries that border the Mediterranean Sea. In practice, the Mediterranean Diet refers to food patterns observed in only two and a half of these: Greece, Spain and Southern Italy.

The focus on the diets of 10% of Mediterranean countries, must be credited to Ancel Keys, who first measured blood lipids and dietary data from different countries and then developed his equation predicting the association between intakes of fats and blood levels of LDL. He was the first to champion (in the United States), the health benefits of diets low in saturates and can claim ownership of scientific interest in the English-speaking world of the health benefits of olive oil. Of course, the Greeks and Italians and Spaniards have never needed scientific data to confirm their love of this food.

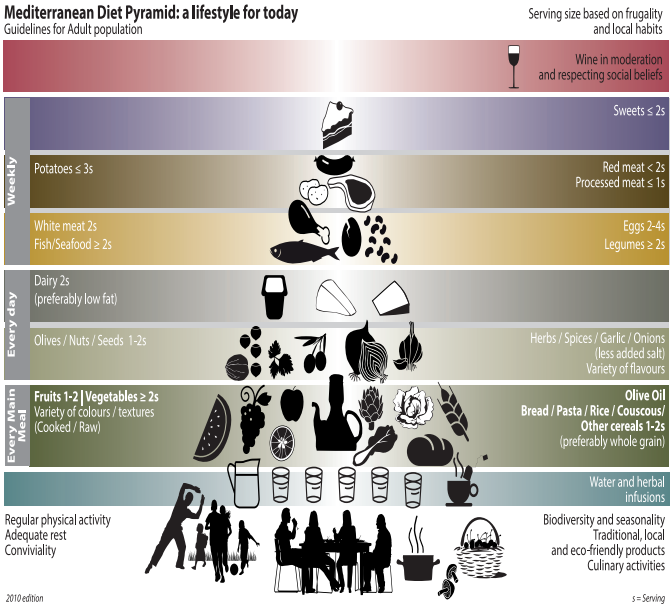
There are many descriptions of traditional Greek/Italian/Spanish diets in culinary literature, but the Blue Zones project, developed by American journalist Dan Buettner, provides excellent current dietary descriptions from the very elderly, in five areas of the world with the longest healthy-life expectancy (see Table 1). Two of the five zones are Ikaria in Greece and the Province of Ogliastra in Sardinia. The others are in Japan, Costa Rica and California. The diets observed in Ikaria are high in fat, from olive oil and full-fat dairy, and contain lots of starch from daily potatoes and white bread. Intakes of green vegetables and legumes are high; intakes of meat are occasional and in small amounts, and fish intakes are low. The diets observed in Sardinia are lower in fat than those in Ikaria, but also high in starchy foods, such as potato, white bread and pasta. Proteins are mainly from beans, chickpeas and nuts, with occasional small intakes of meat. Fish and poultry are rarely consumed. Fresh and dried fruits are small daily additions, as is red wine.

These diets are high in vegetables and legumes and olive oil is consumed daily. However, these diets are near-vegetarian, and very high in starchy foods in the form of potatoes and white bread and pasta. Dairy foods are daily items from goat/sheep sources rather

Table 1: Foods consumed by the very elderly in Greece and Sardinia

Greece
Daily: green veg (wild greens, herbs, cabbage, lettuce,), veg (onions, peppers, tomatoes, courgette, aubergine), potatoes, sourdough bread, pasta, legumes (black-eyed beans, chickpeas), fruit (lemons, apricots/peaches), feta cheese, goat milk, olive oil, herbal teas, coffee, red wine, honey Other: meat 1x week (goat or sheep), fish 1-2x month (fresh or dried)
Sardinia
Daily: veg (onions, tomatoes, courgette, aubergine, fennel), potatoes, pasta, fruit (cherries, pears, melon), sourdough or flat bread, legumes (fava beans, chickpeas), goat and sheep milk and cheese, olive oil, barley, coffee, red wine Other: meat 1x week (sheep, pigs), fish, poultry <1x month, almonds

Figure 1: The Med Diet Pyramid (from www.medfoodcultures.org/)[4]



than bovine and always full-fat. Fresh fruits are consumed daily in season and very small amounts of further sweets are consumed as honey and occasional pastries.

The largest investigation of the health benefits of the Mediterranean Diet is the PREDIMED study (primary prevention of cardiovascular disease with Mediterranean diets),[3] and parentage of the PREDIMED study is directly attributed to the impressive outcomes of the Lyon Diet Heart Study.[1] This randomised 600 French adults after a first myocardial infarction, into either a prudent healthy diet or a Med Diet. The latter were advised to consume more bread, fish and fruit and reduce intakes of red meat. Further, they were supplied with rapeseed oil-based margarine. Dietary assessment showed that in the Med Diet group, intakes of saturated fats were slightly lower and that intakes of oleic acid were slightly higher. Most significantly, the complete replacement of butter with margarine resulted in a three-fold increase in dietary alpha-linolenic acid intakes. The Med Diet group showed impressive protective effects from adverse cardiac outcomes, but there was considerable subsequent debate as to mechanisms, as outcome measures of serum LDL or blood pressure did not vary between the two groups.

The offspring PREDIMED study[2] randomised 7,000 Spanish adults who were assessed as being at high risk of cardiovascular disease. The control group was given dietary advice on a healthy lower fat diet, while two other groups were given dietary additions of either one litre of olive oil per week per family, or about 200g of nuts (walnuts/almonds/hazelnuts) per week per person. The results after five years showed a 30% reduction in cardiovascular events and in stroke, compared to the control diet subjects. Confusions occur because 99% of the control group (being Spanish) also stated that olive oil was their main culinary oil, and nearly 60% stated that they consumed more than four tablespoons per day (although this was lower than the 93% in the olive oil group). Bottom line: diets high in some fats, maybe especially olive oil and/or nuts, seem more cardioprotective than advice to reduce total intakes of fats.

So, why do Mediterranean Diet guides promote low fat dairy items or wholegrain breads/cereals (see Figure 1). Also not Mediterranean Diet-ish are, for example, quinoa, avocados, bananas, dark chocolate, soya foods, or other foods that can be promoted as healthy. The science meaning and the cultural meaning must hang together or the currency of the term will devalue and misleading marketing claims gain a toehold.

References
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