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Review Article

The Mediterranean Diet: A History of Health

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Abstract

The Mediterranean tradition offers a cousine rich in colors, aromas and memories, which support the taste and the spirit of those who live in harmony with nature. Everyone is talking about the Mediterranean diet, but few are those who do it properly, thus generating a lot of confusion in the reader. And so for some it coincides with the pizza, others identified it with the noodles with meat sauce, in a mixture of pseudo historical traditions and folklore that do not help to solve the question that is at the basis of any diet: combine and balance the food so as to satisfy the qualitative and quantitative needs of an individual and in a sense, preserves his health through the use of substances that help the body to perform normal vital functions. The purpose of our work is to demonstrate that the combination of taste and health is a goal that can be absolutely carried out by everybody, despite those who believe that only a generous caloric intake can guarantee the goodness of a dish and the satisfaction of the consumers. That should not be an absolute novelty, since the sound traditions of the Mediterranean cuisine we have used for some time in a wide variety of tasty gastronomic choices, from inviting colors and strong scents and absolutely in line with health.

Keywords: Mediterranean diet, Food pyramid, Obesity, Cardiovascular disease

Introduction

Models of nutrition in the Mediterranean: history, territories, traditions and curiosities

The Mediterranean diet has its origins in a portion of land considered unique in its kind, the Mediterranean basin, which historians call "the cradle of society", because within its geographical borders the whole history of the ancient world took place.

At its banks stretched the valley of the Nile, the site of an ancient and advanced civilization, and the two great basins of the Tigris and Euphrates, which were the environment of the civilization of the Sumerians, Assyrians, Babylonians and Persians. In the Mediterranean region arose the power of the Cretans, then emerged the Phoenicians and the learned Greeks up to the emerging power of Rome, which allowed the territory to become the "good land" between the East and the West. From that time, the Mediterranean became the meeting place of people who, with their contacts, have from time to time modified cultures, customs, languages, religions and ways of thinking about transforming and changing lifestyle with the progress of history. The clash of these two cultures produced their partial integration so even the eating habits merged in part (1).

The origins of the "Mediterranean Diet" are lost in time because they sink into the eating habits of the Middle Ages, in which the ancient Roman tradition - on the model of the Greek - identified in bread, wine and oil products a symbol of rural culture and agricultural (and symbols elected of the new faith), supplemented by sheep cheese, vegetables (leeks, mallow, lettuce, chicory, mushrooms), little meat and a strong preference for fish and seafood (of which ancient Rome was very gluttonous) (2). The rich classes loved the fresh fish (who ate mostly fried in olive oil or grilled) and seafood, especially oysters, eating raw or fried. Slaves of Rome, however, was destined poor food consists of bread and half a pound of olives and olive oil a month, with some salted fish, rarely a little meat. The Roman tradition soon clashed with the style of food imported from the culture of the Germanic peoples, mainly nomads, living in close harmony with the forest, derived from the same, with hunting, farming and gathering, most of the food resources. Raised pigs of fat, widely used in the kitchen, and grew vegetables in small gardens close to the camps. The few grains grown were not used to make bread, but beer. The clash of these two cultures produced their partial integration so even the eating habits merged in part. However, the Roman culture showed itself unwilling to change the style of "Mediterranean" of feeding with that barbaric. The key elements of the Mediterranean diet, which is the triad oil bread and wine, were exported instead in regions of continental Europe by the monastic orders, which migrated in those regions to evangelize those peoples. Bread, oil and wine, were in fact the central elements of the Christian liturgy, but they were later adopted also in the feeding of the common people of Europe (3). The new food culture born from the union and the fusion between dietary patterns of two different civilizations, the Christian Roman Empire and the Germanic, crossed with the passage of time with a third tradition or that of the Arab world, which had developed its own unique food culture on the southern shores of the Mediterranean (4).

Just Muslims gave a boost to a renewal of agriculture that influenced the food model with the introduction of plant species known or used only by the wealthier social classes, because of the high prices, such as sugar cane, rice, citrus, eggplant, spinach and spices, as well as found use in the cuisine of southern Europe, rose water, oranges, lemons, almonds and pomegranates (5).

Islamic culture, therefore, participates in the change and transformation of the cultural unity of the Mediterranean, which Rome had built, and provides a decisive contribution to the new culinary model that was forming. A significant number of foods, passed by Muslims on Latin, drag their preparation techniques and recipes.

Another event of great historical impact was, as it is well known, the discovery of America by Europeans. This discovery is also reflected in a "purchase" on the part of the culinary tradition of new foodstuffs such as potatoes, tomatoes, corn, peppers and chili, as well as different varieties of beans. The tomato, "exotic curiosity", ornamental fruit only belatedly considered edible, was the first red vegetable that enriched our basket of plants and later became a symbol of the Mediterranean cuisine (6).

If the centrality of vegetables is one of the most original characters of the Mediterranean tradition, it is important to remember the role of cereals as the basis of simple cooking and as a weapon of daily survival, because of their "ability to fill" reducing hunger pangs of poor classes . The type of cereals consumed, as well as the modes of transformation, assumes different facets depending on the geographical connotations and traditions that characterize the populations of the countries bordering on the Mediterranean. Bread, polenta, couscous, soups, paella and pasta are different ways to consume cereals (7).

This historical path just described allows identifying many similarities between the Mediterranean diet and current diet of our ancestors to demonstrate the presence of a true path that from the feeding of the Egyptians to the discovery of America led to the introduction of new foods, giving us the Mediterranean diet as we know today.

The Mediterranean Diet is a nutritional model so universally appreciated that belongs to the cultural, historical, social, territorial and environmental and

is closely related to the lifestyle of the Mediterranean peoples throughout their history. The Candidature Dossier submitted to UNESCO defines the Mediterranean Diet as follows:"... deriving from the Greek word "diaita"- lifestyle, way of life - it is a social practice based on all the "savoir-faire", knowledge, traditions ranging from the landscape to the table and covering the Mediterranean Basin, cultures, harvesting, fishing, conservation, processing, preparation, cooking and in particular the way we consume, i.e., conviviality" (8).

The Mediterranean diet, known primarily as a food model, enhances the quality and safety of foods and their link to the land of origin. It offers a simple cuisine, but rich in imagination and tastes, taking full advantage of all aspects of a healthy diet. It is an ethical choice that preserves the traditions and customs of the peoples of the Mediterranean Basin (9). Feeding can profoundly affect the health of individuals; this is because a good nutritional status helps to maintain a good level of health and prevention of metabolic diseases such as obesity, diabetes, hypertension, etc. The Mediterranean Diet is also a "resource for sustainable development is very important for all the countries bordering on the Mediterranean, to the economic and culture effect the food covers throughout the region and the ability to inspire a sense of continuity and identity for local people" (10).

Mediterranean diet: eating behaviors and lifestyles

The discovery of the health benefits of the Mediterranean Diet is attributed to the American scientist Ancel Keys of the University of Minnesota School of Power, which pointed out the correlation between cardiovascular disease and diet for the first time (11). Ancel Keys, in the fifties, was struck by a phenomenon, which could not, at first, provide a full explanation. The poor population of small towns of southern Italy was, against all predictions, much healthier than the wealthy citizens of New York, either of their own relatives who emigrated in earlier decades in the United States. Keys suggested that this depended on food, and tried to validate his original insight, focusing his attention on foods that made up the diet of these populations. Thus, he led the famous "Seven Countries Study" (conducted in Finland, Holland, Italy, United States, Greece, Japan and Yugoslavia), in order to document the relationship between lifestyles, nutrition and cardiovascular disease between different populations, including through cross-sectional studies, being able to prove scientifically the nutritional value of the Mediterranean diet and its contribution to the health of the populations that adopted it (12).

From this study emerged clearly, as the populations that had adopted a diet based on the Mediterranean Diet presented a very low rate of cholesterol in the blood and, consequently, a minimum percentage of coronary heart disease. This was mainly due to the plentiful use of olive oil, bread, pasta, vegetables, herbs, garlic, red onions, and other foods of vegetable origin compared to a rather moderate use of meat (13).

The American nutritionist described the Mediterranean diet in this way: "... homemade minestrone, pasta of all varieties, with tomato sauce and a sprinkling of Parmesan, only occasionally enriched with a few pieces of meat or served with a small fish of the place . beans and macaroni ..., so much bread, never removed from the oven more than a few hours before being eaten, and nothing with which spread it, lots of fresh vegetables sprinkled with olive oil, a small portion of meat or fish maybe a couple of times a week and always fresh fruit for dessert"(14).

Starting from Keys' studies, many other scientific researchers have analyzed the association between dietary habits and chronic diseases. It is now possible to say that there is a convergence of assessments agreed in the direction of full recognition of the beneficial qualities of the Mediterranean way of eating (15). Many studies and clinical trials have shown that the Mediterranean diet reduces the risk of cardiovascular disease and metabolic syndrome. In particular has been put into evidence a remarkable decrease of abdominal circumference, an increase in high density lipoprotein (HDL), a decrease in triglycerides, a lowering of blood pressure and a decrease in the concentration of glucose in the blood (16,17).

However, we must point out that the Mediterranean diet is not able to produce, by itself, the benefits listed above if you do not change at the same time other risk factors (obviously those modifiable). In fact, ischemic heart disease depends not only on errors in the composition of the diet, to which attaches a dominant role, but also by other factors, such as a reduced or absent physical activity, caloric intake in excess of the energy needs of the organism, the presence of metabolic diseases such as diabetes and obesity, stress, cigarette smoking, high levels of homocysteine in the blood, high levels of triglycerides. Therefore, it is not surprising that about half of all cases of stroke occur in individuals with a normal level of cholesterol in the blood. To prevent a heart attack is therefore imperative to take not only a balanced diet (as is indeed the Mediterranean diet), but also a healthy lifestyle (as Ancel Keys had already pointed out).

In 2007, a study conducted by the National Institutes of Health showed that moderate physical activity is associated with a decrease in mortality from cardiovascular disease (18).

In fact, physical activity helps to reduce some risk factors for cardiovascular disease such as hypertension, insulin resistance, hypertriglyceridemia, low HDL and the presence of obesity (19). Moreover, exercise coupled to proper nutrition is able to decrease the blood levels of LDL. Other benefits include the onset of atherosclerosis, because exercise improves myocardial function, increases the vasodilator capacity, muscle tone, and reduces inflammatory stress (20).

You may wonder why you have spent so many words, for thirty years or so, to enhance a diet that does not need any introduction. The reason is that the trend away from the traditional diet in favor of food patterns typical of the affluent society has been ongoing for many years (21). The Mediterranean Diet is therefore characterized by the balanced use of foods rich in fiber, antioxidants and unsaturated fats, a healthy approach designed to reduce the consumption of animal fats and cholesterol in a diet with an appropriate balance between energy intake and expenditure. The relationships between the macronutrient energy answer to those recognized as adequate, ie 55-60% of carbohydrates of which 80% complex carbohydrates (bread, pasta, rice), 10-15% of proteins about 60% of animal origin (especially white meat, fish), 25-30% fat (mostly olive oil) (22). The guidelines developed by nutritionists to improve the eating habits of consumers can be represented by an effective image, the "Food Pyramid" (Fig. 1) designed for the first time in 1992 by the U.S. Department of Agriculture, which simply represents a fair and balanced way of eating, displaying the proportions and the frequencies with which foods should be consumed, style that coincides with the Mediterranean Model identified by the physiologist Ancel Keys.

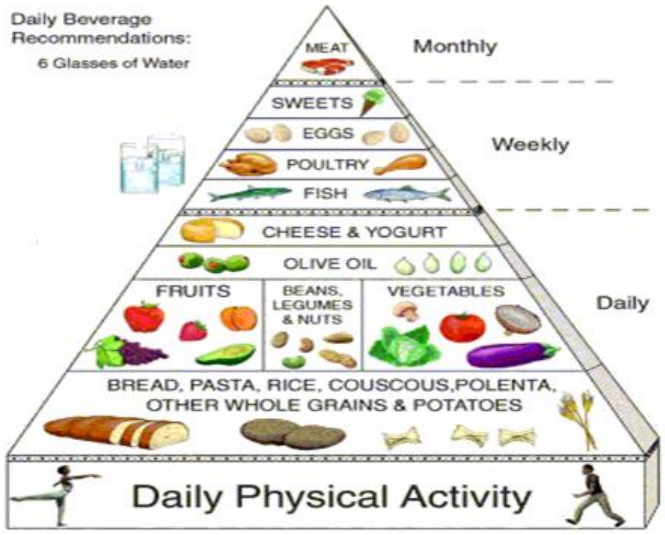

Fig. 1: Food Pyramid in the Mediterranean Diet
Modified From Oldways Preservation & Exchange Trust (2000)

The main concepts of the Food Pyramid are the "proportionality", that is the right amount of foods to choose from for each group, the "portion" standard quantity of food in grams, which is assumed as the unit of measurement to be a balanced feeding, the "variety", i.e., the importance of changing the choices within a food group, and "moderation" in the consumption of certain foods, such as fat or sweets. As you can see, at the base of the pyramid are grains, followed by fruits and

vegetables, legumes, olive oil, low-fat cheese and yogurt, which should be eaten daily. Meat is not excluded, but is given the preference to that of chicken, rabbit and turkey than beef. Along with fish and eggs should be eaten a few times a week, for the supply of high quality protein. Beef or red meat should be eaten a few times a month.

Each group includes foods, which are substantially "equivalent" on the nutritional plan, in the sense that they provide nearly the same type of nutrients. It is obvious that, within the same group, foods despite being homogeneous with each other can have small differences in terms of quality and quantity of patrimony in nutrients. However, this does not affect the concept of "interchangeability" of foods. The latter in fact, if they belong to the same group, being nutritionally equivalent, may be substitutes for each other, without, however, affecting the adequacy of the diet, provided you comply with the variety. In nature does not exist a "complete" food, i.e. it contains all the nutrients the body needs, and that is why it is necessary to vary as much as possible food choices and properly combine foods from the different groups. A very varied Diet not only avoids the risk of nutritional imbalances and possible consequent metabolic imbalances, but it also satisfies the taste of fighting the monotony of flavors. Each group expected is represented by at least a portion of the foods that constitute it, to vary the choices within the same group (23). Table 1 shows the Wellness Quantity (WQ) and their weights (the raw and net waste).The concept of amount is used to point our attention on:• Portion of food, as quantity in grams, which is compatible with the well-being of our body, so there are no good foods or bad, but their effect depends on the amount consumed daily, the choice of an appropriate number of portions of food should cover all the food groups in the pyramid daily to be sure to take all the nutrients; physical activity, not to fall into a sedentary lifestyle, the WQ of reference is a 15 minute walk at a brisk pace, we recommend at least 2 WQ/day which is 30 minutes walk also divisible during the day. The QB of food and movement, if properly adapted to the needs of the individual, allow orienting the lifestyles towards a balance between food intake and energy expenditure. In this way, you can avoid the overweight and fighting obesity that predisposes the organism to an increased risk of metabolic diseases (diabetes, hypertension, etc), cardiovascular diseases and even cancer.

Cereals and tubers

The first group, the cereals and tubers, includes bread, pasta, rice, corn, oats, barley, spelled and potatoes. This group must be present in every day feeding (preferably with whole foods because more fiber-rich) and in several portions, because these foods are the most important source of starch, easily usable energy from our body. This does not mean that cereals should be eaten in exorbitant quantity, but to be consumed in proportion to their needs. It is sufficient to say, by way of example, 120g of uncooked pasta provides 427 calories, 80g is equivalent to 285 calories to and 55g to 196 calories. Moreover, some of these foods contain vitamins of the B group and a fair amount of protein (as in they lack some essential amino acids in sufficient quantities, among which, particularly lysine) that, associated with legumes, constitute a meal with a high protein intake and high biological value, comparable to meat. This combination occurs frequently in our diet since the cereals and their derivatives are the basic ingredients for the preparation of many dishes. The best known examples are the first dishes from cereals and vegetables: these dishes, due to the capability of proteins of the cereals to be "complementary" to the proteins found in legumes, and providing mutually the amino acids of which are singularly lacking (respectively lysine for cereals and methionine for legumes), realize an improvement of the quality of both proteins, which on the whole becomes similar to that of meat proteins (24).

Fruit and vegetables

The group of fruits and vegetables also includes fresh legumes like green beans. They must be strictly seasonal and as fresh as possible: only in this way, they can develop better their quality and are tastier because ripened to the heat of the sun.

Table 1: Portions of main aliments and recommended daily frequency of assumption

Aliment	WQ	Portion	Examples	Tips
Fruit	3WQ/day	150g	Big products (apple, oranges, etc) 1 big fruit. Little fruits (prunes, tangerines, etc) 2-3 pieces.	Vary in the choice of the colors: red, white, green, orange, each of which has specific properties.
Vegetables	2WQ/day	250g greens 50g salad	A middle- big vegetable	
Bread	2-3WQ/day	50g	A little sandwich or a medium slice	Limit the intake of flavored bread (milk, oil, nuts, olives etc) and fresh egg pasta and ravioli. Remember to reduce the amount for soups.
Pasta/Rice	1WQ/day	80g rice and dried pasta 120g egg pasta	A coffee cup and a half	
Biscuits	1 WQ/day	20g	2-4 bicuits	
Potatoes	2 WQ/day	200g	2 medium potatoes	
Meat	5WQ/week	100g	1 slice or 2 meatballs	Prefer lean meats, fish and pulse (whose quality improve if consummated with bread)
Fish	2WQ/week	150g	A medium slice	
Eggs	2WQ/week	60g	An egg	
Cold cuts	3WQ/week	50g	3 slices of ham or 6-7 slices of salami	
Pulse	2WQ/week	30g dried 50g fresh		
Milk and yogurt	14WQ/week	125ml	A glass of milk or a jar of yogurt	Prefer low-fat milk and not too fat products, the skinny and fruit yogurt . Prefer vegetable fats.
Cheese	4WQ/week	50g ripe 100g fresh	A medium portion	
Butter	5WQ/week	50g	5 tablespoons	
Oil	2-3WQ/day	10g	One tablespoon	
Sugar and honey	3WQ/day	5g	A teaspoon	It is recommended to replace the sugar with honey that has a double sweetness

Vegetables and fruits ripened in greenhouse, however, require a greater supply of pesticides and not taking advantage of the heat of the sun, they are less rich in vitamins and nutrients. Fruits and vegetables are an invaluable important source of fiber, Vitamin A (found mainly in tomatoes, peppers, carrots, cantaloupe, apricots, etc), Vitamin C (primarily in tomatoes, strawberries, citrus fruits, kiwi, etc), other vitamins and many minerals, like potassium. In addition, fruits and vegetables contain these minor components (antioxidants and others), which play an important protective action for the body and water that can reach even 95% of the weight (watermelon). Moreover, contain any relevant quantities of dietary fiber (cellulose, hemicellulose and pectin), which despite having a intrinsic nutritional value, has a role in facilitating the intestinal transit and in moderating the levels of blood cholesterol and glucose More consistent is, instead, the contribution in sugar (sucrose and fructose) made from fruit. It is essential that foods in this group are present every day and plenty in nutrition. The role of fruit and vegetables in the diet is also linked to its physiological regulator of water balance for their considerable supply of water. Moreover, the

content of potassium salts is able to counteract the acids arising from a feeding today too often rich in animal proteins. Finally, we should not forget the role of these foods in the prevention of obesity, thanks to their high content of fiber and water and low in calories that provide (12 calories for zucchini, 16 calories for eggplant, 14Kcal for cucumbers, 12 Kcal for fennel and so on) compared to the volume ingested and the high satiating power (24).

Milk and dairy products

The dairy group includes milk, yogurt, cheese and dairy products. This food group provides calcium in a highly bioavailable form, that is easily assimilated by the body. Moreover, these foods contain high biological quality proteins and some vitamins (B2 and A). Within the group are preferred low-fat milk, dairy products and low-fat cheese. The calcium in milk (either be partially or completely skimmed) and its derivatives is the most significant nutrient, with the peculiarity to be better absorbed and used by the body. The milk contains more than 1g of calcium per liter, while cheese, according to the technology of preparation, contains several more percent, so that in the hard cheeses and seasoned the quantity of calcium can be 10 times higher than that present in milk to equal weight. In addition to calcium, these foods provide significant amounts of proteins of high biological value; among these casein is the most represented (the part that coagulates when the milk sours and which forms the basis for the preparation of cheese) and lactalbumin which together constitute 3.5%. The consumption of milk is therefore the most immediate way to make the nutrients characteristic of the group, but an equally valid alternative is represented by yogurt and cheeses, where they exist cases of lactose intolerance, due to the lack or absence of an intestinal enzyme called "lactase", responsible for the breakdown of lactose in the two compounds galactose and glucose (24).

Meat, fish and eggs

The meat is considered a food irreplaceable by virtue of its high protein content (from 15th to 25%) and of high biological value, able to make all the amino acids necessary for protein synthesis (essential amino acids) in optimal amounts. It also provides B-complex vitamins and trace elements, particularly iron, zinc and copper. However, beware not all foods in this group are the same: between the meats is better to prefer those lean both bovine and pork, and white meat and fish and better moderate the consumption of fatter meat and more sausages. For eggs in healthy subjects is allowed a consumption of egg 2-3 times per week. Foods in this group must be present in our diet a few times a week, with the exception of red meat, which should be eaten a few times a month. Any food of animal origin belonging to this group, whether fresh, chilled and frozen, provides protein of high biological value, trace elements and vitamins of the B complex, including in particular thiamine (vitamin B1), niacin (vitamin PP) and vitamin B12, the latter is brought almost entirely of foods of animal origin. Some foods of this group also provide non-negligible quantities of other minerals, such as iodine (in fish) and fat-soluble vitamins (vitamin A and D, contained primarily in the liver).

The amount of protein contained in the food group is equal to 18-20% of the total weight, with higher values for preserved meats (salami), where it may reach up to 37% due to the loss of water consequent to drying.

Dressing fats

The dressing fats group includes vegetable fats, such as olive oil (preferred) and those of animal origin: butter, cream, bacon-fat and lard. Dressing fats enhance the flavors and provide essential fatty acids for the absorption of fat-soluble vitamins, for the formation of the cell membrane and of some structural elements of the cell. However, their use, especially in the case of animal fats, must be limited for two reasons: they provide many calories and, used in excess, represent a risk factor for the onset of obesity, cardiovascular diseases and tumors (24).There is a clear correlation between the consumption of saturated fatty acids and the onset of Coronary Heart Disease (25) and is therefore not recommended to replace saturated

fats with polyunsaturated. Olive oil is a key element in the Mediterranean diet as it helps to prevent cardiovascular disease. The phenols found in olive oil are indeed powerful antioxidants with anti-inflammatory and anti-thrombotic, and some monounsaturated fatty acids found in olive oil are protective for cardiovascular disease (26). For these reasons, the olive oil is commonly referred to as "sweeper of arteries".

Conclusions

In conclusion, it could be said that the Mediterranean diet is not only an immense wealth of foods and recipes, but also an important point of contact between people and territory: the peoples of the Mediterranean have always seen in their land their lives, and are born from the soil most of the products of the diet. The laborious collection of products in the lands of the Mediterranean need to ensure, if consumed in an appropriate manner, all that our body needs to function. Today feeding has become an important aspect in the life of every individual. The art of eating well has become a model for the public to follow, but are also increasing non-autochthonous lifestyles, which are in some target population a fertile ground to increase the number of adepts of these new ways. In the medical field the diet has become one of the most important aspects to be monitored at all stages of the life of the subject: the prevention of many diseases to diet therapy that finds more and more acceptance among physicians and patients. The success of the Mediterranean diet is its composition: a varied diet characterized by a high consumption of vegetables, fruits, grains, legumes, fish, eggs, along with a moderate intake of meat, oil and wine. A diet rich in tradition and in association with one active lifestyle is the model that everyone should follow.

Ethical considerations

Ethical issues (Including plagiarism, Informed Consent, misconduct, data fabrication and/or falsification, double publication and/or submission, redundancy, etc) have been completely observed by the authors.

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The authors declare that there is no conflict of interest.

References

1. Braudel F (1987). *Il Mediterraneo. Lo spazio, la storia, gli uomini e le tradizioni.* Bompiani.
2. Montanari M (2002). *Il mondo in cucina: storia, identità, scambi.* Laterza, Bari.
3. Montanari M, Convivio (1990). *Storia e cultura dei piaceri della tavola dall'antichità al medioevo.* Laterza, Bari.
4. Boni (1930). *La cucina romana: contributo allo studio e alla documentazione del folklore romano.* Edìz. della Rivista Preziosa, Bologna.
5. Tannahil R (1987). *Storia del cibo.* Rizzoli, Milano.
6. Montanari M (1993). *La fame e l'abbondanza. Storia dell'alimentazione europea.* Laterza, Roma-Bari.
7. Trichopoulou A (2001). Mediterranean diet: the past and the present. *Nutr Metab Cardiovasc Dis,* 11 (4 Suppl): 1-4.
8. La Diète Méditerranéenne (2010). Candidature transnationale en vue de l'inscription sur la Liste Représentative du Patrimoine Culturel Immatériel de l'Humanité. Espagne / Grèce / Italie/Maroc, Version Informations Additionnelles.
9. Buono da mangiare (2002). Bioetica e alimentazione, Istituto Italiano di Bioetica, Genova.
10. Senato della Repubblica Italiana (2008). Seduta n. 21.
11. Keys AB, Keys M (1975). *How to Eat Well and Stay Well, the Mediterranean Way.* New York: Doubleday.
12. Keys AB (1980). *Seven countries: a multivariateanalysis of death and coronary heart disease*". Cambridge, Mass Harvard University Press.
13. Menotti A, Keys A, Blackburn H, Kromhout D, Karvonen M, Nissinen A et al. (1996). Comparison of multivariate predictive power of major risk factors for coronary heart diseases in different countries: results from eight nations of the seven countries study, 25-year follow-up. *J Cardiov. Risk,* 3; 69-75.

14. Keys AB, Keys M (1975). *How to Eat Well and Stay Well the Mediterranean Way*. ISBN-13: 978-0385009065.
15. World Cancer Research Fund (1997). *Food, nutrition and the prevention of cancer: a global perspective*. American Institute for Cancer Prevention. Washington DC.
16. Estruch R, Martínez-González MA, Corella D, et al. (2006). Effects of a Mediterranean-style diet on cardiovascular risk factors: a randomized trial. *Ann Intern Med,* 145 (1): 1-11.
17. Fitó M, Guxens M, Corella D, Sáez G, Estruch R, de la Torre R et al.; PREDIMED Study Investigators (2007). Effect of a traditional Mediterranean diet on lipoprotein oxidation: a randomized controlled trial. *Arch Intern Med,* 167(11):: 1195-1203.
18. Leitzmann MF, Park Y, Blair A, Ballard-Barbash R, Mouw T, Hollenbeck AR, Schatzkin A (2007). Physical activity recommendations and decreased risk of mortality. *Arch Intern Med,* 167(22): 2453-2460.
19. Jennings G, Nelson L, Nestel P, Esler M, Korner P, Burton D, Bazelmans J (1986). The effects of changes in physical activity on major cardiovascular risk factors, hemodynamics, sympathetic function, and glucose utilization in man: a controlled study of four levels of activity. *Circulation,* 73(1): 30-40.
20. Lakka TA, Lakka HM, Rankinen T, Leon AS, Rao DC, Skinner JS, Wilmore JH, Bouchard C (2005). Effect of exercise training on plasma levels of C-reactive protein in healthy adults: the HERITAGE Family Study. *Eur. Heart J,* 26(19): 2018-2025.
21. Curtis BM, O'Keefe JH (2002). Understanding the Mediterranean diet. Could this be the new "gold standard" for heart disease prevention? *Postgrad Med*, 112(2): 35-38.
22. Arienti G, Fidanza F (1998). *Ruoli e richieste di energia e nutrienti energetici. Alimentazione e Nutrizione Umana*. Guido Gnocchi Editore.
23. Mariani Costantini A, Cannella C, Tommassi G (2006). *Alimenti e nutrizione umana*. Il Pensiero Scientifico Edizione, Roma.
24. Linee guida per una Sana Alimentazione Italiana (2003). Istituto Nazionale di Ricerca per gli Alimenti e la Nutrizione (INRAN).
25. German JB, Dillard CJ (2004). Saturated fats: what dietary intake? *Am J Clin Nutr,* 80(3): 550-559.
26. Visioli F, Galli C (2002). Biological properties of olive oil phytochemicals. *Crit Rev Food Sci Nutr,* 42(3):209-221.