

LONDON CONFERENCE

SCIENTIFIC EXCHANGE 2000 CONSENSUS STATEMENT: DIETARY FAT, THE MEDITERRANEAN DIET AND LIFELONG GOOD HEALTH Royal College of Physicians, London, 13-14 January 2000

SUMMARY STATEMENTS

There is increasing scientific evidence that there are positive health effects from diets which are high in fruits, vegetables, legumes, and whole grains, and which include fish, nuts and low-fat dairy products. Such diets need not be restricted in total fat as long as there is not an excess of calories, and should emphasise predominantly vegetable oils that are low in saturated fats and partially-hydrogenated oils. The traditional Mediterranean Diet, whose principal source of fat is olive oil, encompasses these dietary characteristics.

Statement of the Issues

The Scientific Exchange carried out its reviews and considerations of the scientific evidence on the relationships between diet and health from two perspectives:

- A. It focused on the current scientific evidence, and acknowledged that this evidence was altering perceptions of the role of lipids in healthy diets; and
- B. It focused on the healthy eating and lifestyle patterns of the traditional Mediterranean diet, and how adapting and modifying these patterns to create a Mediterranean-style diet would confer positive health benefits to populations in northern countries.

Background. The Traditional Healthy Mediterranean Diet

The term "Mediterranean diet" has a specific meaning. It reflects food patterns typical of some Mediterranean regions in the early 1960's, such as Crete, parts of the rest of Greece, and southern Italy. The selection of this specific time and these geographical areas is based on three lines of evidence:

1. Adult life expectancy for populations in these areas was amongst the highest in the world, and rates of coronary heart disease, certain cancers, and some other diet-related chronic diseases were amongst the lowest in the world in the early 1960's, despite limitations of existing medical services.
2. Data on food availability and dietary intake in the Mediterranean region describe dietary patterns with many common characteristics.
3. Dietary patterns sharing many of these common characteristics have been associated with low rates of chronic diseases and high adult life expectancy in numerous epidemiological studies conducted throughout the world.

Variations of the Mediterranean diet exist but have been less well described in other parts of Italy, and in parts of France, Lebanon, Morocco, Portugal, Spain, Syria, Tunisia, Turkey, and elsewhere in the Mediterranean region. As defined here, the diet is closely tied to traditional areas of olive cultivation in the Mediterranean region. Thus, the generic term "Mediterranean diet" particularly refers to dietary patterns found in olive-growing areas of the Mediterranean region = 30 years ago.

Mediterranean Diet: 1960s Characteristics

The Mediterranean diet of the early 1960's can be described by the following broad characteristics: an abundance of plant food (fruit, vegetables, breads, other forms of cereals, potatoes, beans, nuts, and seeds); minimally processed, seasonally fresh, and locally grown foods; fresh fruit as the typical daily dessert, with sweets containing concentrated sugars or honey consumed a few times per week; olive oil as the principal source of fat; dairy products (principally cheese and yogurt) consumed daily in low to moderate amounts; fish and poultry consumed in low to moderate amounts; zero to four eggs consumed weekly; red meat consumed in low amounts; and wine consumed in low to moderate amounts, normally with meals.

As much as can be determined, this diet was low in saturated fat (= 7-8% of energy), with total fat ranging from <25% to >35% of energy from one area to another. Data also indicate that work in the field or kitchen resulted in a lifestyle that included regular physical activity and was associated with far less obesity than was observed in the United States.

The Mediterranean diet is a centuries-old tradition that contributes to excellent health, provides a sense of pleasure and well-being, and forms a vital part of the world's collective cultural heritage.

For Mediterranean people, this way of eating describes a traditional diet that can be readily preserved and revitalised within a modern lifestyle.

For Americans, Northern and Eastern Europeans, and others who wish to improve their diets, the Mediterranean way of eating describes a dietary pattern that is attractive for its famous palatability as well as for its health benefits, and one that can be adopted in its entirety or adapted to a "Mediterranean-style diet".

1. Heart Disease

A. Dietary factors important in preventing atherosclerosis include:

1. Substantial reduction of saturated fat.
2. Substitution of saturated fats by unsaturated fats, preferably monounsaturated fats and oils.
3. Consumption of fish.
4. Increased consumption of vegetables, fruits and whole grains.

B. Possible mechanisms by which dietary factors decrease the risk of coronary heart disease include the following:

1. Improvement in the blood lipid profile (lowering LDL-cholesterol and triglycerides while increasing or maintaining HDL-cholesterol);
2. Decrease in oxidation of lipids;
3. Decrease in thrombogenesis (blood clotting) and in clot dissolution (fibrinolysis);
4. Improvement in endothelial function;
5. Improvement in insulin resistance;
6. Decrease in ventricular irritability (lowering the risk of sudden death)
7. Decrease in inflammation; and
8. Reduction in plasma homo- cysteine concentrations.

2. Diabetes

A. The principal message should be: "Control weight, increase physical activity, and reduce sedentary behaviour."

B. High carbohydrate diets that are based on minimally-processed cereal grains, vegetables, and fruits that are also high in fibre can be used to improve blood glucose and the lipid profile.

C. The same beneficial effects can be achieved with a diet that emphasises vegetable oils that are predominantly monounsaturated, along with the foods listed above.

3. Obesity

A. Obesity is primarily a disorder of energy balance.

B. Obesity increases the risk of many diseases including diabetes, heart disease, hypertension, dyslipidemias and certain cancers.

C. Obesity is a common and increasing public health problem in both developed and developing countries.

D. Although data are limited in population studies, no strong association has been

demonstrated between dietary fat and body fatness.

E. Obesity can be prevented and controlled by balancing energy intake and energy expenditure through a healthy diet and regular physical activity.

F. The Mediterranean diet, though not a low fat diet, may contribute to the prevention and treatment of obesity because of its variety and palatability, provided it is controlled in calories.

4. Cancer

There is substantial and consistent evidence that diets rich in vegetables, fruit, and whole grains reduce risk of cancer. Concerning fat and related foods, the following may be said:

A. Colon cancer:

1. Total fat is probably unrelated.
2. Saturated fat may increase risk.
3. Olive oil and marine oils may decrease risk.
4. Antioxidants and phytosterols may decrease risk.
5. There is disagreement on the strength of the association of red meat with increased risk.

B. Breast cancer:

1. Total fat intakes in the range of 20-40% of energy are not related.
2. Monounsaturated fats and olive oil may decrease risk.

C. Prostate cancer:

1. There is some evidence of an association between intake of saturated fat and risk of prostate cancer.

5. Alcohol

A. Wine is part of the traditional diet in much of the Mediterranean region, where it is the usual meal-time beverage. It is well established that the light-to-moderate intake of wine and other alcoholic beverages reduces the risk of coronary heart disease and ischemic stroke by 30% or more, and is usually associated with a reduction in all-cause mortality.

B. There is less consensus on whether wine has advantages over other types of alcoholic beverages in the prevention of cardiovascular disease, as wine drinkers often have other healthy lifestyle habits that may contribute to the added protection against heart disease. On the other hand, phenolics and other non-alcoholic substances in wine have been well demonstrated to be powerful antioxidants and have many potentially important health effects.

C. The beneficial health effects of alcohol are primarily on the risk of chronic diseases of middle-aged and elderly people. General recommendations to the public regarding the consumption of any type of alcohol consumption must always take into account the adverse health and societal effects of excessive or irresponsible alcohol consumption. Excessive intake of alcohol increases the risk of many cancers, especially upper aero-digestive tract cancers, and many studies indicate a slight increase in breast cancer risk even for small amounts of alcohol. Alcohol consumption is not recommended for individuals with a past history of alcohol abuse, with liver disease or certain other medical conditions, or for those who choose not to drink because of religious, ethical, or other reasons.

6. Antioxidants

A. The Mediterranean diet contains an important amount of antioxidants: Vitamins E, C, carotenoids and various polyphenol compounds. These antioxidants are present in vegetables, fruits, nuts, whole grains, legumes, virgin olive oil, and wine.

B. These substances, which are absorbed to some extent, could play an important role in the prevention of cardiovascular disease, cancer, and aging.

7. Gene/Environment Interaction

A. Common chronic and degenerative diseases such as coronary heart disease, diabetes, cancer, hypertension, and obesity have a significant genetic predisposition.

B. The higher genetic risk can be modulated by environmental factors, mainly dietary habits.

C. Further knowledge of these genetic factors and their interaction with environment, such as diet, has the potential to provide the tools for a more precise and personalised approach to prevent and treat chronic disease.

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