

Dietary Fat Consensus Statements

1998 CONSENSUS STATEMENT ON TOTAL DIETARY FAT AND THE OVERALL DIETARY PATTERN

There is increasing scientific evidence that there are positive health effects from diets that are high in fruits, vegetables, legumes, and whole grains, and that 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 the diet is low in saturated fats and partially hydrogenated oils. Diets that emphasize vegetable oils (predominantly monounsaturated), nuts, and fish are preferable to those high in animal products and partially hydrogenated oils. Many individuals will have to limit their intake of fat or carbohydrate to avoid excess calories.

2000 CONSENSUS STATEMENT ON DIETARY FAT, THE MEDITERRANEAN DIET, AND LIFELONG GOOD HEALTH

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

THE TRADITIONAL HEALTHY MEDITERRANEAN DIET

Background

The term “traditional Mediterranean diet” has a specific meaning. As defined here, it refers to dietary patterns found in olive-growing areas of the Mediterranean region—such as Crete, parts of the rest of Greece, and southern Italy—in the early 1960s. Variations of the Mediterranean diet exist in other parts of Italy, and in parts of France, Lebanon, Morocco, Portugal, Spain, Syria, Tunisia, Turkey, and elsewhere in the Mediterranean region, but they have been less well described. 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. It can be readily adopted in its entirety elsewhere in the world as part of a modern lifestyle or adapted as a “Mediterranean-style” diet.

The Mediterranean diet of the early 1960s is characterized by the following:

1. An abundance of plant food (fruit, vegetables, breads, other forms of cereals, potatoes, beans, nuts, and seeds);
2. Minimally processed, seasonally fresh, and locally grown foods;
3. Fresh fruit as the typical daily dessert, with sweets containing concentrated sugars or honey consumed a few times per week;
4. Olive oil as the principal source of fat;
5. Dairy products (principally cheese and yogurt) consumed daily in low to moderate amounts;
6. Fish and poultry consumed in low to moderate amounts;
7. 0 to 4 eggs consumed weekly;
8. Red meat consumed in low amounts; and
9. Wine consumed in low to moderate amounts, normally with meals.

As much as can be determined, this diet was low in saturated fat ($\leq 7\%$ to 8% of energy), with total fat ranging from $<25\%$ to $>35\%$ of energy from 1 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 exists in the United States and Northern Europe.

Rationale and Evidence

The selection of this specific time and these geographical areas is based on 3 lines of evidence:

1. Adult life expectancy for populations in these areas was among the highest in the world, and rates of coronary heart disease, certain cancers, and some other diet-related chronic diseases were among the lowest in the world in the early 1960s, despite limitations of existing medical services.

The 1998 Consensus Statement was developed during a 2-day Scientific Exchange entitled, “Dietary Fat: How Much? What Type? Reaching for Consensus.” This exchange preceded the 1998 International Conference on the Mediterranean Diet, which was organized by the Harvard School of Public Health and Oldways Preservation & Exchange Trust, and held in Cambridge, Massachusetts, USA.

The 2000 Consensus Statement was developed during a 3-day Scientific Exchange entitled, “Dietary Fat, the Mediterranean Diet, and Lifelong Good Health.” This exchange preceded the 2000 International Conference on the Mediterranean Diet, which was organized by the Harvard School of Public Health and Oldways Preservation & Exchange Trust, and held in London, England.

Additional information about the Consensus Statements is available from K. Dun Gifford, Oldways Preservation & Exchange Trust, 266 Beacon Street, Boston, Massachusetts 02116.

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.
2. High-carbohydrate diets that are based on minimally processed cereal grains, vegetables, and fruits, and that are also high in fiber, can be used to improve blood glucose and the lipid profile.
3. The same beneficial effects can be achieved with a diet that emphasizes vegetable oils that are predominantly unsaturated, along with the foods listed above.

STATEMENT OF THE ISSUES

The Scientific Exchange carried out its reviews and considerations of the scientific evidence on the relation between diet and health from 2 perspectives:

1. It focused on the current scientific evidence and acknowledged that this evidence was altering perceptions of the role of lipids in healthy diets.
2. 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.

Heart Disease

Dietary factors important in preventing atherosclerosis include:

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

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

1. Improvement in the blood lipid profile (lowering low-density lipoprotein cholesterol and triglycerides while increasing or maintaining high-density lipoprotein cholesterol);
2. Decreased oxidation of lipids;
3. Decrease of risk for atherothrombosis (blood clotting);
4. Improvement in endothelial function;
5. Improvement in insulin resistance;
6. Decrease in ventricular irritability (lowering the risk of sudden cardiac death);
7. Decrease in inflammation;
8. Reduction in plasma homocysteine concentrations.

Diabetes

1. The principal message should be: “Control weight, increase physical activity, and reduce sedentary behavior.”

Obesity

1. Obesity is primarily a disorder of energy balance.
2. Obesity increases the risk of many diseases including diabetes, heart disease, hypertension, dyslipidemias and certain cancers.
3. Obesity is a common and increasing public health problem in both developed and developing countries.
4. Although data are limited in population studies, no strong association has been demonstrated between dietary fat and body fatness.
5. Obesity can be prevented and controlled by balancing energy intake and energy expenditure through a healthy diet and regular physical activity.
6. The Mediterranean diet, although 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.

Cancer

There is substantial and consistent evidence that diets rich in vegetables and fruit reduce risk of cancer. The folic acid content may be a reason. Concerning fat and related foods, the following may be said:

Colon cancer:

1. Total fat is probably unrelated.
2. There is disagreement on the strength of the association of red meat with increased risk.

Breast cancer:

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

Prostate cancer:

1. There is some evidence of an association between intake of red meat and risk of prostate cancer.

Alcohol

1. Wine is part of the traditional diet in much of the Mediterranean region, where it is the usual mealtime 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 $\geq 30\%$ and is usually associated with a reduction in all-cause mortality.

- Clearly, alcohol itself is a major reason for the benefits of wine and other alcoholic beverages, which are increases in HDL and possibly an antithrombotic effect. There is less consensus on whether wine has advantages over other types of alcoholic beverages in the prevention of cardiovascular disease, because 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, although it is unclear whether the amounts of them in wine are sufficient to produce benefits.
- 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 respiratory and 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.

Antioxidants

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

Gene–Environment Interaction

- Genetic predisposition is a significant factor in common chronic and degenerative diseases, such as coronary heart disease, diabetes, cancer, hypertension, and obesity.
- The higher genetic risk can be modulated by environmental factors, mainly dietary habits.
- Further knowledge of these genetic factors and their interaction with environment, such as diet, has the poten-

tial to provide the tools for a more precise and personalized approach to prevent and treat chronic disease.

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