



HEALTHY PASTA MEALS

SCIENTIFIC CONSENSUS STATEMENT

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1. Scientific Consensus Statement
2. Context of Pasta Meals Conference
3. Role of Carbohydrates in Healthy Eating Patterns
4. Assessing Glycemic Impacts
5. Role of Pasta Meals in Healthy Eating Patterns
6. Notes
7. Signatories of the Scientific Consensus Statement

1. Scientific Consensus Statement

1. Scientific research increasingly supports the importance of total diet, rather than individual foods and nutrients.
2. Pasta is a key component of many of the world's traditional healthy eating patterns, such as the scientifically-proven Mediterranean Diet. Traditional dietary patterns confer greater health benefits than current Western dietary patterns.
3. Many clinical trials confirm that excess calories, and not carbohydrates, are responsible for obesity. Diets successful in promoting weight loss can emphasize a range of healthy carbohydrates, protein and fat. All these three macronutrients, in balance, are essential for designing a healthy, individualized diet anyone can follow for their whole life. Moreover, very low carb diets may not be safe, especially in the long term.
4. At a time when obesity and diabetes are rising around the world, pasta meals and other low-glycemic foods may help control blood sugar and weight especially in overweight people. Glycemic index is one of many factors that impact the healthfulness of foods.
5. Pasta is an affordable healthy choice available in almost all societies. Promoting the affordability and accessibility of pasta meals can help overcome the misperception that healthy foods are too expensive.
6. Healthy pasta meals are a delicious way to eat more vegetables, legumes and other healthy foods often underconsumed.
7. Pasta meals are enjoyed in cultural traditions worldwide, as they are versatile and easily adaptable to national / regional seasonal ingredients.
8. Doctors, nutritionists and other health professionals should recommend varied and balanced pasta meals for good health.

2. Context

Weight gain has become cause for grave public health concern in populations of affluent, developed countries, and is emerging as an issue in populations of developing countries. Causes of this weight gain are a combination of increased calorie intake, changed characteristics of the dietary macronutrients (carbohydrates, fats and proteins), reduced physical activity, and shortfalls of key nutrients. Many people are overweight and yet still undernourished.

Effective remedial policies and strategies for reversing overweight and obesity are urgently sought at the highest levels of governments and in international and national health and public policy organizations.

Carbohydrates and their digestive glucose products have supplied the majority of energy to most populations for thousands of years, and recent high-level considerations of appropriate macronutrient ratios confirm the essential role of carbohydrates in healthy eating patterns. As a result, it is a public health priority to engage nutrition and related experts, especially those who are experts in carbohydrate metabolism, to develop and regularly update a Scientific Consensus Statement on relationships between carbohydrates and healthy eating patterns.

A Scientific Consensus Statement will materially assist policy makers, professionals, business and consumers at all levels to: (a) discern among responsible and irresponsible dietary advice concerning foods and drinks containing carbohydrates; and (b) develop effective messages that will encourage and enable consumers to adopt and maintain eating patterns that promote lifelong good health.

3. Role of Carbohydrates in Healthy Eating Patterns

A half-century of population studies has made clear the characteristics of dietary patterns that promote low levels of chronic disease and extend longevity. There is broad worldwide consensus among high-level nutrition scientists and related experts concerning healthful ratio ranges among the major macronutrients: carbohydrates at 45- 60% of calories; fat at 25-30% of calories; and proteins at 15-20% of calories (see Note).

As these ranges indicate, the optimal ratio of dietary carbohydrates, protein and fats for promoting lifelong good health is a subject of ongoing review and debate, because humans can maintain good health within a range of nutrients so long as adequate attention is given to macronutrient balance, energy balance, and nutrient quality. This means avoiding extreme and/or unbalanced diets and favoring macronutrient-balanced eating patterns that emphasize high-quality nutrients such as unsaturated fats, low glycemic index carbohydrates, and a combination of plant and/or animal proteins.

Recent studies, detailed in the Scientific References for this conference, show that a diet with adequate carbohydrates is associated with lower likelihood of overweight and obesity, better appetite suppression, and lower overall mortality.

However, over-consumption of highly-refined carbohydrates is not health-promoting. Daily consumption of whole grain products together with better refined grain products represents

sound dietary guidance for overall good health for general populations.

The amount and type of carbohydrates consumed in the well-studied traditional Mediterranean Diet eating pattern, described as a gold standard, is in accord with these principles, and is also typical of other less-documented traditional diets.

4. Assessing Glycemic Impacts and Insulin Response

The amount and the type of consumed carbohydrates have both independent and cumulative impacts on health.

Over-consumption of carbohydrates in any form promotes weight gain and may precipitate disease. The same is true for over-consumption of either of the other macronutrients (fats and proteins).

Consumption of high levels of saturated fats or of highly-refined and/or highly-processed carbohydrates in large amounts can precipitate glycemic- and insulin-related health disorders, some of which may be irreversible. As a result, moderate consumption of foods containing these macronutrients should be stressed in dietary guidance programs.

Increased consumption of whole grain carbohydrates is encouraged by a large majority of official and unofficial dietary guidance policies. Promotion activities to encourage consumption of foods that contain whole grains should be expanded. These activities should specifically encourage consumers to move toward consuming at least half their grains as whole grains. Food companies can support this move by offering a wide range of foods with varying proportions of whole and refined grains, to meet consumer demand for different choices.

Assessments of glycemic impacts are essential to determining those eating patterns that promote good health and those that degrade health. Two important assessment measures in widespread current use are the glycemic index and the glycemic load, which gauge the glycemic impacts of individual foods commonly eaten.

In order to increase our understanding of the glycemic index and glycemic load as effective scientific measures and consumer education tools, research should be carried out to better document the relationship between glycemic load/index and insulin response.

5. Place of Pasta Meals in Healthy Eating Patterns

An abundance of studies analyzing the health of populations conclude that health correlates closely with the composition of diets – better diets are aligned with better health. This is so for the world's principal food cultures, which are often described in grain-centric terminology such as wheat, rice, corn and rye cultures. The macronutrient composition of these culturally-described eating patterns is remarkably similar despite the difference in the principal carbohydrate source.

In each of these cultures, the people harvested their central grain, dried and ground it, and then reconstituted it by cooking with water in soups and stews, and by making cakes and porridges. Both ground flour and cracked grains, and a wide variety of dried forms, are common in these cultures during the grain storage phase.

Wheat pasta is an important form of stored (or preserved) carbohydrate in Mediterranean cultures. It is called pasta on the north shores of the Mediterranean and Turkey, but trahana in Greece, and couscous on the south shores of the Mediterranean. It has other names in other languages, as pasta is widely enjoyed from country to country.

To be eaten, pasta must be boiled in water. However, consumers rarely (if ever) eat pasta alone. They eat a "pasta meal" – pasta with other ingredients.

A pasta meal has countless variations, but it always has "partners" for the pasta: a fat (olive oil, vegetable oil, or butter); a vegetable and/or legume (tomato, zucchini, eggplant, or beans); dairy (cheese); and often an animal protein (shellfish, fish, meat or poultry).

Traditional healthy pasta meals are modest in size and thus in total calories. The "westernized" versions of pasta meals are often large in size and thus in total calories, and also often contain over-large amounts of saturated fats.

Pasta meals are usually accompanied by a glass of water, wine or juice, vegetables, bread, fruit or other sweet, and coffee or tea. The presence of multiple ingredients in a pasta meal modulates glucose uptake by delaying gastric emptying and prolonging glucose absorption. This offers an explanation for the central place of pasta meals in the traditional healthy Mediterranean diet, and also in other traditional dietary patterns, such as Asian, Latin American and vegetarian. The multiple ingredients carry with them their own health-promoting benefits, providing essential macronutrients in desirable forms. The carbohydrate itself is slowly digested, because it is traditionally a durum wheat pasta or another pasta with a low glycemic index, and is boiled for a short time (only until "al dente").

In this respect, pasta is itself a healthy ingredient, and is also an efficient "delivery system," or "carrier," of additional health-promoting ingredients.

Pasta is affordably priced, widely available, and culturally adaptable. Because dry pasta requires no refrigeration, it presents no food-safety challenges in either developed or developing countries. Pasta's health benefits, universal cultural acceptance, and its easy accessibility, combine to ensure that pasta meals are not part of the problem that confronts public health officials, but part of the solution for educating consumers to adopt healthy eating patterns for lifelong good health.

6. Notes

"Slow-release carbohydrates" are contained in foods with a low glycemic index and contribute to "prolonged carbohydrate absorption." Credible dietary recommendations for upper limits of the percent of calories from dietary fats vary from below 15% to as high as 40%, so long as the quality of the fat is health-promoting, macronutrients are in sound ratios, and overall energy balance is maintained. An example of a healthy diet at about 40% of calories is that of a physically-active Greek population where olive oil is the principal fat. Examples of lower levels of fats recommended for healthy diets are the 2000 US Dietary Guidelines at below 30%; the 2001 WHO/FAO EURODIET at below 30% (below 35% for active persons); and a 2003 Technical Report of the WHO/FAO at between 15%-30% of fat.

8. Signatories of the Scientific Consensus Statement

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