



# NUTRITIONAL GOALS AND GUIDELINES

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## 1. INTRODUCTION

There are three main types of dietary recommendations that have been produced by public health agencies. They can be described as

- . dietary allowances
- . dietary goals
- . dietary guidelines

## 2. DIETARY ALLOWANCES

These are often known as RDIs (recommended dietary intakes) or RDAs (recommended dietary allowances). RDAs arose out of the need to assess whether populations or groups of people were receiving enough nutrients in the food supply to maintain health. However, in the same way that people are not all the same height, different people have different requirements for nutrients. The distribution of requirements tends to be fairly symmetrical with a lot of people having requirements around the average and just a few having extremely low or high requirements.

To ensure that the RDA for a particular nutrient meets the needs of as many healthy people in a population as possible, the value is set at a level appropriate for those with high requirements. This means that the RDA can represent far more of a particular nutrient than people with low requirements actually require but may only just meet the needs of those with the highest requirements for that particular nutrient.

The concept of RDA is often misused, being presented as a minimum or average amount of a nutrient required for the maintenance of health of an individual. This is not the case.

The amounts recommended, although greater than the requirements of most individuals, are not considered harmful to health. Claims have been made that very high intakes of certain nutrients may be therapeutic. These do not fall within the definition of 'requirements' and are not included in the calculation of RDAs.

RDAs have been compiled for whole populations and for groups of individuals of different sex, age, physiological status and activity level. Values vary considerably,

partly because the data used to compile them is incomplete and therefore open to interpretation. But different populations also differ in cultural background, physiological needs, food production and food preparation methods and availability.

Little attempt has been made to harmonize these values and, as most appear to offer nutritional adequacy, there is little physiological need to do so. However, with the increased availability of nutritional labelling on packs, and the increase in international trade, it would be very helpful to food manufacturers to have available a set of international RDAs.

### 3. DIETARY GOALS

Dietary goals are quantified national targets for selected macronutrients and certain micronutrients such as sodium, aimed at preventing long-term chronic diseases like coronary heart disease, stroke and cancer. They are usually expressed in terms of grams/day or as a percent of energy contribution. The base line for change is the usual national diet of the country concerned.

### 4. DIETARY GUIDELINES

Dietary guidelines are targeted at individuals, and consist of semi-quantitative advice directed towards increasing or decreasing certain food groups or major macronutrients such as fat, starch, fibre, sugar or salt. They often go hand in hand with dietary goals, being designed so that if *individuals* follow the guidelines, then the *population* should meet the goals.

### 5. CONCERNS ABOUT DIETARY GOALS AND GUIDELINES

Four main areas give rise to concern. They are:

#### A. *Mass Versus Individual Prevention*

Most dietary guidelines are promoted to the general population but this approach raises a number of questions.

- i) Diet is only one of a number of risk factors for many diseases. Dietary measures affecting entire populations may not be an effective way to tackle certain diseases. For example, it is very likely that promoting the use of fluoride toothpaste will be much more effective in controlling caries than trying to limit sugar consumption and that promoting even moderate physical activity will contribute more to reducing obesity and risk of chronic diseases than major dietary change.
- ii) There are wide variations in the dietary intakes of individuals. Should the dietary goal be met by changing the eating habits of the whole population or by eliminating extreme consumption? The first approach may be justified where it is deemed that a whole population, for example, eats excessive fat.

This approach has many enthusiasts in the public health arena. For example, Rose (1981) put forward a strong case for mass intervention measures in the treatment of cardiovascular disease.

However, he recognised and accepted what he refers to as the 'prevention paradox' in which the measures that are applied bring large benefits to the community and little benefit to the participating individual.

Although Rose was an advocate of some of the mass prevention measures advocated for cardiovascular disease, and for the prevention of the disease in the population at large, it is interesting to note that he was not an advocate of mass prevention of obesity. A population approach could be risky in the case where obesity was the target.

Shifting the body mass index of the total population downward would drive many currently at an ideal weight to become dangerously lean. In this case treating overweight so as to prevent further obesity is the only reasonable and responsible solution.

- iii) In 1981, the US Food and Nutrition Board recommended an advisory and clinical approach to prevention in which those at risk of diet-related diseases were identified and advised of dietary change. The advisory approach was considered preferable to drastic national changes which would almost certainly involve insupportably expensive changes in farming and industry.
- iv) The UK's Committee on Medical Aspects of Food Policy (COMA) report on Diet and Cardiovascular Disease recommended that individuals who had a fat/energy intake in excess of 35% should reduce to below that level. There was no suggestion that those who were already below that level should decrease their fat intake further. This supports the individual approach rather than whole population measures.

In a more recent report on Dietary Reference Values, the UK's COMA Panel repeated the level of 35% energy from fat. The report emphasised the role of saturated fatty acids in the aetiology of coronary heart disease, while recognising that not all saturated fatty acids were equal in their effect. The report set a target of 10% energy from total saturated fatty acids as a whole population target. However less than 3% of the UK population actually achieve this low level, raising the question of its practicality or even desirability as a whole population target.

## B. *Good Foods Versus Bad Foods*

Dietary guidelines often make distinctions between good or healthy foods and those that are considered to be bad or unhealthy. Foods singled out in this way may be subjected to measures such as extra taxation, legal constraints or poor availability to obtain compliance with dietary recommendations. Making this type of distinction between foods is, of course, arbitrary, frequently emotional and does not serve a useful purpose. It is irrelevant where specific nutrients come from, provided that the total diet provides adequate sustenance. There is an infinitely large number of ways of achieving a healthy diet and to suggest otherwise is misleading and unhelpful to the public.

## C. *Recommendations About Sugars*

Most dietary recommendations around the world suggest that sugar (sucrose) intake should be reduced while complex carbohydrate or starch consumption should be increased. An exception to this rule are the dietary recommendations issued by the Canadian Government. These do not include targets for sugars and concentrate on reducing energy from fat. The only goal for carbohydrates is that they should provide 55% of energy from a 'variety of sources'.

There is no scientific basis for making a distinction between starches and sugars as the body handles both in essentially the same way (see the fact sheet on sugars for the exceptions to this simple rule). There are neither dental nor nutritional reasons to recommend a reduction in one while suggesting an increase in consumption of the other. Both provide 4 kcals (17 Kjoule) ; both are potentially cariogenic; the glycemic effects of both are similar and both are generally eaten in composite foods that supply other nutrients.

The FDA Reports of 1986 and 1988 on Sugars and Health deal with these issues as did a 1994 ILSI conference on Sugars and Health.

D. *The Scientific Basis of Dietary Goals and Guidelines*

It has been argued that dietary goals and guidelines serve different purposes: dietary goals being useful for planning the food supply and food policy of the nation while dietary guidelines are for the individual to follow. Taking these definitions, it has been argued that the scientific basis for dietary goals can be less rigid, since these goals are not being applied to the individual and are not therefore going to be injurious to health even if wrong. This type of distinction is unwise. If meaningful decisions on agricultural and food policy and food supply are to be made, it is incumbent on all who make them that they are based on accurate, soundly scientific and practical data.

Otherwise the guidelines developed to encourage the population group to meet the goals will not be practical. Neither goals nor guidelines should have negative effects.

The scientific concepts and principles underlying the process of setting nutritional goals were outlined in a major international congress convened in 1986 by the International Life Sciences Institute. They examined the case for quantitative dietary goals and concluded that there is, at present, insufficient evidence on which to base them.

The joint committee of the US Department of Agriculture and the US Department of Health and Human Services reviewed the Dietary Guidelines for Americans. They concluded that current knowledge makes it extremely difficult to give more specific and quantitative dietary advice to the general public than that contained in the present qualitative guidelines. It may never be possible to make quantitative recommendations because dietary components have different effects in population subgroups, and because eating patterns vary with factors such as geographical location and climate.

This obvious doubt about the validity of setting quantitative nutritional goals seems contrary to the often bold and confident statements made by many health authorities throughout the world. It is endorsed by the March 1995 Consultation on Guidelines for establishing food based dietary guidelines, convened by WHO/FAO.

## 6. PRACTICAL ASPECTS

It is difficult to encourage new eating habits in an individual when he is not clear about why the old habits were wrong. Some dietary recommendations may in fact have a negative effect on nutritional practices. This is particularly true of those that recommend significant reduction in both fats and sugars. This has been referred to as the sugar-fat see-saw (McColl, 1988) and has been noted in many dietary studies.

In these studies, low sugars intake both in the average population and amongst professional dietitians, has been associated with excessive fat intakes and vice-versa. For most people, achievement of reduced fat intake is accompanied by an increased intake of carbohydrates in the form of sugars.

Greater care should therefore be taken to establish priorities and practicality as well as scientific and medical need for nutritional goals.

It is also important to note that dietary goals for adults are not necessarily appropriate for children. Children have similar energy needs to adults but cannot accommodate the bulk found in adult diets. As a result, they need concentrated energy sources in order to meet their energy needs with a smaller volume of food. For example, the Canadian Minister of National Health and Welfare, in collaboration with the Canadian Paediatric Society, has issued a separate document outlining dietary recommendations for children.

In this document, it is suggested that the percentage of dietary energy from fat should be gradually reduced during the period of linear growth from 50% energy from fat, as contained in breast milk, to 30% energy from fat, the recommendation for adults.

## 7. IOCCC POSITION

IOCCC recognises and supports attempts to ensure that the public eat healthy diets and live healthier lifestyles. Dietary recommendations are welcomed provided that they are based on sound scientific data both from a physiological, psychological and practical point of view. To neglect this condition is to mislead the public, and encourage development of agricultural and food policies that are flawed and unnecessary.

The consensus on healthy diets gives rise to the following dietary goals:

Fat	30-35% energy
Protein	10-15% energy
Carbohydrate	50-60% energy (the rest)
Fibre	20-25 g per day

These suggestions should be kept under constant review and should not be taken as definitive standards. Rather, they should be accepted as a best possible consensus view that takes account of available scientific evidence and the discrepancies of that evidence. Many countries in Scandinavia, Europe, Americas and Australia have accepted these consensus goals and have incorporated them into their own national nutrition policies.

In addition, IOCCC recognises that diet is only one component of healthy living and would encourage an increase in physical activity as part of a multifaceted approach to the prevention of chronic diseases.

In order to help individuals achieve the consumption of healthy diets consistent with these goals, the IOCCC supports the provision of nutritional labelling (where practically possible, presented according to the Codex guidelines) on food products. This allows consumers to make wise food choices and construct a healthy diet.

The IOCCC opposes any attempts to legislate for healthy eating as well as discriminatory measures and guidelines that support the concept of good or bad foods.

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