Food Composition and Food Cariogenicity Factors Affecting the Cariogenic Potential of Foods

Introduction

The workshop participants decided not to discuss the main text of the paper presented by M.S. Edmondson and to declare it a personal opinion of the author. The recommendations in the paper, however, did form the basis of the discussion. Although the participants are aware of the close relationship of caries and erosion, it was decided to focus on caries alone. The word ‘food’ as used in the following was defined as ‘every dietary item including drinks’.

1) Recommendations to Dental Researchers

(a) Lists of foods with no cariogenic potential should be drawn up according to the San Antonio criteria and made available to health care professionals.

The cariogenic potential of foods should be established according to the San Antonio criteria. Arbitrary distinctions should not be made between low and high cariogenic potential foods because a ranking might prove to be misleadingly precise.

The relative influence of dietary modification within the framework of preventive dental measures should be researched more fully.

More research should be done to clarify the cariogenic potential of starch-containing foods.

Further research should be done on the nature of cariostatic substances in certain foods.

2) Models for the study of anticariogenic foods need to be developed and a consensus reached about their application.

(g) Models for the study of food and root caries need to be developed and a consensus reached about their application.

2) Recommendations to Dental Health Care Professionals

Dietary advice should take into account the social circumstances and dietary habits that have led to an individual’s caries.

Information should be based on foods as eaten and not solely on the carbohydrate substrate in the food, because a food’s composition is an inadequate guide for potential cariogenicity. For example: although sugars have more cariogenic potential than starches when tested as pure substrates, there is evidence that foods containing cooked starches can also have cariogenic potential.

Dental advice on diet should not contradict general nutritional principles.

The public should be encouraged to make dietary changes which will limit the frequency of intake of foods and drinks containing fermentable carbohydrate. This can be achieved by:

- reducing the frequency of such foods and drinks between main meals, especially those containing sugars and starches with cariogenic potential, or

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substituting this intake with foods or drinks that have no cariogenic potential, or finishing any eating or drinking occasion with a food or drink with no cariogenic potential or with cariostatic properties.

(3) Recommendation of Food Manufacturers

Manufacturers should be encouraged to develop more products that have little or no cariogenic potential or are cariostatic.

(4) Recommendations to the European Commission and National Governments

(a) The working group endorsed the methodology established at San Antonio and recommends that these testing procedures be recognized in Europe, acknowledging that there may be future developments.

(b) This methodology should form the basis of claims relating to potential cariogenicity.

(c) The European Commission, governments and industry should make funds available to achieve these goals.