Session C
Nutritional Impact in Oral Health Promotion

Paula Moynihan/Marjolyn Hovius/Rolf Attström

The report was gone through page by page and the group added some comments.

Some of the comments were related to non-diet issues. It was agreed to limit the report strictly to diet factors and only include matters specifically relating to diet composition.

The group accepted the background paper as an overview of the current status of science for nutrition and oral health.

Oral Health Prev Dent 2003; 1: Supplement 1: 403-405.

Scope and Questions

1. WHAT IS THE RATIONAL AND PRIORITY FOR INCLUDING NUTRITIONAL ANALYSIS/DIETARY COUNSELING IN THE HYGIENIST CURRICULUM?

The report compiled relevant scientific data on the importance of nutritional factors for oral health and diseases. The associations between nutritional factors and, for instance, dental caries, erosion and severe oral infections (noma) are established beyond doubt. Therefore dietary modification is an intrinsic part of comprehensive patient care. On the basis of the current information the group concluded that:

- a member of any health team should have a broad understanding of the influence of diet and nutrition on general health. The main classes of nutrients, their sources, functions and the effects of deficiencies and excesses should be known
- a holistic approach to learning should be adopted in dental hygiene curricula
- an in-depth knowledge and understanding of the effects of nutritional factors on oral health and diseases is essential
- it is important for the dental hygienist and other health professionals to understand the impact of oral diseases on the nutritional status.

2. HOW IS DIETARY ANALYSIS PERFORMED?

The group was asked to identify target groups in the population that would benefit from dietary advice.

- It was agreed all patients should be provided with some dietary information for oral health e.g. leaflet. However, within populations there are special groups of people, who would benefit from more in-depth dietary counseling. These groups include:

  1. immigrants
  2. athletes
  3. patients with eating disorders
  4. elderly
  5. reduced salivary functions
  6. pregnancy and weaning
  7. history of high caries activity
  8. medically compromised (cancer, irradiated patients, immunosuppressed, hospitalized patients, children with chronic diseases, mentally handicapped).

The group was asked to consider the tools for dietary analysis.

Prior to embarking on dietary analysis the hygienist should evaluate the patient's readiness for

change and adopt a mode of expression, which is comprehensible, adjusted to the situation and to the patient, e.g. cultural background and education. Dietary intervention that incorporates behavioral change strategies has been shown to more effective than simple provision of dietary knowledge. Before embarking on dietary change the patient's current diet needs to be recorded. This is usually done using a dietary diary over periods of time, e.g. 3 days, 7 days, etc. The information from the diary can be used for analysis of the food composition and eating frequency. Further factors valuable to the determination of dental risk are saliva buffering capacity and secretion rate, as well as the Lactobacilli and mutans streptococci counts over time.

In addition to one-to-one counseling, discussions with groups of people (children, adults and elderly) on dietary issues form an important part of oral health promotion.

Dietary Advice

In patients ready to change dietary habits the next steps should be followed:

- Identify the necessary changes, e.g. food composition, types of food and eating frequency
- Negotiate the desirable change with the patient, using patient centered decision making
- Set goals for the patient over time
- Monitor the change
- The information should be designed for general purposes and in individual cases counseling should be adjusted to the specific problems of the patient.

The group agreed that dietary intervention is indicated in the following situations:

- When clinical symptoms indicate a dental problem
- In connection with major dental restorations resulting in increased need for prevention.

The effectiveness of dietary advice should be monitored. This can be achieved by evaluating the clinical outcome and cost benefit. In addition, monitoring behavioral change with objective parameters is important. Finally a whole dental team approach should be utilized to increase the impact of motivation and preventive procedures.

Interaction with other health professionals should be encouraged to facilitate the integration of oral health to general health. The dental hygienist should know when to refer a patient to a specialist (e.g. dietitian).

In terms of dietary analysis the following points are relevant to the dental hygiene curriculum:

- The dental hygiene curriculum should provide the future dental hygienist with the theoretical and practical background to address the above mentioned target groups
- The dental hygiene curriculum should address how to recognize the early signs of oral conditions relating to diet and also should teach the behavioral skills necessary to instigate dietary changes. The learning of psychology should be a part of the dental hygiene curriculum and integrated with practice
- The dental hygiene curriculum should include shadowing the other paramedical professions.

The group was asked to consider what the current recommendations regarding dietary sugar intake are. It was agreed that, in all age groups, free sugars should be consumed no more than 4 times per day and should provide no more than 10% of the calorie intake. Special attention should be given to free sugars hidden in food (e.g. fructose and glucose syrup). Free sugars should also be avoided in between meals and one hour before bedtime. The duration of consumption episodes of free sugars should be minimized.

These recommendations are relevant for both primary and secondary caries prevention.

For prevention of erosion the consumption of acidic drinks (still, sparkling, sugared and sugar free) should be minimized. Unusual dietary practices/habits resulting in prolonged exposure to dietary acids should be discouraged.

Implications for the dental hygiene curriculum are:

- The curriculum should highlight the necessity of critically assessing the sources of information regarding free sugars consumption and other dietary items in relation to oral health
- The students of oral hygiene should be able to recognize the signs of eating disorders and be aware of the need for referral.

The group was asked to consider what the current recommendations regarding sugar substitutes are. It was agreed that sugar substitutes are useful if used to replace high sugar items, which tend to be consumed between meals or those taken frequently for example hot drinks like tea and coffee as well as medication. It was also agreed that chewing gum sweetened with sugar substitutes (sugar free gum) may help caries prevention. Guidelines on the use of non-sugar sweeteners should be followed. A number of negative issues regarding sugar substitutes were identified and these include cost, side effects, taste and contra-indications, for example young children and patients with phenylketonuria.

In terms of the curriculum the dental hygienist should know about sugar substitutes and where to look for their safety guidelines. Therefore the dental hygiene curriculum should contain information on both bulk and intense non-sugar sweeteners and their applications/limitations

The group was asked to consider what the current recommendations regarding fluoride supplementation/application in various target groups are. Common dietary vehicles for fluoride supplementation are water and salt. These methods reach all target groups when these public health measures are adopted. Fluoride application is not a dietary issue.

The group considered the educational implications of nutritional impact on oral health promotion and concluded that teaching and learning about dietary items and the delivery of dietary advice lends itself to case based learning and practical exercises such as role play.