Food Choices for the 21st Century

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ABSTRACT. In December 1997, a coalition of health professionals with a wide range of expertise in science, government, education, marketing and communications, convened to discuss the challenges and
implications of food choices for the 21st Century. Taking the newly published Dietary Reference Intakes (DRIs) as a framework and starting point, the members of the coalition explored how health professionals can individualize dietary recommendations to help guide people in their food choices.

KEYWORDS. Food choices, Dietary Reference Intakes (DRIs)

A WORD TO OUR COLLEAGUES

In December 1997, a coalition of health professionals with a wide range of expertise in science, government, education, marketing and communications, convened to discuss the challenges and implications of food choices for the 21st Century. We are the members of that coalition. Using the new DRIs as a framework and starting point, we engaged in lively discussion and debate over how to individualize dietary recommendations to help guide people in their food choices.

This paper describes the ideas generated by those discussions. It is our intent to raise the consciousness level of our colleagues on the issues and ideas presented in this paper. This represents a preliminary first step to initiate thinking and comment. We encourage an open and frank dialogue among all who read this paper. Share it with your colleagues. Discuss it with friends in other disciplines. Working together, we can have a profound, positive impact on people’s food choices now and into the 21st Century.

We are on the brink of a new era in nutrition that embraces the growth in complementary medicine and the movement toward more responsibility and control over our own health decisions. Expectations of diet and health are changing at all levels—from the public, the food industry, researchers, public health, and medical professionals. Scientific research continues to reveal the profound influence of nutrition and diet on health and well-being.

Americans are redefining what they want their foods to provide. They are looking for nutrition to improve health, ward off disease, enhance mental function, and improve athletic performance. Increasingly, readily available information assists people in making dietary choices absent hard scientific evidence of a food or food component’s safety and efficacy.
With the public as the primary force that drives the food industry, changing expectations and a growing research base will alter the composition of our food supply. There will be rapid introduction of fortified, specially formulated, and bioengineered foods including some types never before seen in the marketplace.

The first DRI document, Dietary Reference Intakes (DRIs) for Calcium, Phosphorous, Magnesium, Vitamin D, and Fluoride, released in August 1997, represents a change in focus of dietary recommendations. Nutrient intake recommendations have evolved from levels needed to prevent deficiency diseases, to levels needed to reduce the risk for chronic disease and achieve optimal health and well-being. For the first time, the recommendations are goals for individuals rather than for populations. In addition, some recommendations may be at levels that are difficult or impossible to meet with current dietary patterns and the traditional food supply.

Dietary recommendations will be constantly evolving and changing, as research unveils new findings and as funding becomes available to convene new scientific panels. In time, dietary guidance will be supported by many documents such as the DRIs, which will be developed and issued by scientific panels.

THE CHALLENGE

Health professionals and health educators are in a prime position to take the lead in this new era to address dietary advice and guidance issues that impact an individual's quest for optimal health and well-being. The introduction of the new DRIs presents an excellent opportunity to contemplate how change will impact food choices for the 21st century.

THE HEALTH PROFESSIONAL'S ROLE

Health professionals will need to familiarize themselves with reports, such as the DRI documents, when they are released. The reports provide detailed background information and rationale as to how and why decisions were made in arriving at nutrient intake recommendations.
Given their expertise, health professionals have an opportunity to evaluate and apply new research on the protective effect of foods and their components. With an awareness and understanding of new foods and supplements available in the marketplace they can continue to position food in a central, critical role in the optimization of health. To achieve maximum impact, this should be done in concert with professionals in related fields such as agriculture, food science and technology.

Significant gaps between recommended intakes and actual consumption of some nutrients exist in certain groups of individuals. Health professionals should be vigilant in identifying these gaps in specific age groups (as in the case of the new DRI for vitamin D in the elderly, or for calcium in preteens and teens). They should be familiar with the availability of those nutrients in the food supply and be able to make recommendations appropriate to the particular age group. Health professionals need to know that these gaps can best be remedied by considering the combination of factors that influence nutrient requirements, including genetics, age, sex, individual needs and lifestyle. Solutions for improving intakes can be determined based on these factors. Health professionals can advocate appropriate fortification and development of new food products when appropriate.

**CRITICAL POINTS FOR HEALTH PROFESSIONALS AND HEALTH EDUCATORS TO CONSIDER: HELPING PEOPLE MAKE FOOD CHOICES TODAY AND IN THE FUTURE**

A single-nutrient, single-disease dietary approach is simplistic and doesn't address the variable effects of genetics and of other dietary and lifestyle factors on disease. Overall patterns of food intake, rather than intakes of individual nutrients, are the core of food-based standards.

RDAs and Adequate Intakes (AIs) represent goals for individuals for average intake of nutrients over time, at levels needed to sustain desired health states, as measured by functional indicators (such as cholesterol levels, blood pressure, iron status, etc.).

Functional endpoints, such as cardiovascular health and bone density as a predictor of fracture risk, are tangible health outcomes to which consumers and health professionals can both relate. Understanding the
relationship between these endpoints and nutrition enhances the likelihood of behavior change to meet RDAs/AIs.

An individual's health is impacted by many diverse factors such as genetics, mental state, immune system, activity levels, environment, and diet, making individualization of dietary recommendations of paramount importance.

**PERSPECTIVES ON DIETARY GUIDANCE FOR HEALTH PROFESSIONALS**

Nutrient requirements to meet specific functional endpoints vary among individuals. An individual's caloric intake will influence his/her intake of specific nutrients. Additional information about an individual's lifestyle, genetics, and health history is used to tailor DRI nutrient recommendations.

Foods, including appropriately fortified foods, are the preferred means for meeting nutrient intake goals. In some cases, supplements or specially formulated foods can help individuals meet specific needs.

Information on food labels can help guide selection of specific foods. The Food Guide Pyramid continues to serve as a flexible framework for food choices to achieve a healthy diet. Food pattern recommendations in the food guide are periodically reviewed and updated by USDA as new DRI and new Dietary Guidelines are released. However, the health professional is instrumental in tailoring the food guide to help individuals meet their needs according to age, genetics and lifestyle. (For example, addressing the needs of diverse groups such as female adolescents, smokers, the elderly, and elite athletes.)

In providing general dietary guidance, most fortified foods should be placed in a food group as determined by its primary food base. For example, calcium-fortified orange juice would be listed in the fruit group. Its additional benefits could be discussed in the individualization of the diet. (For example, when advising an elderly woman who is unable to increase her intake of milk products to meet her calcium needs.) Some specially formulated foods, such as sports performance foods, may be considered in a separate category, not within existing food groups. Their potential role in the diet could be addressed on an individual basis. (For example, as a special purpose supplement or meal replacement.)
Using the Tolerable Upper Intake Levels (ULs) from the DRIs, health professionals can provide guidance to individuals as to upper levels of nutrient intake that pose negligible risk of adverse effects. Although ULs refer to intakes from all sources, generally these levels might help individuals avoid excessive intakes that may arise from regular use of high dose supplements in addition to their usual intake from foods and fortified foods.

**SIMPLE MESSAGES FOR THE CONSUMER**

Health professionals can help people change their diets to meet new recommendations with simple, positive, action-oriented messages such as:

- Eat five servings of fruits and vegetables a day.
- Consume a calcium-rich food at each meal.
- Engage in 30 minutes of physical activity on most days. The more active you are, the greater your choices in the variety of foods you can eat.
- Choose foods first, then specially formulated foods or supplements if necessary to get the nutrients you need.

**THE FUTURE**

In the future, the DRIs will address both micronutrient and macronutrient needs. This could lead to a consolidation of the DRIs and Dietary Guidelines processes and the development of a single set of nutrient standards to be used by health professionals to translate recommendations into individual dietary patterns.

As advances in research provide evidence that increased intake of certain dietary components provides specific, as well as general health benefits, some new food products may need to be developed and/or existing products modified to provide these protective factors at levels higher than naturally occur. In the same way, other food products may need to be altered to lower the content of specific nutrients or other substances, such as fat.

It is likely that research will increasingly discover and/or define
how constituents of individual foods within the food groups have unique, protective qualities. Research will also improve our ability to define, measure, and manipulate levels of those constituents in foods through fortification, bioengineering, and selective plant breeding. As scientific information evolves on the benefits of foods beyond the nutrients they provide, there will be an even greater opportunity for health professionals to tailor dietary recommendations to meet an individual's nutrient requirements for optimal health and well-being.