Applications and uses of nutrient intake recommendations

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Topics to address

• How nutrient intake recommendations are used to assess and plan intakes for individuals and populations

• A review of the many critical health applications that depend on accurate nutrient intake recommendations
For individuals, intake should be between the INL and the UNL.
For groups, most people should have intakes between the ANR and the UNL.
Apply these methods to various health applications

- Assessment applications for individuals include evaluating a person’s diet
- Planning applications for individuals include dietary advice
- Assessment applications for groups include evaluating dietary surveys
- Planning applications for groups include designing food fortification programs
Dietary Reference Intakes

Developed by the Institute of Medicine (IOM), the Dietary Reference Intakes (DRIs) are nutrient reference values that support many program, policy, and regulatory initiatives. They serve as a guide for good nutrition and provide the scientific basis for the development of food guidelines in both the United States and Canada – making it important that they remain up-to-date.

Provide Nutrient Standards For:

- Requirements
- Excessive Levels

Recommendations Include:

- Fiber
- Protein, Fats, & Carbs
- Vitamins & Minerals
- Water

Plus:

- Calories and Physical Activity

DRIs Promote Health Through:

- Nutrition monitoring
- Dietary guidelines
- Assistance programs
- Health professionals
- Nutrition research
- Food policies
- Military
- Nutrition labeling
- Food supplement industries
- Global nutrient standards

Current DRIs Can Result In:

- Healthier Americans
- Healthier Canadians
- Healthier Global Population

For more information, visit www.iom.edu/dri
Back of handout from US Institute of Medicine

CRITICAL HEALTH APPLICATIONS
That Depend on the Dietary Reference Intakes (DRIs)

NUTRITION MONITORING
- Assess the nutritional health of the nation
- U.S. National Health and Nutrition Examination Survey (NHANES) and What We Eat in America (WWEIA) analyses
- Canadian Community Health Survey (CCHS) analyses

DIETARY GUIDELINES
- U.S. Dietary Guidelines for Americans
- USDA Food Patterns
- Canada’s Food Guide

HEALTH PROFESSIONALS
- Dietary counseling and education
- Healthy diets for institutions (hospitals, schools, prisons)

NUTRITION RESEARCH
- Researchers study how diet can help prevent diseases
- Used as a frame of reference in research

ASSISTANCE PROGRAMS
- Guide the design of healthier federal nutrition assistance programs
- School Meals, WIC, SNAP, Child and Adult Care Programs
- Administration on Aging programs

NUTRITION LABELING
- May be used for Nutrition Facts label and Supplement Facts label
- Key tools to help consumers make healthier food choices

FOOD POLICIES
- National, state, and local food policies to improve health
- Wellness policies in schools

MILITARY
- Ensure nutrient needs are met for armed forces
- Meal planning
- Food procurement including military rations

FOOD AND SUPPLEMENT INDUSTRIES
- Develop healthy foods and safe supplements

GLOBAL NUTRIENT STANDARDS
- Framework is used by many other countries and international organizations when setting their own standards

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INSTITUTE OF MEDICINE
OF THE NATIONAL ACADEMIES
Highlights 10 critical health applications that depend on nutrient intake recommendations

- Developed for:
  - United States
  - Canada
- But most of the applications also apply to other countries
For example, food-based dietary guidelines
Most countries have food-based dietary guidelines
Effective *food-based* guidelines rely on accurate *nutrient-based* recommendations

- Discusses how to consider nutrient priorities when formulating food-based dietary guidelines
NUTRITION MONITORING
Assess nutritional health on a national level

- U.S. National Health and Nutrition Examination Survey (NHANES) and What We Eat in America (WWEIA) analyses
- Canadian Community Health Survey (CCHS) analyses
Many countries also have dietary surveys to assess the nutrient adequacy of diets

- Individual-level
- Household-level
- The estimated prevalence of deficiencies and excesses can be examined using nutrient intake recommendations
Percentage of Americans with inadequate intakes

- Vitamin E: 93%
- Magnesium: 56%
- Vitamin A: 44%
- Vitamin C: 31%
- Vitamin B₆: 14%
- Zinc: 12%
- Folate: 8%
- Copper: 5%
- Phosphorus: 5%
- Thiamin: 4%
- Iron: 3%
- Protein: <3%
- Carbohydrate: <3%
- Selenium: <3%
- Niacin: <3%
- Riboflavin: <3%
- Vitamin B₆: <3%
- Vitamin C: <3%
- Vitamin A: <3%
- Magnesium: <3%
- Vitamin E: <3%
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- Carbohydrate: <3%
- Selenium: <3%
- Niacin: <3%
- Riboflavin: <3%

Source: What We Eat In America, NHANES 2001-2002, 1 day, individuals 1 year+, excluding breast-fed children and pregnant or lactating females
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Healthy diets for institutions (hospitals, long-term care, prisons)
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Study how diet can help prevent diseases
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Wellness policies in schools
GLOBAL NUTRIENT STANDARDS
Provide a framework that is used by many other countries and international organizations when setting their own standards.
A global approach to setting nutrient standards has many potential applications, such as

- Assist Codex Alimentarius Commission in setting standards and recommendations
- Establish international fortification policies
- Promote trade by standardizing nutrition labeling
Summary

• It is possible to harmonize the methods that are used to assess and plan intakes for individuals and populations.

• Although many of the many critical health applications that depend on accurate nutrient intake recommendations are country-specific (e.g., food-based dietary guidelines), much can be learned by sharing these experiences.
Harmonization has many advantages

- Less redundancy
  - More efficient use of professional time
- Limited funds can be pooled so there is no large burden on any specific country/region
- More timely update process so out-of-date values won’t lead to inappropriate policies
- Increased understanding of uses, and more appropriate application of recommendations