Is there a role for Dietary Supplements in Nutrition and Health?

International Alliance of Dietary /Food Supplement Association Sponsored Session
Framing the Issues:
Is there a role for dietary/food supplements in nutrition and health?

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Then
- Public health: Communicable diseases of mothers and children
- Nutrition: Dietary deficiency disease

Now
- Public health: Chronic disease & obesity across lifespan
- Nutrition: Deficiency, excess, and imbalances

Health problems have changed over the past 100 years
Many ways to enhance the healthfulness of diets today
Foods first, supplements only when food based solutions fail
Supplements most effective when they focus on specific nutrient gaps in diets
Advantages of specific nutrients as supplements

- Rapid, reasonable, economic and specific targeting of deficient subgroups
- Increase nutrient but not energy density of intakes
- Need no massive changes in food supply
- Need some, but often modest nutrition educational efforts
Supplements helped beyond foods alone in decreasing percent of US population below the Estimated Average Requirement (EAR) for some but not all nutrients  
Fulgoni et al JN 2011
Specific nutrient supplements have been helpful in lower income countries as well.
Advantages of specific nutrients as supplements

- Can improve dietary quality adherence for key nutrients lacking

- Decrease risks if specific deficiencies present
  - vitamin D, B-12, folic acid, calcium, iron,

- May help decrease risk of some chronic degenerative diseases
Limitations of nutrient supplements

- **Cost**

- **Volitional- adherence is required**

- **Formulations may not be appropriate for the nutrient gaps/risks present**

- **Inability to reach some populations at risk**
Limitations of nutrient supplements

- Little gained if intakes already in normal range and already sufficient
  - Ex. Iron to iron replete pregnant women

- Some nutrients are difficult to supplement for technical or taste reasons
  - Potassium, iron, fiber

- Some dietary problems not amenable to supplementation
  - Saturated fat, sodium, excess energy intakes, others
Rational public health policy on supplements needed

- Need
- Ability to reach population in need
- Cost
How are dietary supplements defined?
Many different definitions of dietary / food supplements

- Nutrients
- Herbs
- Botanicals
- Non-nutrient, non-mineral ingredients
- Others
- Traditional & Complementary Medicines (TCM)
What is the role of single vs multi-nutrient supplements?
Do non-nutrient bioactives in supplements have a role in health?
Should non-nutrient bioactives be allowed in supplements?
Essential elements all dietary/ food supplements
How can we harmonize regulations across countries in an increasingly global marketplace?
How can we foster more research on supplement science?
Enhancing supplement science and regulation is challenging
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• From challenges of the past to opportunities of the future: Evolution of the field of nutrition *Andrew Shao*  Chair IADSA Scientific Council

• Dietary/food supplements in health promotion: illustrations of the benefits and risks of research *Jeffrey Blumberg* Tufts

• Regulation of dietary /food supplements: a global view *Simon Pettman* Exec.Dir IADSA

• Discussion: *Silvia Franciscato Cozzolinao* U Sao Paulo, *Ricardo Uauy* U Chile and U London
Thank you!