

A decorative graphic consisting of a thin gold circle on the left side, partially overlapping a horizontal bar. The bar has a light olive green gradient and contains the title text. The bar is enclosed by large, stylized brackets: a black one on the left and a gold one on the right.

# Value of Protein in Diets

# [ Dietary Protein Priorities ]

## ⇒ Fluids:

- ☑ safe supply, use in preparation

## ⇒ Calories:

- ☑ primary sources are carbs and fat

## ⇒ Protein:

- ☑ spare for use as protein

## ⇒ Micronutrients:

- ☑ balanced with variety of sources

# [ Human Protein Needs ]

- ➔ Based on “nitrogen balance”
  - ☑ Provides for maintenance of protein levels according to intake = output
  - ☑ Validity/methods are tricky and interpretation is questioned: the body adapts
  - ☑ Obligatory nitrogen loss replacement vs. nitrogen balance vs. optimal growth, development, and rehabilitation
  - ☑ Potential for protein metabolism alterations are not always considered

# [ Dietary Protein: Demands ]

- ⇒ Maintenance of body pool and functions: largest amount needed
- ⇒ Growth, development at crucial points
- ⇒ Disease alterations in turnover and “shunting” to allow priority body functions, even to allow protein loss

# [ Not All Proteins are Alike ]

- ➔ Essential amino acids especially crucial to consider
  - ☑ Change in amino acid profile affects effectiveness of dietary protein intake to maintain nitrogen balance
- ➔ RDI is established using highly digestible and high quality protein
  - ☑ Lower quality protein means higher protein requirements
  - ☑ Study results vary widely in estimation of needs in special populations

# [ Protein Requirements ]

- ➔ Maintenance/balance
- ➔ Additional for deposition
  - ☑ Pregnancy/lactation
  - ☑ Growth, physical activity
- ➔ Additional for conditions of loss
  - ☑ Disease, injury, climate
- ➔ Non-protein nitrogen

# Contribution of Dietary Protein

- ⇒ Shore up deficient food supply
  - ☑ As ingredient
  - ☑ As fortificant
- ⇒ Maintain body in health and disease
  - ☑ Growth/development
  - ☑ Disease management
  - ☑ Health maintenance