

# Value of Protein in Diets

YICBCBMBD\*

\*Yes, It Can Be Complicated, But Must Be Discussed

# Nutrient “Value Judgments”

- ➔ “...the notion of ‘optimum’ state of nutritional health [suggests the] achievement of which might be the criterion for a requirement level...”
- ➔ “Any views of ‘desirable’ or ‘optimal’ food intakes for human individuals or groups can only be value judgments.”
  - ☑ Agriculture Development and Nutrition, 1985

# Whose Judgment Counts?

- ➔ Body needs for survival
- ➔ Body needs for ADLs, “active, participatory life”
- ➔ Personal and community needs for security of food and nutrition
- ➔ Special populations or conditions
- ➔ “Weights and Measures”

■ YAWYR/E\*

# [ SAD\*: 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 [RINASROL\*]
- ➔ Non-protein nitrogen

# Contribution of Dietary Protein

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

# [NSS\*: Protein in the Mix]

## ➔ Group questions

- ☑ Who benefits from protein? [WTBFTJC?]\*\*
  - How much
  - What kind(s)
  - What form (food and/or fortification/supplementation?)

## ➔ Individual questions

- ☑ Where are needs great?
- ☑ Where are there contraindications?

# [ GL\*: Define/Choose a Path ]

- ➔ Therapeutic programming
- ➔ Feeding program
- ➔ Emergency
- ➔ Development
- ➔ Population-specific
- ➔ Others...

# [ Value of Protein in the Diet ]

- ⇒ NSS
- ⇒ YICBCBMBD
- ⇒ YAWYR/E
- ⇒ SAD
- ⇒ RINASROL
- ⇒ WTBFTJC?
- ⇒ GL!