

Part 2

- **Nutritional adequacy and the body**

There is no simple explanation for the relationship between diet and health. However, differences in *genetic predisposition* to disease can be influenced by diet, but not eliminated

- **Characteristics of nutritional adequacy**

1. Definition of nutritional adequacy

- A state of good health, vitality, and a sense of well-being
- A healthy body can do all of the following:
 - a. Grow
 - b. Repair damage
 - c. Maintain structure and functions
 - d. Reproduce (at a specific time in the life cycle)
 - e. Do useful work

2. The four states of nutritional health

- **Overnutrition:** dietary excesses of nutrients and calories
biggest problem in the US today
- **Desirable status:** sufficient amount of nutrients and calories
- **Undernutrition:** nutrients and calorie stores depleted
- **State of body deficiency:** reduced biochemical function and clinical symptoms

3. Dietary Reference Intakes

- a. Definition:

Dietary Reference Intakes are reference values that are quantitative estimates of nutrient intakes to be used for planning and assessing diets for healthy people. They include RDA values and three other types of reference values, EAR, AI, and UL

- b. The Four Dietary Reference Intake (DRI) values are:

- Estimated Average Requirement (EAR)
- Recommended Dietary Allowances (RDAs = EAR + 2SD)
- Adequate Intake (AI) Levels
- Tolerable Upper Intake Level (UL)

- **Characteristics of nutritional adequacy**

MALE:

$$EER = 662 - (9.53 * \text{age [y]}) + (PA * ((15.91 * \text{wt [kg]}) + (539.6 * \text{ht [m]})))$$

FEMALE

$$EER = 354 - (6.91 * \text{age [y]}) + (PA * ((9.36 * \text{wt [kg]}) + (726 * \text{ht [m]})))$$