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Composition of the Body

A healthy 150-pound body contains about 90 pounds of water and about 20 to 45 pounds of fat. The remaining pounds are mostly protein, carbohydrate, and the major minerals of the bones. Vitamins, other minerals, and incidental extras constitute a fraction of a pound.



Key:

-  % Carbohydrate, protein, vitamins, minerals in the body
-  % Fat in the body
-  % Water in the body

Body Composition of Healthy-Weight Men and Women

The human body is made of compounds similar to those found in foods, mostly water (60 percent) and some fat (18 to 21 percent for young men, 23 to 26 percent for young women), with carbohydrate, protein, vitamins, minerals, and other minor constituents making up the remainder.

Dietary Reference Intakes

Nutrition experts have produced a set of standards that define the amounts of energy, nutrients, other dietary components, and physical activity that best support health. These recommendations are called **Dietary Reference Intakes (DRI).**

Establishing Nutrient Recommendations:

The DRI Committee consists of highly qualified scientists who base their estimates of nutrient needs on careful examination and interpretation of scientific evidence. These recommendations apply to healthy people and may not be appropriate for people with diseases that increase or decrease nutrient needs.



Dietary Reference Intakes (DRI): A set of nutrient intake values for healthy people. These values are used for planning and assessing diets and include:

- **Estimated Average Requirements (EAR)**
- **Recommended Dietary Allowances (RDA)**
- **Adequate Intakes (AI)**
- **Tolerable Upper Intake Levels (UL)**



Estimated Average Requirements (EAR)

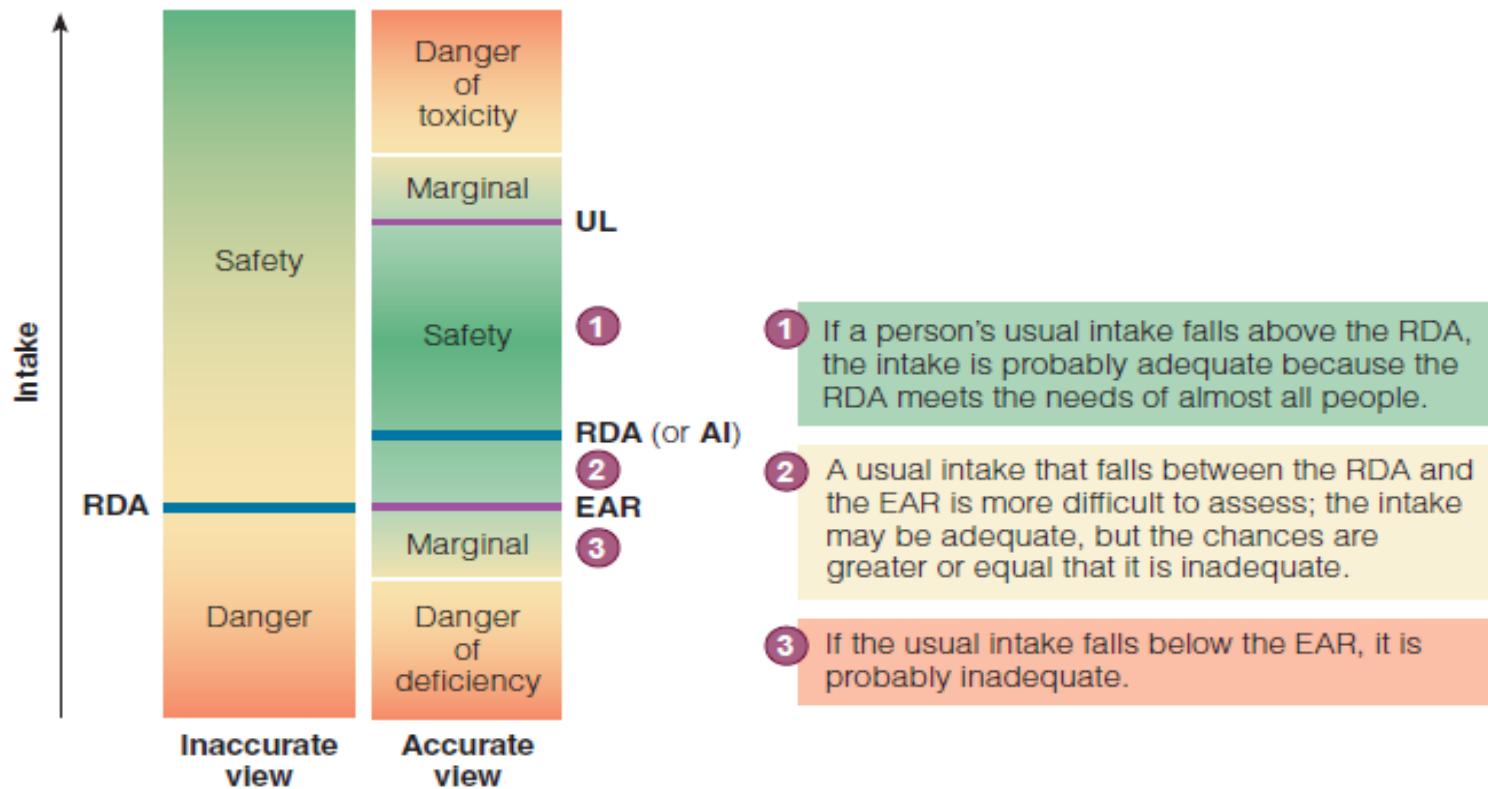
Each person's body is unique and has its own set of requirements. Men differ from women, and needs change as people grow from infancy through old age. For this reason, the committee clusters its recommendations for people into groups based on gender and age. **ERA is average daily nutrient intake level that is estimated to meet the requirement of one half $\frac{1}{2}$ healthy individual in particular life stage and gender, Useful to estimate actual requirements in groups ERA sets foundation for RDA.**

Recommended Dietary Allowances (RDA) Once a nutrient requirement is established, the committee must decide what intake to recommend for everybody, the Recommended Dietary Allowance (RDA). **RDA is average daily amount of a nutrient considered adequate to meet the known nutrient needs of practically all healthy people; a goal for dietary intake by individuals.**



Adequate Intakes (AI) For some nutrients, there is insufficient scientific evidence to determine an EAR. In these cases, the committee establishes an Adequate Intake (AI) instead of an RDA. An AI reflects the average amount of a nutrient that a group of healthy people consumes. An RDA for a given nutrient is based on enough scientific evidence to expect that the needs of almost all healthy people will be met. **AI is a set instead of RDA when sufficient Scientific evidence is not available to calculate ERA or RDA e.g. AI for young infants who are healthy, full term infants and exclusively are breast fed.**

Tolerable Upper Intake Levels (UL): The recommended intakes for nutrients are generous, yet they may not be sufficient for every individual for every nutrient. Nevertheless, it is probably best not to exceed these recommendations by very much or very often. Individual tolerances for high doses of nutrients vary, and somewhere beyond the recommended intake is a point beyond which a nutrient is likely to become toxic. This point is known as the Tolerable Upper Intake Level (UL). **UL is highest average daily nutrient intake level that is likely to pose no risk or adverse health effect to almost all individual in general population.**



Inaccurate versus Accurate View of Nutrient Intakes The RDA (or AI) for a given nutrient represents a point that lies within a range of appropriate and reasonable intakes between toxicity and deficiency. Both of these recommendations are high enough to provide reserves in times of short-term dietary inadequacies, but not so high as to approach toxicity. Nutrient intakes above or below this range may be equally harmful.