

**Letter to Editor**

**Dietary Reference Intake Level for Protein is not a Point but a Range.**

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**Dear Editor:**

In the nutritional field, the recommendations which drop by official organizations have always been accepted as facts. However, there are many figures we do not know how scientists calculate them, resulting in a rigid application for varying situations. To be specific, We are talking about the Dietary Reference Intake (DRI).

- Table 1 indicates that DRI for protein differ for WHO, the US, Japan and Vietnam. They are (g/kg body weight) 0.75, 0.8, 0.9 and 1.13, respectively. There is a large differences and we have doubts about them. Is there some mystery here?

**Table 1. DRI for Protein for adults in some countries**

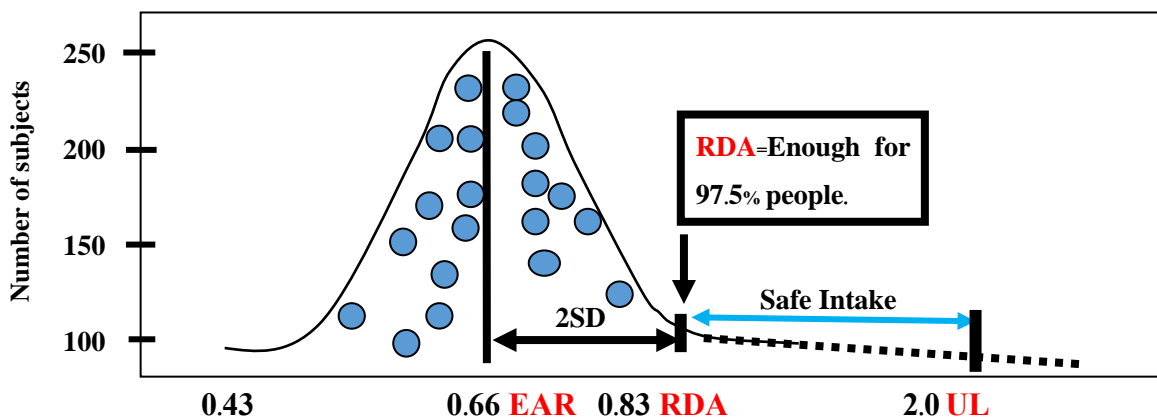
Country	DRI (g/kg BW/day)	DRI (g/day)	
		Male	Female
<b>WHO</b>	0.75		
<b>USA</b>	0.8	56	46
<b>Japan</b>	0.9	60 =	50
<b>Vietnam</b>	1.13	70	60

To use it freely, people have to understand how the DRI was obtained. The nitrogen balance method is considered to be the standard method for determining protein requirement. A Joint WHO/FAO/UNU Expert Consultation analysed the nitrogen balance data of 235 adults who were using good quality protein sources (Figure 1. Shows) (1).

*Estimated Average Requirement (EAR) of protein:* this is expected to satisfy the protein need of 50% of the people in general population. *Recommended Dietary Allowance (RDA) of protein:* the daily dietary intake level of protein to meet the requirements of 97.5% of the general population. It is calculated based on the EAR.  $RDA = EAR + 2SD$ .

**Dietary Reference Intake (DRI) for Protein** include several different systems for identifying protein levels that can be used in planning diets for healthy people and assessing their diets as listed below.

*Safe Upper Limit (UL)* is the highest level that is likely to pose no risk of adverse health effects in almost all individuals in the general population and to meet everyone's needs but could result in harmful effects if exceeded (2).



**Figure 1: How to determine Dietary Reference Intake (DRI) for Protein (g/kg body weight)**

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Figure 1 shows EAR as 0.66 g/kg per day and RDA as 0.83 g/kg per day. Although the UL has not been identified, it is stated that intakes of 2g/kg body weight are unlikely associated with any risk (1).

Although RDA is the enough level for 97.5% people from the nitrogen balance study, but we do not know the requirement from the points of immunity, stress and other factors. Furthermore, the actual intake level is usually higher than the RDA and changes day by day and person to person.

Considering such facts, scientists set DRI any figure between RDA and UL, which means that dietitians can think menus with protein intake level from RDA to UL freely.

## REFERENCES

1. Holt LE., Snyderman S.E., "Protein and Amino Acid Requirements of Infants and Children," *Nutr. Abstr. Rev.*, 35, 1-13, 1965.
2. Institute of Medicine 1998, *Dietary Reference Intakes: A Risk Assessment Model for Establishing Upper Intake Levels for Nutrients*. 1998.