



GL-BPR-03 Guideline of Amino Acid Requirements

DECEMBER 4, 2020
NATIONAL MEDICINE REGULATORY AUTHORITY
Norris Canal Rd, Colombo 01000, Sri Lanka

GL-BPR-03 Guideline of Amino Acid Requirements

Amino acid requirement for Adults			
Amino Acid	Requirement (mg/kg/day)	Minimum (mg/kg/day)	Maximum (mg/kg/day)
Histidine	10	8	12
Isoleucine	20	10	25
Leucine	39	20	40
Lysine	30	18	45
Methionine	10	8	12
Cysteine	4	3	5
Phenylalanine + Tyrosine	25	18.5	36
Threonine	15	10	20
Tryptophan	4	4	5
Valine	26	10	32

Amino acid requirement for Infants, Children and Adolescents (mg/kg/day)									
Age (Years)	Histidine	Isoleucine	Leucine	Lysine	Sulfur amino acids (Methionine / Cysteine)	Aromatic amino acids	Threonine	Tryptophan	Valine
0.5	22	36	73	64	31	59	34	9.5	49
1 -2	15	27	54	45	22	40	23	6.4	36
3 – 10	12	23	44	35	18	30	18	4.8	29
11 – 14	12	22	44	35	17	30	18	4.8	29
15 – 18	11	21	42	33	16	28	17	4.5	28
>18	10	20	39	30	15	25	15	4	26

Protein Requirement for adults

For adults, the protein requirement per kg body weight is considered to be the same for both sexes, at all ages, and for all body weights within the acceptable range (the average body weights of adult Sri Lankan males and females are to be considered as 60 kg and 55 kg respectively). The value accepted for the safe level of intake is **0.83 g/kg per day**, for proteins with a protein digestibility-corrected amino acid score value of 1.0. No safe upper limit has been identified, and it is unlikely that intakes of twice the safe level are associated with any risk. However, caution is advised to those contemplating the very high intakes of 3–4 times the safe intake, since such intakes approach the tolerable upper limit and cannot be assumed to be risk-free.

Protein requirement for Infants, children and adolescents

Safe level of protein intake for infants, children and adolescent boys and girls						
Age (Years)	Boys			Girls		
	Weight (kg) ^a	Safe level of protein intake (g/kg/day)	Safe level of protein intake (g/day)	Weight (kg)	Safe level of protein intake (g/kg/day)	Safe level of protein intake (g/day)
0.5	7.8	1.31	10.2	7.2	1.31	9.4
1	10.2	1.14	11.6	9.5	1.14	10.8
1.5	11.5	1.03	11.8	10.8	1.03	11.1
2	12.3	0.97	11.9	11.8	0.97	11.4
3	14.6	0.9	13.1	14.1	0.9	12.7
4 - 6	19.7	0.87	17.1	18.6	0.87	16.2
7 - 10	28.1	0.92	25.9	28.5	0.92	26.2
11 - 14	45	0.9	40.5	46.1	0.89	41
15 - 18	66.5	0.87	57.9	56.4	0.84	47.4

^a WHO reference values

Extra protein requirements for pregnancy and lactation

Extra protein requirements for pregnancy and lactation	
	Safe Intake (g/day)
Pregnancy Trimester	
1	1
2	10
3	31
Lactation	
1st 6 months	19
2nd 6 months	13