

General Nutrition Guidelines for SMA Children

Calories

8-11 kcal per centimeter height (conversion is height in inches X 2.54)
Ideally, caloric intake should be monitored and adjusted as needed to maintain weight for height ratio around the 10th percentile. This is because SMA subjects have significantly reduced lean mass.

Protein

Recommended range is 1 - 2 grams per kilogram body weight (conversion is weight in pounds divided by 2.2). Protein in excess of 2 grams/kg/day over a long period of time could potentially result in kidney problems and negatively affect bone density.

Fat

Try not to exceed 30% of total calories. Children less than age 2 years require a critical minimum amount of fat in the form of essential fatty acids for normal brain development. Please consult a dietician if you have specific questions regarding such guidelines.

Fiber

A good general guideline is age plus 5 (a 3 year old would need 3 + 5 = 8 grams of fiber a day)

Fluid

115 – 135 ml/kg (conversion is weight in pounds divided by 2.2). Children with fever or excessive fluid loss from sweating may require more in some cases.

Vitamins and Minerals*

Nutrients	1-3 yr old	4-8 yr old	9-13 yr old	*14-18 yr old
Vitamin D	5 mcg	5 mcg	5 mcg	5 mcg
Vitamin A	300 mcg	400 mcg	600mcg	900/700 mcg
Vitamin E	6 mg α -toco	7 mg α -toco	11 mg	15 mg
Vitamin C	15 mg	20 mg	45 mg	75/65 mg
Thiamin	0.5 mg	0.6 mg	0.9 mg	1.2/1.0 mg
Riboflavin	0.5 mg	0.6 mg	0.9 mg	1.3/1.0 mg
Niacin	6 mg	8 mg	12 mg	16/14 mg
Vitamin B6	0.5 mg	0.6 mg	1.0 mg	1.3/1.2 mg
Folate	150 mcg	200 mcg	300 mcg	400 mcg
Vitamin B12	0.9 mcg	1.2 mcg	1.8 mcg	2.4 mcg
Vitamin K	30 mcg	55 mcg	60 mcg	75 mcg
Calcium	500 mg	800 mg	1300 mg	1300 mg
Iron	7 mg	10 mg	8mg	11/15 mg

*Where two numbers are listed, the first number refers to the recommendation for males, the second is for females.

mg = milligram

mcg = microgram

IU = international unit

α -toco = alpha-tocopherol

***These are recommended daily intakes, not tolerable upper limits. It is not known whether or not these recommendations are ideal for SMA subjects, but can provide a guide to appropriate intake. Certain vitamins in excess, such as B6 (pyridoxine), can be toxic to nerves. Niacin in large quantities can cause flushing and stomach upset. Thus, it is wise to be conservative in providing vitamin supplements greatly in excess of RDA requirements.**

Last updated 11/2007. Prepared by Kathryn Swoboda, M.D. and Gail Wiebke, R.D., University of Utah to help promote minimum standard of care guidelines for nutritional management in infants and children with SMA. These recommendations are guidelines only; please consult with your physician regarding specific care issues in you or your child. For questions regarding this document, you may email Swoboda@genetics.utah.edu.