



INFORMATION FOR MOTHERS, MOTHERS-TO-BE & INFANTS/CHILDREN

Choline: The Unknown Essential Nutrient

Choline is an essential nutrient needed for overall health promotion and disease prevention and is especially important for pregnant, breastfeeding women and infants/children. This nutrient has been shown to influence brain and spinal cord structure of the fetus as well as infant brain development. However, research shows that nearly 75% of moms and moms-to-be are not familiar with the nutrient and its benefits. Choline affects specific parts of the brain that are responsible for memory as well as lifelong learning ability.

In addition, research shows that adequate choline intake can help prevent certain birth defects, such as spina bifida. Women who do not consume enough choline are at greater risk of having babies with these birth defects. Overall, adequate intake of choline is essential during pregnancy and breastfeeding as choline needs are much higher during these times to support the fetus. Furthermore, choline is crucial during the first 3 years of life as infant and child brain development is at its peak during this time.

The Food and Nutrition Board (FNB) of the Institute of Medicine recommends that pregnant & breastfeeding women, infants and children consume the following amount of dietary choline each day:

POPULATION	ADEQUATE INTAKE (AI) OF CHOLINE
Pregnant Women	450 milligrams (mg)
Breastfeeding Women	550 milligrams (mg)
Infants (0-6 months)*	125 milligrams (mg)
Infants (6-12 months)*	150 milligrams (mg)
Children (1-3 years)	200 milligrams (mg)

**Source of intake should be from breast milk/formula/food only*



Including choline-rich foods into the diet will help you get your daily choline needs. The following is a list of dietary sources of choline with their serving size and corresponding amount of choline per serving:

FOOD	SERVING SIZE	TOTAL CHOLINE (MG)
Beef liver, cooked*	3 ounces	355
Wheat germ, toasted	1 cup	172
Egg (yolk)	1 large	130
Atlantic cod, cooked	3 ounces	71
Beef, trim cut, cooked	3 ounces	67
Cauliflower, cooked	1 cup	64
Brussel sprouts, cooked	1 cup	63
Broccoli, chopped, cooked	1 cup	62
Chicken breast, cooked	3 ounces	60
Shrimp, cooked	3 ounces	60
Salmon, cooked	3 ounces	56
Navy beans, cooked	½ cup	48
Milk	8 ounces	38
Peanut Butter, smooth	2 tablespoons	20
Milk Chocolate	1.5 ounce bar	20
Almonds, sliced	½ cup	26
Tofu	3 ounces	24
Breastmilk	per 100 calories	17-25
Similac Formulas	per 100 calories	24
Enfamil Formulas	per 100 calories	24

*Beef liver should be limited to once per month

Pre-natal supplements provide some choline but not enough to meet your daily needs. See the below list for choline content of pre-natal supplements and consider a choline supplement if you are struggling to meet your daily choline needs through food intake.

PRE-NATAL SUPPLEMENT	CHOLINE CONTENT (MG)
Enfamil Expecta Pre-Natal with DHA	55mg per tablet
Clinical Nutrients Pre-Natal Formula	23mg per tablet
Rainbow Light Pre-Natal One	10mg per tablet
Whole Foods Pre-Natal Essentials	6.7mg per tablet
Vitafusion Pre-Natal with DHA & Folic Acid	5mg per gummy
Now Pre-Natal Gel + DHA	3.3mg per gel

CHOLINE SUPPLEMENT	CHOLINE CONTENT
Nature's Plus Choline	600mg/tablet
Nature's Way Choline	500mg/tablet
Solgar Choline	350mg/tablet
Solaray Choline	300mg/tablet
Twinlab Choline	300mg/tablet
Country Life Choline	293mg/tablet
Kal Choline	250mg/tablet
GNC Choline	250mg/tablet



Please call your _____, RD/RD-N
at 860.545-_____ with any questions/concerns.

