



RDN Resources for Consumers:

# Choline in Vegetarian Diets

Choline is a nutrient commonly grouped with B-vitamins. Choline has a variety of functions: It is part of cell membranes, helps nerves function properly, plays a role in liver function, is linked to our memory and mood, and may work with folic acid during pregnancy for the development of a baby's brain and nervous system.

## Meeting Your Daily Choline Requirement

The recommended amounts listed in the chart to the right meets the needs of individuals. Women who want to become pregnant should include choline-rich foods in order to reduce the risk of neural tube defects.

## Food Sources of Choline

The body naturally makes choline in the liver, but it is not enough to meet our recommended intake. Eating a well-balanced vegetarian diet with a wide variety of whole foods should will help you get most of the nutrients your body needs. Although eggs and meat tend to be the highest sources of choline, it is found in a wide range of plant foods in smaller amounts. It is important for vegans to carefully consider prioritizing foods that are good sources of Choline.

## Special Considerations

Vegan women who may become pregnant or vegans with special dietary concerns should consult with a registered dietitian nutritionist. An RDN can provide individual recommendations for a healthy eating plan to meet your needs.

## Recommended Choline Intake\*

Age	Female (mg)	Male (mg)
0-6 months	125	
7-12 months	150	
1-3 years	200	
4-8 years	250	
9-13 years	375	
14-18 years	400	550
≥ 19 yrs	425	550
Pregnant	450	N/A
Breastfeeding	550	N/A

\*Adequate Intake (AI) of Choline 1998.



## Sample of a Choline-rich Vegetarian 1 Day Menu

### Breakfast

- 1 cup of instant oats
- 1/4 cup of almonds
- 1 cup of soymilk
- 1 medium banana

### Snack

- 1/4 cup of pistachios
- 1 cup soymilk

### Lunch

- 1 cup of quinoa with 1/2 cup of edamame in a tossed salad
- 1 cup of grilled asparagus
- 1 medium orange

### Dinner

- 1 cup of soymilk
- 1 cup of refried pinto beans
- 1/2 avocado, sliced
- 1/4 cup of salsa
- 2 yellow corn tortillas

### Snack

- 5 pieces of Medjool dates

**A registered dietitian nutritionist can help you develop a healthy vegetarian eating plan that meets your needs. To find an RDN in your area, visit <https://vegetariannutrition.net/find-a-registered-dietitian/>**

### Resources

<http://pi.oregonstate.edu/infocenter/othernuts/choline/>

Dietary Reference Intakes for Thiamin, Riboflavin, Niacin, Vitamin B6, Folate, Vitamin B12, Pantothenic Acid, Biotin, and Choline. A Report of the Standing Committee on the Scientific Evaluation of Dietary Reference Intakes and its Panel on Folate, Other B Vitamins, and Choline and Subcommittee on Upper Reference Levels of Nutrients. Food and Nutrition Board, Institute of Medicine. 1998:390-422.

## Choline Content of Selected Foods

	Serving Size	Choline (mg)
<b>Legumes &amp; Soy Products</b>		
Soymilk	1 C	57
Tofu	1/2 C	35
Roasted edamame	1/2 C, cooked	44
Peanut butter	2 T	20
Pinto beans	1/2 C, boiled	30
Green peas	1/2 C, boiled	22
<b>Grains</b>		
Oats	Instant 1 C, cooked	17
Bread (whole wheat)	1 slice	7
Quinoa	1 C, cooked	42
<b>Nuts</b>		
Almonds	1/4 C, dry roasted	18
Pistachios	1/4 C, dry roasted	22
Walnuts	1/4 C, halves	10
<b>Vegetables</b>		
Artichoke	1/2 med, cooked	21
Asparagus	1/2 C, boiled	23
Brussel sprouts	1/2 C, boiled	32
Cauliflower	1/2 C, boiled	24
Salsa	1/4 C	8
Broccoli	1/2 C, boiled	31
Potatoes	1 medium, baked w/ skin	22
Collard Greens	1/2 cup, raw	30
<b>Fruit</b>		
Banana	medium, raw	12
Orange	large, raw	15
Dates (Medjool)	5 pcs	12
Avocado	1/4 C, cubes	5
Apple	large, raw	8
<b>Dairy &amp; Egg Products</b>		
Yogurt (plain, low-fat)	1/2 C	19
Swiss cheese	2 oz	9
Milk (skim)	1 C	40
Egg	1 large, hard-boiled	147