

# THINK CHOLINE FOR A SMART START



Choline is a nutrient that people need throughout life, yet only 10 percent of Americans are getting enough each day.<sup>1</sup> Women of childbearing age are getting less than half of the choline they need, on average, even though choline is especially important during pregnancy for both mom and baby.<sup>1</sup>

## PROACTIVE PREGNANCY PERKS

Choline, like folic acid, protects against neural tube defects in early pregnancy.



## BABY BRAIN BUILDER

Babies' brains grow very quickly. Choline is important for healthy brain growth.

## LONG-TERM MENTAL HEALTH

Choline intake during pregnancy may be associated with good mental health for children later in life.<sup>2</sup>



## FUEL FOR ACTIVE BODIES

Choline is a key nutrient for promoting metabolism and supporting a healthy liver throughout life.

## LIFE-LONG MEMORY BOOST

Choline may help with knowledge retention and memory, which is important at all ages.



# CHOLINE IN THE DIET

A mom needs 550 mg of choline each day to support a healthy pregnancy, and for her own general health before and after pregnancy.<sup>3</sup>



## TOP CHOLINE SOURCES<sup>4</sup>



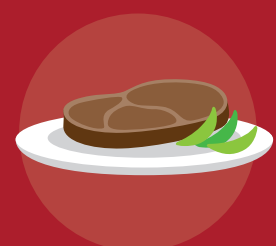
BEEF LIVER



WHEAT GERM CEREAL



BRUSSELS SPROUTS



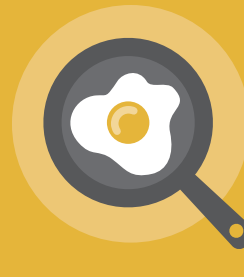
BEEF AND POULTRY



COLLARDS



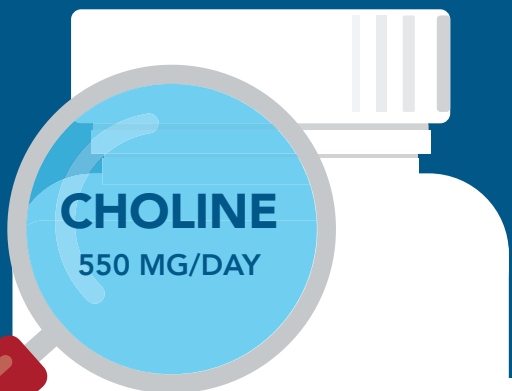
LIMA BEANS & EDAMAME



WHOLE EGGS



SALMON



Choline is often **NOT** in prenatal vitamins.

Consult your doctor before supplementing with choline.

For more tips and tools, visit [cholinecouncil.com](http://cholinecouncil.com).

1. Wallace TA and Fulgoni VL 3rd. Assessment of Total Choline Intakes in the United States, Journal of the American College of Nutrition, DOI: 10.1080/07315724.2015.1080127. Published online February 17, 2016.

2. Ross RG, Hunter SK, McCarthy L, Beuler, J, Hutchison AK, Wagner BD, Leonard S, Stevens KE and Freedman R. Perinatal Choline Effects on Neonatal Pathophysiology Related to Later Schizophrenia Risk. Amer J Psych 2013; 170(3): 290-298.

3. US Food & Drug Administration. Code of Federal Regulations Title 21, Volume 2. 21CFR101.9. Revised April 2016. Internet: <http://www.accessdata.fda.gov/SCRIPTS/cdrh/cfdocs/cfcr/CFRSearch.cfm?fr=101.9>

4. US Department of Agriculture, Agricultural Research Service, Nutrient Data Laboratory. USDA National Nutrient Database for Standard Reference, Release 28. Version Current: September 2015, slightly revised May 2016. Internet: <https://www.ars.usda.gov/nea/bhnrc/ndl>.

