

Cyto-Choline

275mg of choline per capsule in the highly bioavailable choline bitartrate salt to support liver health, fetal neurological development in pregnancy and cognitive function in the elderly.

Sans OGM

Sans gluten

Sans produits laitiers

Sans soya

Convient aux végétaliens



- 275mg of choline per capsule, delivered in the highly bioavailable choline bitartrate salt, offering a relatively high amount of elemental choline
- Choline is an essential nutrient needed to make phosphatidylcholine, bile, acetylcholine and betaine
- Indicated for fetal neurological development, cognitive support and liver support

Choline is a b-vitamin like compound and also an essential nutrient needed to make compounds such as phosphatidylcholine, bile, acetylcholine and betaine. Although the human liver can produce small amounts of choline, the majority must be obtained through diet. Unfortunately, according to studies more than 90% of people aren't getting enough choline from diet alone. Moreover, certain populations such as expectant mothers and older adults have higher choline needs that may be difficult to meet from food alone.

Perhaps the most critical need for choline occurs during gestation, where fetal development requires it for proper neurological development. Not only is

choline required to make *Phosphatidylcholine* and, therefore, is an important component of cellular membranes, but it also plays a role in nutrient transport through the placenta. Choline enhances the transport of *Docosahexaenoic acid* (DHA), a fatty acid that is crucial for a baby's brain and nervous system development. In fact, low intake of choline during pregnancy has been shown to raise the risk of neural tube defects in unborn babies independent of folate intake. Low choline intake has also been linked with an increased risk of other pregnancy complications including premature birth and low birth weight.

It is worth noting that the influence of choline on fetal and childhood development seems to last for years. Specifically, one study found that higher choline intake in the 3rd trimester of pregnancy led to better information processing speed and visuospatial memory in offspring. A follow-up study then showed these same children still had improved sustained attention 7 years later when compared to the lower choline intake group.

Exploring the other end of the life spectrum, another vulnerable population to the effects of low choline

intake are the elderly. Large observational studies link choline intake and choline blood levels to improved brain function, better memory and processing in this population. This makes sense when we understand that choline is required to make *Acetylcholine*, an important neurotransmitter involved in memory and muscle function. One interventional trial in adults aged 50–85 with poor memory found that supplementing with 1,000 mg per day led to improved short- and long-term verbal memory.

Finally, given choline's role in so many biological functions, it may not come as a surprise that greater intakes have also been linked to various physiological systems. For example, higher intake of choline is associated with a reduced risk of heart conditions, likely due to its role in converting homocysteine to methionine and reducing levels in the body. Choline is also essential for making bile and aiding in the removal of cholesterol from the liver. In fact, one of the first signs of inadequate choline intake is fat and cholesterol accumulation in the liver.

Cyto-Choline offers 275 mg of choline per capsule for expectant mothers to support fetal development and adults focused on optimal cognition and liver health. **Cyto-Choline** is delivered as VitaCholine®, a patented and clinically studied choline bitartrate salt. Research shows that there is no difference in resultant choline plasma concentrations after equivalent choline supplementation in the forms of choline chloride, choline alfoscerate (GPC), phosphatidylcholine and choline bitartrate. With this in mind, VitaCholine® offers a relatively high amount of elemental choline, rapidly dissolving and becoming available in the body as free choline without the need for enzymatic liberation.

Chaque capsule végétales contient

Choline	275mg
(VitaCholine bitartrate de choline L(+))*	

* VitaCholine™ is a trademark of Balchem Corporation or its subsidiaries.

Ingrédients non médicinaux

Cellulose microcristalline, hypromellose, stearate de magnésium.

Indications

Aide à maintenir la fonction hépatique.

Mode d'emploi

Adolescents et Adultes (9 ans et plus) - Prendre 1 capsule, 1 à 3 fois par jour.

Mises en garde et avertissements

Garder hors de la portée des enfants.

Rangement

Ne pas utiliser si le sceau de sécurité est brisé.