

CHOLINE

No patient is too sick to have his life saved

Choline - Basics

- An essential nutrient, must be obtained from diet or supplement sources
- Required for production of acetylcholine, a neurotransmitter which plays an important role in brain and muscle function.
- *Natural sources of choline:*
 - Egg 120 mg
 - Beef (3oz) 67 mg
 - Cod fish (3oz) 71mg
 - Beef liver (3oz) 355mg
 - Salmon, krill oil, nuts

Ideal choline intake

- Male: 550 mg/day
- Female: 425 mg/day
- Pregnant: 450 mg/day
- Breastfeeding: 550 mg/d

Choline deficiency

- Liver disease
- Neurological disorders, including cognitive and memory dysfunction
- Premature birth, low birth weight and preeclampsia



Benefits of choline

- Higher choline intake is associated with better cognitive performance, especially on verbal and visual memory tests.
- ↓ Risk of dementia, Alzheimer's and Parkinson's disease.
- Protects against liver disease, including hepatitis and cirrhosis in alcoholics. Key factor in preventing non-alcoholic fatty liver disease (NAFLD) by ↑ secretion of very low density lipoprotein (VLDL) cholesterol particles required for transport of fat out of the liver.
- Reduces gut inflammation and lessen symptoms of ulcerative colitis and irritable bowel syndrome.
- Critical during fetal development as it modifies brain and spinal cord.