Choline

Features of Choline:
• Supports healthy cell membrane structure and function
• Provides support for methylation reactions
• Supports healthy liver and gallbladder function
• Supports a healthy nervous system*

Adequate Intake (AI) of Choline

<table>
<thead>
<tr>
<th></th>
<th>Adult Males</th>
<th>Adult Females</th>
<th>During Pregnancy</th>
<th>During Lactation</th>
</tr>
</thead>
<tbody>
<tr>
<td>mg/day</td>
<td>550</td>
<td>425</td>
<td>450</td>
<td>550</td>
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Current Total Dietary Intake of Choline in the U.S.

Data from the 2009-2014 National Health and Nutrition Examination Survey (NHANES; n = 24,774) indicated that suboptimal intakes of choline are prevalent across many life-stage subpopulations in the United States. Only 8.51 +/- 2.89% of pregnant women from the 2005-2014 datasets for NHANES survey met the AI for choline. Only 10.8 +/- 0.6% of 2009-2012 NHANES participants aged >/= 2 years (15.6 +/- 0.8% of males and 6.1 +/- 0.6% of females) achieved the AI for choline. The fact that the vast majority of the population and especially women during pregnancy are not meeting their AI is of concern considering the essential role of choline in the adult body and during the pre- and perinatal period of development.

Supplement Facts

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Amount per Serving</th>
<th>%Daily Value</th>
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<tbody>
<tr>
<td>Choline</td>
<td>180 mg</td>
<td>33%</td>
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Ingredients: Choline bitartrate, honey, and calcium stearate.

NOTES

*These statements have not been evaluated by the Food and Drug Administration. These products are not intended to diagnose, treat, cure, or prevent any disease.
What are the major sources of dietary intake of choline in the US population?

Choline is found in several animal sources and some plant sources, however, a recent comprehensive study concluded that it is extremely difficult to achieve the AI for choline without consuming eggs (richest source of choline) or taking a dietary supplement. Consumption of animal-based products (meat, poultry, and seafood) increased choline intakes but did not result in substantial increases in percent of individuals meeting the AI. Hence, it is recommended that vegetarians, vegans, and individuals that do not consume eggs may consider choline supplementations to meet their gender and life-stage needs.

REFERENCES


Standard Process is a family-owned company dedicated to making high-quality and nutrient-dense therapeutic supplements for three generations.

We apply a wholistic approach to how we farm, manufacture and protect the quality of our products. This comprehensive strategy ensures that our clinical solutions deliver complex nutrients as nature intended. It’s how we define the whole food health advantage.