




NATURAL PRODUCTS
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The **Choline** **Need**

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with many benefits
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Viewpoint: Choline Enlightenment



Takeaways for Your Business



Choline—An Underused, Essential Nutrient

Research has shown choline's benefits to liver health, prenatal development, heart health, cognition and sports nutrition.

Marygrace Taylor explains how supplement brands can educate consumers and deliver products that make it easy to get more choline in the diet.



SupplySide and Vitafoods Global Storefronts Directory

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Choline Enlightenment



In May 2015, I was eight months pregnant and sitting at the Southwest College of Naturopathic Medicine (SCNM) in Tempe, Arizona, listening to Dr. Tieraona Low Dog speak of the benefits of natural ingredients and the lack of these essential nutrients in many diets. She was speaking at the member retreat of the United Natural Products Alliance (UNPA).

As she ran through her “must” list ingredients for pregnant women, I mentally checked them off my own list; surely, they were all in my high-quality prenatal and additional supplements. Iodine, check; folic acid, check; vitamin D, check; omega-3s, check; probiotics, check; choline, uh oh.

No choline appeared on my prenatal ingredient list.

Those last four weeks of my pregnancy, I ate eggs all day every day, it seemed, because egg yolk is the only food I eat that has a decent amount of choline. Yes, I skipped the beef liver.

What I probably should have done is taken a choline supplement, and I should have heard Dr. Low Dog’s presentation eight months earlier.

My son is now 2, and he’s fine, despite the lack of choline throughout most of my pregnancy. But if I could go back and add it to my supplement list, I would, given the health benefits.

But choline is not just for expecting moms, as we see in this Digital Magazine. Research has shown its benefits to liver health, heart health, brain health and sports nutrition, too. Scroll on to learn the health benefits of choline and for a description of research studies that back this information.

The truth is, like me, many are unaware of the lack of and the need for more choline in their diets. If an editor of a trade magazine in this industry was unaware, who else is?

This leaves ample opportunity for supplement brands to educate and create choline products to help consumers better their health, and perhaps, the health of future generations.

Sandy Almendarez

Sandy Almendarez
Editor in Chief

(480) 281-6745

sandy.almendarez@informa.com



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550 mg

Janet needs
425 mg

Sarah needs
425 mg

John needs
550 mg

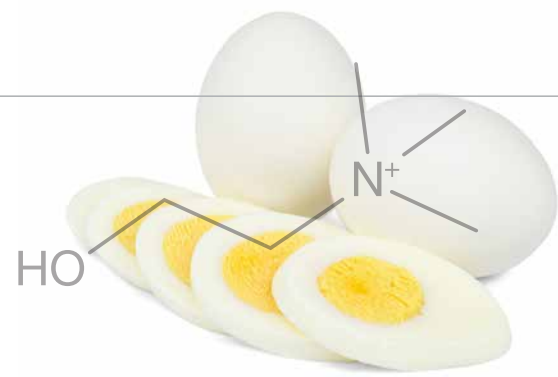
Kyle needs
150 mg

Lily needs
375 mg



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Choline—An Underused, Essential Nutrient

Supplement brands have opportunity to help consumers meet their nutrient needs

by Marygrace Taylor

INSIDER's Take

- Choline has been known for hundreds of years, but its essential need and lack in American diets has only recently been understood.
- Research has shown choline's benefits to liver health, prenatal development, heart health, cognition and sports nutrition.
- Supplement brands can educate consumers and deliver products that make it easy to get more choline in their diets.

Choline is a vitamin-like nutrient essential for helping the body maintain

optimum health and carry out several critical functions. And yet, plenty of people have never heard of it.

Researchers have only recently begun to study the important role choline plays in the body, particularly for pregnant women, overweight or obese adults, older adults and athletes. They're also finding out most Americans aren't getting enough choline from their diets. And today, leading government agencies are paying attention.

Supplement manufacturers should be, too. "What sets choline apart from the latest hot ingredient is the international acknowledgment by government health agencies that it is an essential nutrient with well-established benefits," said Tom Druke, director of strategic marketing at Balchem Human Nutrition and Pharma.

In fact, choline is the most recent nutrient to receive a reference daily intake (RDI) from FDA. Here's a closer look at how this mineral works to promote optimum health, the consumers who need it most, and how supplements can play a valuable role in helping them get adequate amounts.

What Is Choline—And Why Does It Matter?

Experts have known about choline, a vitamin-like nutrient, since the middle of the 19th century. But it wasn't until 1998 that the Institute of Medicine (IOM) classified it as an essential nutrient. And even then, it didn't receive the same amount of attention as many other essential nutrients, like calcium or omega-3 fatty acids. "At the time, the prevailing belief was that choline was readily available through diet, and there was little evidence to the contrary," Druke said.

That belief turned out to be false. Once researchers took a closer look at the choline content of common foods in the early 2000s, they discovered the nutrient wasn't as readily available as previously thought. In fact, estimates showed up to 90 percent of Americans weren't

90% of Americans weren't meeting IOM's recommended daily intake of **425 mg** choline for **adult women** and **550 mg** choline for **adult men**.



meeting IOM's recommended daily intake of 425 mg choline for adult women and 550 mg choline for adult men.¹ (Those recommendations were set in 1998, before FDA's recent RDI.)

The consequences could be significant. "Choline's necessity for human health is fundamental," said Anand Swaroop, president of Cepham. "It acts as a biochemical building block, an agent of cell-to-cell communication and transportation, and part of a regulatory system for gene expression." The body needs choline to export fat out of the liver, preventing the buildup of harmful deposits that could lead to fatty liver disease. It also plays an essential role in fetal brain development and helps prevent neural tube defects. And it's intricately involved in biochemical processes that promote healthy cognitive, heart and muscle function—especially among older adults.

Choline is, in short, a powerhouse nutrient. But there's just one problem: The body can only synthesize small amounts of choline. The rest needs to come from food or supplements, and choline's limited food sources aren't particularly popular. Add it all up and it's easy to see why many consumers are falling short, and how supplements may be best suited to fill the nutritional gap.

How Choline Helps

Choline works in the body through four main functions:

It helps transport and metabolize fat and cholesterol in the liver.

It's a structural component of cell membranes.

It helps maintain normal levels of homocysteine in the blood.

It's involved in the production of neurotransmitters.

Healthy Liver Function

Choline can manage fat metabolism by exporting fat out of the liver. This can help maintain normal liver function—which is crucial, since up to 40 percent of Americans now have non-alcoholic fatty liver disease, in large part due to skyrocketing obesity rates.² "The liver makes very low density lipoproteins (VLDLs) in order to export fats out of the liver, where they can be transported to storage or immediately converted into energy," Druke explained. These VLDLs consist of a core of inner lipids surrounded by a phospholipid membrane, and the body needs adequate levels of choline to generate components of that membrane.

Without enough choline, those components can't be generated—and fat transport begins to slow. Eventually, fats will begin to accumulate within the liver and cause damage, quickly raising the risk for fatty liver disease. When healthy adults were deprived of choline for 42 days, 77 percent of men and 80 percent of postmenopausal women developed signs of subclinical liver dysfunction, according to one *American Journal of Clinical Nutrition* study.³ But the damage was reversed

40% of **Americans**
now have non-alcoholic
fatty liver disease,
in large part due to
skyrocketing obesity rates.



when subjects began consuming a high-choline diet. “This firmly establishes the unique ability of choline to help prevent fat from accumulating in the liver,” Druke said.

Prenatal Development

Because choline is a fundamental building block of cells, vast quantities of it are needed during pregnancy. Findings show pregnant women are able to utilize about twice the recommended levels of choline.⁴ And yet, only one in 10 pregnant women is even meeting the recommended amount.⁵

Because choline is a fundamental building block of cells, vast quantities of it are needed during pregnancy.



A growing body of evidence suggests choline, like folate, may be crucial for preventing neural tube defects such as anencephaly and spina bifida. One *Epidemiology* study found low blood concentrations of choline during mid-pregnancy were associated with a 2.4-fold higher risk of neural tube defects.⁶ Prenatal choline intake may be important for other reasons, too. “Choline appears to lower the stress hormone cortisol and may help ease the baby’s response to stress,” Druke said. It also makes omega-3s such as docosahexaenoic acid (DHA) more available to the prenatal brain, promoting healthy cognitive development.^{7,8} High choline supplementation during the third trimester has been shown to reduce the risk for pre-eclampsia, found Cornell University research.⁹

Brain and Heart Health

As the population ages, a growing number of older adults face chronic health problems such as heart disease, neurodegenerative diseases and cancer. But getting enough choline could help.

That’s because choline helps keeps the body’s levels of homocysteine, an inflammatory marker, in check. High levels of homocysteine can damage the lining of the arteries and raise the risk for blood clots, and are linked to greater risk for heart disease, cancer, cognitive decline and bone fractures.¹⁰ Choline could be advantageous because it converts homocysteine into the beneficial amino acid methionine, preventing excess homocysteine from building up in the body, Druke said.

Experts still have more to learn about choline’s effects on inflammation, and how that translates to better health. But findings show choline-rich diets are associated with lower homocysteine concentrations.¹¹ And one study, published in the *American Journal of*

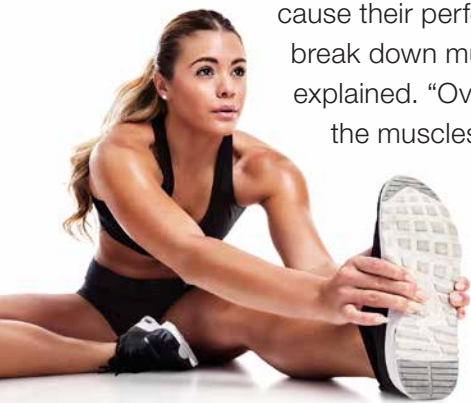
Clinical Nutrition, showed subjects with the highest dietary choline had lower biomarkers for inflammation that are considered markers of heart disease.¹²

Athletic Performance and Recovery

Active folks can benefit from getting enough choline, too. Choline supports speedy communication between the brain and muscle fibers¹³ and promotes muscle recovery after repetitive motions, both of which help to boost overall performance.¹⁴ It also aids in the synthesis and optimization of nitric oxide (NO), which relaxes blood vessels to help maximize the flow of oxygen and nutrients to the muscles.¹⁵ “It’s able to help body builders achieve a better pump during workouts,” Druke said.

But sustained exercise means active people are at greater risk for depleting their choline levels, which could put them at greater risk for deficiency. That, in turn, could cause their performance to suffer. “Without enough choline, the body may begin to break down muscle cells to ensure an adequate choline supply to the brain,” Druke explained. “Over time, this can lead to harmful effects on the body by damaging the muscles and potentially leading to an accumulation of fat in the liver.”

Getting enough daily choline can help keep these harmful effects at bay. But athletes may also need to consider replenishing their choline stores post-workout to promote optimal muscle communication, as well as ensure they have a steady supply of energy. “By transporting fats out of the liver for conversion to energy, it helps provide fuel to get through a hectic day,” Druke said.



Why People Aren’t Getting Enough

As an essential nutrient, everyone needs choline. And for some segments of the population, the stakes for missing out are particularly high. But nine out of 10 Americans aren’t getting enough of the nutrient in their diets. Choline isn’t found in many foods, and the foods that contain the most choline tend to be under consumed.

At 356 mg per 3-oz. serving, beef liver is one of the most choline-rich foods out there, but it’s not exactly a staple on most dinner tables. Egg yolks and beef are other top sources, but many consumers are eating less of those foods than they used to, Swaroop said. They may also be off the table for those who follow a vegetarian or vegan diet. Other foods—including chicken, salmon, broccoli, Brussels sprouts and peanuts—offer smaller amounts of choline, too. But none come close to delivering the amount of choline needed in a day.

Choline Food Sources



Egg Yolks



Beef



Chicken



Salmon



Broccoli



Brussels Sprouts



Peanuts


Most consumers aren't aware of choline's importance. "There's little information available to the public," Swaroop said. "Most of the scientific information is technically oriented." But many experts aren't getting the message, either. One *Nutrition Reviews* analysis found only 10 percent of health professionals—including registered dietitians—recommend choline to their patients, while less than 10 percent of OB/GYNs say they're very likely to recommend choline to pregnant women.¹⁶

Opportunity for Supplement Manufacturers

Low dietary intake coupled with low public awareness add up to an opportunity for supplement manufacturers to educate consumers about the value of choline—and deliver products that make it easy to get more of what they need.

In May 2016, FDA established a recommended dietary intake of 550 mg/d choline for all adults in response to mounting evidence showing choline's effect on health. "As awareness of the recent establishment of an RDI for choline filters down to consumers, it will lead them to seek products containing choline," Druke said. And given the consumer aversion to many choline-rich foods, many shoppers may be looking for supplements.

Supplement manufacturers have a chance to build even more awareness about this essential nutrient. "Given the significant benefits supported by research, particularly for liver health and prenatal development, adding this compelling information to their product marketing efforts is a great opportunity for manufacturers," Druke said. Swaroop echoed that sentiment, pointing out the need for more graphic, visual media on choline that the public can easily grasp. For Millennial women in particular, an emotional approach could be key. "Targeting pregnant women and children's health might yield the required awareness for choline," Swaroop noted.

As public awareness of choline grows, manufacturers on the leading edge will benefit from including at least 55 mg choline in their products, ensuring they meet FDA's "good source" hurdle and can thus make content claims, Druke said. And there are multiple avenues for conveying choline's benefits: Currently, six FDA-allowed structure/function claims, and three European Food Safety Authority (EFSA)-approved claims in the areas of cognition, fitness, metabolism and prenatal health. 



A former food editor, Marygrace Taylor is an award-winning health and nutrition writer specializing in natural living. She writes for consumer and trade publications including Prevention, FITNESS and Food Service Director, and is the co-author of the cookbook Allergy-Friendly Food for Families. Visit her at marygracetaylor.com.

References

1. Jensen H et al. "Choline in the diets of the US population: NHANES, 2003–2004." *FASEB* 21 (2007): LB486.
2. "Definition & Facts of NAFLD & Nash." National Institute of Diabetes and Digestive and Kidney Diseases, National Institutes of Health, accessed May 9, 2017, <https://www.niddk.nih.gov/health-information/liver-disease/naflid-nash/definition-facts>.
3. Fischer LM et al. "Sex and menopausal status influence human dietary requirements for the nutrient choline." *American Journal of Clinical Nutrition*. 2007;85(5):1275-85.
4. Yan J et al. "Maternal choline intake modulates maternal and fetal biomarkers of choline metabolism in humans." *American Journal of Clinical Nutrition*. 2012;95(5):1060-1071.
5. Brunst KJ et al. "Racial/ethnic and sociodemographic factors associated with micronutrient intakes and inadequacies among pregnant women in an urban US population." *Public Health Nutrition*. 2014;17(9):1960-1970.
6. Shaw GM et al. "Choline and risk of neural tube defects in a folate-fortified population." *Epidemiology*. 2009;20(5):714-719.
7. Wurtman R. "Synapse Formation and Cognitive Brain Development: effect of docosahexaenoic (DHA) and other dietary constituents." *Metabolism*. 2008;57:Suppl 2:S6-S10.
8. Wurtman R, Cansev M, Ulus I. *Handbook of Neuro-chemistry and Molecular Neurobiology: Neural Lipids*, eds. Tettamani, G. & Goracci, G. (Springer, New York). 2009;443-500.
9. Jiang X et al. "A higher maternal choline intake among third-trimester pregnant women lowers placental and circulating concentrations of the antiangiogenic factor fms-like tyrosine kinase-1 (sFLT1)." *FASEB*. 2013;27(3):1245-1253.
10. "High Homocysteine Level: How It Affects Your Blood Vessels." FamilyDoctor.org, The American Academy of Family Physicians, accessed May 8, 2017, <https://familydoctor.org/high-homocysteine-level-how-it-affects-your-blood-vessels/>.
11. Fargnoli JL et al. "Adherence to healthy eating patterns is associated with higher circulating total and high-molecular-weight adiponectin and lower resistin concentrations in women from the Nurses' Health Study." *American Journal of Clinical Nutrition*. 2008;88(5):1213-1224.
12. Cho E et al. "Dietary choline and betaine assessed by food-frequency questionnaire in relation to plasma total homocysteine concentration in the Framingham Offspring Study." *American Journal of Clinical Nutrition*. 2006;83(4):905-911.
13. Tracey KJ. "Physiology and immunology of the cholinergic antiinflammatory pathway." *Journal of Clinical Investigation*. 2007;117(2):289-96.
14. Penry JT, Manore MM. "Choline: An important micronutrient for maximal endurance-exercise performance." *International Journal of Sport Nutrition and Exercise Metabolism*. 2008;18:191-203.
15. Doyle M et al. "Acetylcholine induces conducted vasodilation by nitric oxide-dependent and -independent mechanisms." *American Journal of Physiology*. 1997;272:3pt2:H1364-71.
16. Zeisel S, da Costa K. "Choline: An Essential Nutrient for Public Health." *Nutr Rev*. 2009 Nov; 67(11):615–623.

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Each company is part of SupplySide & Vitafoods Global Storefronts, which offers a range of educational resources and business details, as well as multiple methods of connecting with those companies to receive more information.

This Digital Magazine is no exception. Head to the back of the issue for a tailor-made directory of companies specializing in choline and looking to help your business excel.

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Takeaways for Your Business

Choline is an essential nutrient that helps carry out vital functions throughout the body, but estimates show 90 percent of Americans don't meet the Institute of Medicine's (IOM) recommended daily intake, and most aren't aware of its benefits.

Choline is, in short, a powerhouse nutrient. But there's just one problem: The body can only synthesize small amounts of choline. It is the most recent nutrient to receive a reference daily intake (RDI) from FDA, but researchers found it is not readily available in the diet as once perceived. A portion typically needs to come from food or supplements, but choline's limited food sources aren't particularly popular. At 356 mg per 3-oz serving, beef liver is one of the most choline-rich foods available, but it's not exactly a staple on most dinner tables. Egg yolks and beef liver are other top sources, but many consumers are eating less of those foods than they used to, citing concerns about saturated fat and cholesterol.

Choline works in the body through four main functions, which include helping transport and metabolize fat and cholesterol in the liver; via its role as a structural component of cell membranes; through helping maintain normal levels of homocysteine in the blood; and via its role in the production of neurotransmitters. Because choline is a fundamental building block of cells, vast quantities are needed during pregnancy.

In May 2016, FDA established a recommended dietary intake of 550 mg/d of choline for all adults in response to mounting evidence showing choline's effect on health. "As awareness of the recent establishment of an RDI for choline filters down to consumers, it will lead them to seek products containing choline," said Tom Druke, director of strategic marketing at Balchem Human Nutrition and Pharma.

Low dietary intake coupled with low public awareness add up to an opportunity for supplement manufacturers to educate consumers about the value of choline—and deliver products that make it easy to get more of what they need.

Supplement manufacturers have a chance to build even more awareness about this essential nutrient. "Given the significant benefits supported by research, particularly for liver health and prenatal development, adding this compelling information to their product marketing efforts is a great opportunity for manufacturers," Druke concluded. 🌐



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3300 N. Central Ave. Ste 300, Phoenix, AZ 85012
Tel. 480-990-1101 • Fax 480-990-0819
Website: naturalproductsinsider.com

EDITORIAL

Editor in Chief
Sandy Almendarez sandy.almendarez@informa.com

Managing Editors
Rachel Adams rachel.adams.us@informa.com
Steve Myers steve.myers@informa.com

Editor, Food Insider Journal
Judie Bizzozero judie.bizzozero@informa.com

Assistant Editor
Courtney Johnson courtney.johnson@informa.com

Content Marketing Manager
Karen Butler karen.butler@informa.com

Legal and Regulatory Editor
Josh Long josh.long@informa.com

SALES

Vice President, Sales, Health & Nutrition
Danica Cullins danica.cullins@informa.com

Senior Account Director
Ioana Neacsu ioana.neacsu@informa.com

Account Managers
Anthony Arteca anthony.arteca@informa.com
Todd Berger todd.berger@informa.com
Laurel Rivers laurel.rivers@informa.com

Development Specialist – Asia
Jiani Lai jiani.lai@informa.com

Sales Assistant
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