

Should you take folic acid? Too much may cause cancer; additional research suggested

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Folic acid is one of those great public health success stories. In the decade following fortification of cereal grains and other foods, the rate of certain birth defects dropped dramatically.

As studies started showing that [folic acid](#) also could help prevent cancers, it started to seem like a wonder vitamin.

Folic acid's heyday may be over. New studies suggest that getting too much folic acid might fuel certain cancers in some people.

And with the vitamin showing up in ready-to-eat cereals, bread, snack bars and multivitamins, some experts fear it's easy to exceed the recommended daily intake of 400 micrograms. There is an urgent need, some say, to figure out how much folic acid is enough but not too much for different segments of the population.

"Too little folic acid we know is not good, and too much folic acid is probably not good," says Connie Motter, a genetic counselor at Akron Children's Hospital in Ohio and co-chair of the National Council on Folic Acid, a coalition of advocacy groups. "The answer is not going to be easy."

Folic acid is the synthetic version of folate, vitamin B9, which is found naturally in such foods as leafy greens, orange juice and legumes. It helps the body make and maintain new cells. The United States began requiring fortification of flour and several other cereal grains in 1998,

after studies linked folic acid deficiency with spina bifida and anencephaly, two potentially devastating birth defects. Since then, the rate of both defects has declined by 20 percent to 50 percent.

No one disputes that women should have adequate amounts of folic acid in their bodies at conception. The first few weeks of pregnancy are especially critical. And because more than half of pregnancies are unplanned, doctors recommend that all women of childbearing age take a daily supplement of up to 800 micrograms.

Getting enough folate also may protect against anemia, premature birth and congenital heart defects, and keeps hair, skin and nails healthy.

But scientists also know that excess folic acid can cover up a shortage of the vitamin B12, a common condition in older people that can cause dementia if unaddressed.

Then there's cancer. The vitamin can help prevent development of certain cancers, particularly in the colon, where cells replicate especially fast. Studies show that people who get plenty of folic acid reduce their risk of developing colorectal cancer and precancerous polyps by 40 percent to 60 percent.

But folic acid helps cancerous cells grow too. Animal studies show that once cells are on the path to becoming cancers, the vitamin makes things worse.

Researchers noticed that rates of colorectal cancer went up in North America around the time that fortification began. One 2007 study acknowledged that the link could be a coincidence. But another published this year found the same thing happened in Chile after fortification began there in 2000.

"It's not as simple of a relationship as we thought," says Joel B. Mason, professor of nutrition science and policy at Tufts University in Boston, author of the 2007 study.

Folic acid also has been studied in clinical trials. In the largest one, half of almost 1,000 people who had had precancerous colon polyps took a daily supplement of 1 milligram of folic acid (2.5 times the recommended 400 micrograms). Several years later, those people were more than twice as likely to have three or more new polyps, researchers reported in 2007.

Also, the men who had taken folic acid supplements were nearly three times as likely to develop prostate cancer up to a decade later, researchers reported in March.

The numbers were small_34 prostate cancers in more than 600 men_but enough to cause concern.

Experts say that all women of childbearing age should get 400 daily micrograms of folic acid through food and/or supplements. Pregnant women should get 600 micrograms, adds Janis Biermann, a health educator at the March of Dimes. Breast-feeding mothers should get 500 micrograms. Pregnant or regularly breast-feeding women who have already had a child with a brain or spinal cord defect should take 1 milligram.

It's hard to get researchers to recommend amounts for other categories of people.

The Institute of Medicine's recommended upper limit for folic acid is 1 milligram, from synthetic and natural sources combined. "That's one thing consumers can really take home," says Marian Neuhouser, nutritional epidemiologist at the Fred Hutchinson Cancer Research

Center in Seattle. "Not to get more than 1,000 micrograms."

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