

Spotlight

By Caroline Seydel

Folic Acid: Cancer Friend or Foe?

Figueiredo *et al.*

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Low levels of folate have been associated with increased risk of colorectal polyps, as well as cancer. But can folic acid supplements help protect against cancer? Some studies suggest just the opposite: that the popular B vitamin, known for warding off birth defects, may actually increase the risk of developing colorectal cancer. Figueiredo *et al.* set out to explore these findings. They found neither an increase nor decrease in adenomas after up to 3.5 years of folic acid supplementation.

The authors looked at data from 5 clinical trials of folic acid among people with a history of adenomas. Two small trials showed some benefit, but 2 larger trials showed none. A third large trial suggested that folic acid decreased risk among those with lower baseline folate levels, and higher alcohol intake. To conduct their analysis, the authors pooled data from the three largest studies, including more than 2,600 individuals. They found that daily folic acid use, by people with prior colorectal polyps, did not prevent new adenomas from forming. Drinking alcohol, which can block folic acid, seemed to reduce the risk of adenomas, although the decrease was not statistically significant.

The conclusions from these clinical trials disagree with earlier observational studies, which suggested that folic acid reduced cancer risk. The authors propose that while folate is necessary to a certain threshold, beyond that, additional supplements could be harmful. Folic acid's role in nucleotide synthesis could very well spawn cancers; folic acid inhibitors such as methotrexate have been used to fight colorectal cancer.