Dr. Stephen Chaney July 14, 2011
Folates Do Not Increase Colon Cancer Risk

Dr. Stephen Chaney is a frequent spokesman for health and nutrition issues. As a professor of biochemistry, biophysics and nutrition at the University of North Carolina, Chapel Hill, he teaches nutrition to medical students and has conducted a cancer research project for nearly 30 years. His name is on over 80 published studies in peer-reviewed journals.

There has been a lot of confusion about the effect of folates (folic acid and all of its naturally occurring metabolites) on colorectal cancer. There have been a number of studies showing that increased folate intake was associated with a lower risk of developing colorectal cancer.

However, mandatory folic acid fortification of grain products was introduced in 1998. In addition, the number of Americans taking supplements with folic has increased dramatically in recent years. As a consequence total intake of folates (folic acid from fortified foods and supplements plus folates from foods) has increased significantly. By one estimate blood levels of folates have increased 2.5-fold between 1994 (before fortification) and 2000 (after fortification). So it was just natural to ask if this increase in folate intake might have unintended consequences.

And one clinical study seemed to suggest that it might. This study looked at colorectal adenomas and reported high folate intake was associated with an increased risk of more advanced adenomas. [It is important to note that adenomas are benign tumors. They are thought to be precursors to colorectal cancer but they are not actually cancerous].

Some experts immediately started warning about getting too much folic acid in the diet - with some going so far as to warn that people over 50 should only take a multivitamin every other day.

And several papers were published speculating on how differences between the way that folic acid and the other folates were utilized by the body could cause folic acid to increase the risk of colorectal cancer while naturally occurring folates decreased the risk.

The problem was that all of this hype and hypothesizing was based on a single study, and that study didn't actually look at colorectal cancer.

A Norwegian study two years latter found no evidence for increased colorectal cancer at intakes of folic acid of up to 800 ug/day - but it was largely ignored. So the American Cancer Society decided to resolve this uncertainty once and for all (V.L. Stevens et al, Gastroenterology, doi:1053/j.gastro.2011.04.004).

They designed the study to answer two very important questions:

1) Has the increased folate intake by Americans over the past several years actually increased their risk for colorectal cancer?

2) Does the chemical form (folic acid versus folate) influence its effect on colorectal cancer risk?

And this study had two very important firsts:

1) This was the very first study to investigate the association between folate intake and colorectal cancer entirely in the post-fortification period.

2) This was also the very first study to separate out the effects of folate and folic acid on colorectal cancer risk.

And it was a very large study. They followed 43,512 men and 56,011 women aged 50-74 for 8 years between 1999 and 2007.

Folate intakes from food ranged from 175 ug/day to 354 ug/day while folic acid intakes from fortified foods, supplements and multivitamins ranged from 71 ug/day to 660 ug/day.

Total folate (both naturally occurring folates and folic acid) intakes ranged from 246 ug/day to over 1224 ug/day.

When they analyzed the data they found that high intakes of neither folic acid nor natural folates were associated with any increased risk of colorectal cancer. And, they found high intake of total folates was associated with a significant decreased risk of colorectal cancer.

What does this mean to you?
To quote the authors: "The findings of this study add to the epidemiological evidence that high folate intake reduces colorectal cancer risk."

"More importantly, no increased risk of colorectal cancer was found, suggesting that the high levels of this vitamin consumed by significant numbers of Americans should not lead to higher incidence rates of this cancer in the population."
In short, forget the warnings and the hype. You can be confident that folic acid decreases the risk of colorectal cancer.

To Your Health!
Dr. Stephen G Chaney