

IN EVERY ISSUE

## Cutting Out Hormones

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*Safety of hormones in food and milk questioned by doctors and survivors.*

Many cancer survivors look for ways to further reduce their risk of recurrence or second cancers, even if the methods are scientifically unproven. A common tactic finds survivors purchasing hormone-free beef and dairy products to avoid synthetic hormones given to some animals to increase milk production and weight gain.

Health concerns about artificial sex hormones used to promote weight gain in cattle and sheep intensified after researchers linked red meat with a higher risk of certain cancers, including hormone receptor-positive breast cancer in premenopausal women. One theory suggests the increased risk might be because of the hormones found in beef, but other factors may be players in increased cancer risk.

“If you see a higher risk, it’s hard to pinpoint if it’s the hormones or the animal fat or other factors,” says Marji McCullough, a registered dietitian and nutritional epidemiologist at the American Cancer Society. “Sometimes these questions are difficult to disentangle.” The ACS currently recommends limiting red meat consumption (beef, lamb and pork) because of its association with colorectal cancer and prostate cancer.

Concerns about hormones in beef extend to growth hormones found in some dairy products. Recombinant bovine growth hormone (rbGH) is a synthetic form of bovine somatotropin, a hormone produced naturally in the cow’s pituitary gland. Dairy farmers use rbGH to increase milk production. The U.S. Department of Agriculture estimates that around 22 percent of dairy cows are treated with rbGH, which was approved by the Food and Drug Administration in 1993 under the brand name Posilac®.

Critics of the hormone argue that rbGH-treated cows pass on rbGH through milk in addition to antibiotics given to the cows to treat udder infection, a possible result of the increased milk production. The FDA, on the other hand, has determined the hormone is safe and a significant amount of hormones and

antibiotics are not transferred through the milk. Experts call for long-term studies, but current data from more than 50 studies show little or no link between dairy consumption and the risk of breast cancer.

“If growth hormones in milk increase cancer risk, you would think milk consumption would increase risk,” says McCullough, who says she has not seen hard evidence that shows rbGH adversely affects outcome or risk of recurrence in cancer patients. “In fact, in some cases, milk has been associated with lower risk.”

A byproduct of growth hormones is increased levels of insulin-like growth factor 1 (IGF-1) in treated milk. High levels of this protein, which also occurs naturally in humans, have been associated with colorectal, prostate and breast cancer. Researchers don't know if higher levels in milk are meaningful, particularly since IGF-1 in milk is degraded during the digestive process. Even in rare instances when IGF-1 is absorbed, it accounts for less than 0.06 percent of IGF-1 in the body—a percentage scientists believe is unlikely to impact cancer risk. Furthermore, IGF-1 levels were found to have no effect on premenopausal breast cancer risk in a recent study of more than 300 women diagnosed with invasive or in situ breast cancer.

Debu Tripathy, MD, director of the Komen/University of Texas Southwestern Breast Cancer Research Program in Dallas, believes more research, particularly regarding long-term risk, is needed before the medical community can conclude if growth hormones affect cancer risk. “It may be that even a small amount may make a difference, but the truth is we just don't know,” Dr. Tripathy says.

And they may never know since many other factors cannot be removed, such as iron in red meat, which could increase risk, and calcium and vitamin D in milk, which decreased risk in some studies. “We just don't have a good way to detect risk right now,” Dr. Tripathy says. “My advice is to be aware of where your food comes from and decide for yourself how much risk you want to take. You can either avoid specific items if there is even a possibility of risk or you can say, ‘Until the risk is definitively shown, I'm not going to worry about it.’ It's a personal decision.”