



E & N News to Use
for cancer patients, survivors and caregivers

February 2009

EXERCISE & NUTRITION during/after **CANCER**

CURRENT PEER-REVIEWED MEDICAL LITERATURE and EXPERT COMMENTARY
from **RELIABLE SOURCES** and **DR. BLEYER**

Note: The entire year of 2008 *E&N News* is now available as a year summary for downloading, either for exercise (including exercise and nutrition) or nutrition (including exercise and nutrition) on the DEFEAT Cancer website: www.defeatcancer.info.

Both versions include executive summaries and are fully indexed and bookmarked.

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Exercise

Vancouver study finds exercise helps breast cancer patients

[Exercise can help breast cancer patients having treatment to feel better both physically and emotionally, according to new research.](#)

Reuters - February 25, 2009

NEW YORK, - In a review of **nine published studies** Dr Susan R Harris, of the University of British Columbia in Vancouver, and her team said they found strong evidence that exercise positively influences the quality of life for women living with breast cancer.

"It helps enhance mood and emotions during all phases of cancer treatment," Harris, said in an interview.

She added that recent studies showing that breast cancer survivors reduce their risk of the disease recurring, and are less likely to die from the disease, make the case for exercise even more compelling.

It can also help to ward off weight gain, which is known to increase breast cancer mortality, especially for women who gain weight after undergoing treatment.

Harris, who is a breast cancer survivor, studied trials in which similar patients were randomly assigned to the exercise group or to a control group.

The studies evaluated physical activity ranging from **aerobic exercise and resistance training to Tai Chi, dance and movement therapy, and gentle exercises done in a seated position.**

The researchers said the findings provide "strong evidence that exercise positively influences quality of life in women living with breast cancer."

But it is not clear what type of exercise is best for a woman according to the stage of her treatment, they added.

Certain questions about safety also remain, Harris said in an interview.

Advanced breast cancer may spread to the bones and make them more fragile, so it's not clear that resistance exercise is safe for these patients.

But she said **aerobic exercise is "completely safe."** Breast cancer patients should understand that they **don't need to exercise every single day to benefit from physical activity**, Harris explained.

Despite the clear benefits of exercise during breast cancer treatment, the researcher said, doctors often don't give these patients recommendations on physical activity.

"It's been kind of a black hole because oncologists don't know what to recommend, although they're getting better at it," Harris said.

Dr. Bleyer:

☑ This *met-analysis* of multiple studies is a *tour de force*.

☑ DEFEAT Cancer has been advocating the conclusion of the study for a couple of years; how many more will it take to really get the point across?

Yoga may bring calm to breast cancer treatment:

[Yoga can improve the emotional health of breast cancer patients, contends a new U.S. study; Women reported less stress, more peace after sessions.](#)

HealthDay News - February 26, 2009

"Given the high levels of stress and distress that many women with breast cancer experience, the opportunity to experience feeling more peaceful and calm in the midst of breast cancer is a significant benefit," lead researcher **Suzanne Danhauer, of the Wake Forest University School of Medicine**, said in a university news release.

The study involved 44 women with breast cancer. About a third of them were undergoing cancer treatment during the study, and the others had completed their treatment. Half were enrolled in a yoga program, and half were put on a waiting list for the program.

Women in the yoga group participated in **75-minute classes in restorative yoga** -- a more passive and gentle form of yoga that uses props such as cushions and blankets for support. At the beginning and end of the study, both groups of women completed questionnaires evaluating their quality of life.



After **10 weeks of classes**, the yoga participants showed greater improvements in areas of mental health such as **depression, positive emotions and spirituality** -- feeling calm and peaceful -- than did the women still waiting to begin the yoga program. The yoga group reported, on average, a **50 percent reduction in feelings of depression and a 12 percent increase in feelings of peace and meaning**. Yoga participants also reported **less fatigue** than the others, the study found.

The results, which Danhauer said "are very promising and will allow us to embark on a much larger scale study," were published Feb. 24 in a special physical activity issue of the journal *Psycho-Oncology*.

"Evidence from systematic reviews of randomized trials is quite strong that mind-body therapies improve mood, quality of life and treatment-related symptoms in people with cancer," Danhauer said. "Yoga is one mind-body therapy that is widely available and involves relatively reasonable costs."

Dr. Bleyer:

- ☑ This is yet another study that supports the benefit of yoga in improving the *quality* of survivorship
- ☑ That the benefit was achieved with just 10 weeks of 1¼ hours sessions of yoga must be noted

Nutrition

Green tea and this cancer medicine may not mix

[Green tea contains inhibitors of that antitumor action of bortezomib \(Velcade®\)](#)

Los Angeles Times - February 3, 2009

By Melissa Healy

Green tea may seem an elixir of good health, what with its vaunted antioxidants and polyphenols and whatnot. But if you're taking a relatively new cancer drug called bortezomib -- marketed commercially as Velcade -- for multiple myeloma, mantle cell lymphoma or the brain cancer glioblastoma, drinking green tea could be a very bad idea.

A new study by pharmacologists and physicians at the **University of Southern California** found that, in animals as well as in the test tube, certain constituents of green tea blocked the effects of bortezomib -- notably, the drug's ability to induce tumor cells to die off. Bortezomib, or Velcade, is a boronic acid proteasome inhibitor. It was first approved by the FDA in 2003 as a last-ditch drug for myeloma patients, but is now recognized as a first-line drug against mantle cell lymphoma and multiple myeloma.

The USC study found that green tea appears to interfere only with boronic-acid proteasome inhibitors such as Velcade, but not with non-boronic proteasome inhibitors, including the drug nelfinavir, a medicine for use in HIV/AIDS patients.

The finding that green tea's constituents had a "pronounced antagonistic function" when combined with the cancer drug was a major surprise. Researchers -- responding to optimism in the cancer research and patient communities over the curative potential of green tea -- set out to investigate whether the combination of green tea and bortezomib would yield "increased antitumor efficacy" over bortezomib alone. Instead they found that **green tea's polyphenols "have the potential to negate the therapeutic efficacy"** of bortezomib against cancerous cell lines that give rise to glioblastoma and multiple myeloma.

Dr. Bleyer:

- ☑ Instead of an increase antitumor effect of the combination of green tea and bortezomib, which was expected since both are antitumor agents when used individually, a deleterious interaction was observed, with the weaker antitumor agent, green tea, interfering with the ability of the more potent anticancer agent, bortezomib
- ☑ Until we know more about the mechanism of action of drugs and new drugs we use, paradoxical results are not uncommon in the practice of medicine

A drink a day raises women's risk of cancer, study indicates [Prevention]

[The largest study to date provides the strongest evidence that as little as a drink a day increase the risk of cancer](#)

Washington Post

By Rob Stein

February 25, 2009

For years, many women have been buoyed by the news about one of life's guilty pleasures: That nightly glass of wine may not only take the edge off a day but also improve their health. Now it turns out that sipping pinot noir might not be such a good idea after all.

A new study involving nearly **1.3 million middle-aged British women** -- the largest ever to examine alcohol and cancer in women -- found that just one glass of chardonnay, a single beer or any other type of alcoholic drink per day increases the risk of a variety of cancers.

"That's the take-home message," said Naomi E. Allen of the University of Oxford, who led the study being published March 4 in the *Journal of the National Cancer Institute*. "If you are regularly drinking even one drink per day, that's increasing your risk for cancer."

Understandably, the study may leave many women scratching their heads, given all the talk about red wine being something akin to a fountain of youth.

"I thought drinking wine was good for you," said Mirella Romansini, 27, of Chevy Chase, outside Paul's liquor store in Northwest Washington. "Now they are saying it increases your risk for cancer? Yes, I would say I'm surprised."

Romansini is hardly alone. At least half of U.S. women drink sometimes, and even the Dietary Guidelines for Americans, the government's official bible on what we should be putting into our mouths, says alcohol can have "beneficial" effects, allowing women as much as one drink a day (men get two, of course).

Confused? It turns out the guidelines were never intended to recommend that anyone drink for his or her health. Yes, it's true that studies have indicated that moderate drinking may cut the risk of heart disease and other ailments. And researchers have identified a substance in red wine (remember resveratrol?) that could offer a host of benefits.

But officials have long worried about sending the wrong message, giving people who take extraordinary risks if they drink -- young people, pregnant women, those prone to alcoholism -- permission to abuse alcohol. As a result, officials have long tried to walk a fine line between acknowledging the possible benefits of alcohol and encouraging people to start drinking or to abuse it. The guidelines were intended to set an upper limit on what might be safe, not a recommended daily dose.

"It's a level of consumption that generally has been found in scientific studies to be associated with a relatively low risk of harms," said **Robert D. Brewer** of the federal **Centers for Disease Control and Prevention**. "But low risk does not mean no risk."

In fact, many previous studies have found that alcohol appears to increase the risk of breast cancer, and that heavy drinking could make men and women prone to other cancers as well. The new study is a large-scale attempt to explore all cancer risks posed by more typical drinking levels and a spectrum of alcoholic beverages.

Allen and her colleagues analyzed data collected by the Million Women Study, which since 1996 has been gathering detailed information from **1.28 million women ages 50 to 64**. The researchers examined how much alcohol women reported consuming when they volunteered for the study and again three years later, and examined whether there was any link with the 68,775 cancers they developed over an average of the next seven years.

Even among women who consumed as little as 10 grams of alcohol a day on average -- the equivalent of **about one drink -- the risk for cancer of the breast, liver and rectum was elevated**, the researchers found. Among women who also smoked, the risk of mouth and throat cancer also increased.

Based on the findings, the researchers estimated that about **5 percent of all cancers diagnosed in women each year in the United States are the result of low to moderate alcohol consumption**. Most are breast cancers, with drinking accounting for 11 percent of cases -- about 20,000 extra cases each year -- the researchers estimated.

In any group of 1,000 U.S. women up to age 75 who consumed an average of one drink a day, the researchers calculated, there would be 15 extra cancers; two drinks per day would result in 30 extra cancers, and so forth.

The risk appeared the same regardless of whether women drank wine, beer or any other type of alcohol. Allen noted that even less than one drink per day may increase the risk.

"There doesn't seem to be a threshold at which alcohol consumption is safe," she said.

The reason alcohol increases the risk for cancer is not entirely clear, but there are several possibilities, including that it **enables carcinogens to do their damage, increases inflammation or, in the case of breast cancer, boosts estrogen levels**.

Several researchers noted that the findings were essentially consistent with previous studies, and despite its size the study does have shortcomings. The researchers could not, for example, distinguish between women who drank only one or two drinks every day and those who drank seven drinks all at once. Some researchers worried the findings would unnecessarily frighten women and deprive them of the possible health benefits of an occasional drink.

"We can't use this to scare people away from alcohol," said Eric Rimm of the Harvard School of Public Health.

Allen plans to analyze the study data to try to determine whether the net risks from cancer outweigh any heart benefits. But other researchers were doubtful.

"Among women, the major cause of death by far during the middle age years is cancer," Michael S. Lauer and Paul Sorlie of the National Heart, Lung and Blood Institute noted in a editorial accompanying the study. "For this large group, the only reasonable recommendation we can make is there is no clear evidence that alcohol has medical benefits."

As it turns out, the federal government is rewriting its dietary guidelines, including the part about alcohol consumption, and will consider the new study in that process.

"No one study is ever sufficient to make a recommendation," said Linda Van Horn, a **professor of preventive medicine at Northwestern University** who is chairing the committee revising the guidelines. "But it will be added to the body of literature that will be reviewed."

In the meantime, several experts said women should consult with their doctors about whether they should drink. "It really comes down to a personal decision based on their own history and risk factors," Rimm said. "But it shouldn't be based only on health. **Some people drink for cultural reasons; some people drink for religious reasons. I personally think it enhances the flavor of meals, and some people think it enhances the company you're with.**"

Dr. Bleyer:

- ☑ The verdict appears to be that one glass of wine a day both reduces the risk of heart disease and increases the risk of breast in women, and liver and rectal cancer in both men and women
- ☑ Until we know more about which kind of person in whom one occurs and the other doesn't, the choice of heart disease vs. breast cancer is a personal choice and should probably be considered in context of familial patterns of cancer
- ☑ I couldn't agree more with the opinion that drinking enhances the company one is with

Calcium linked to lower colon cancer risk, study finds [Prevention]

[A larger study than an important prior negative one suggests that calcium in relatively high doses can reduce the risk colon cancer, especially in women](#)

New York Times - February 25, 2009

By Roni Caryn Rabin

A huge study of nearly half a million people found that older men and women who consumed large amounts of dairy foods and calcium were at reduced risk of developing digestive cancers, especially colorectal cancer. The findings have reignited a long-simmering debate over calcium's potential to fight colon cancer.

Among women, high calcium intake was associated with a reduced overall cancer risk as well, the study found. Previous studies have produced mixed results regarding the link between calcium and colon cancer.

The latest report, an observational study in which researchers reviewed dietary profiles for possible links to cancer, was published on Monday in **The Archives of Internal Medicine**. Such studies are not considered as reliable as randomized, controlled trials that compare a treatment in one group with a placebo in a similar group. "Our key finding is that higher total calcium intake is associated with a decreased risk of digestive system cancers," said first author **Dr. Yikyung Park**, a cancer epidemiologist at the **National Cancer Institute**, who noted that current dietary recommendations to consume calcium are intended to promote bone health, not prevent cancer.

"Our study is just one study," she added. "We need to look to other studies to confirm the finding."

The study examined the relationship between dairy and calcium intake and cancers among **293,907 men and 198,903 women** ages 50 to 71 who participated in the **National Institutes of Health-AARP Diet and Health Study**. Participants filled out a dietary questionnaire when they enrolled in the mid-1990s, noting how often they consumed dairy and other foods and whether they took supplements. Researchers then linked the participants' records with state cancer registries to identify new cases of cancer diagnosed through 2003.

After seven years of follow-up, researchers found 36,965 cases of cancer in men and 16,605 cases in women. The researchers found that men who reported consuming the most calcium, about 1,500 milligrams daily, faced a **16 percent lower risk of developing cancers of the digestive system** than those who consumed the lowest amounts, about 500 milligrams daily.

Women with the highest dairy and calcium intake had a **23 percent reduced risk of colon cancer**, the scientists found, compared to women with the lowest intakes of calcium.

The scientists found no association between calcium intake and overall cancer risk in men, but found that women were at lower overall cancer risk if they reported high intakes of calcium, up to 1,300 milligrams daily. There were no added benefits with higher amounts.

Researchers had to make adjustments in their data to make sure there were no other factors affecting cancer rates, since those who consumed the highest amounts of calcium were more likely to be white, college-educated and physically active, and less likely to smoke and drink alcohol.

In 2006, a randomized controlled clinical trial that was part of the Women's Health Initiative found no evidence to support the hypothesis that calcium prevents colon cancer.

But **Dr. JoAnn Manson**, one of the principal investigators of that trial and chief of preventive medicine at **Brigham and Women's Hospital in Boston**, said the weight of the cumulative evidence suggests calcium does play a role in preventing colon cancer, noting that some studies have found calcium intake is associated with reduced occurrence of precancerous colon polyps.

The earlier trial may have not found any effect because the population studied was well nourished overall and many women in both groups had a high calcium and dairy intake, she said.

But she noted that vitamin D, which is often consumed with calcium, may be the pivotal player in cancer prevention and ought to be a focus of ongoing study.

"The totality of the evidence in aggregate is consistent with the benefit of dairy products and total calcium intake in the prevention of colorectal cancer," she said. "But these studies really cannot disentangle the effects of calcium and vitamin D."

Experts noted that there is a plausible biological explanation as to how calcium may reduce colorectal cancer.

Calcium may reduce the growth of abnormal cells in the gastrointestinal tract, Dr. Park said. Since calcium binds to bile and fatty acids, it may reduce damage to the mucous membranes of the large intestine, she said.

Dairy foods are also rich in other potentially anticarcinogenic nutrients, including vitamin D and conjugated linoleic acid.

The Institute of Medicine recommends that adults ages 50 and older consume 1,200 milligrams of calcium per day because it contributes to bone health.

Dr. Bleyer:

☑ Calcium and folic acid have been thought to help prevent colon cancer, but conflicting results have not led to a consensus; vitamin D is helpful if there is a deficiency of the vitamin

☑ This, the largest trial to date, supports calcium as a chemo-preventer of colon cancer

Vitamin pills: a false hope? [Prevention]

[The largest study to date fails to find any benefit of vitamins C, D and E in preventing cancer](#)

New York Times - February 17, 2009

By Tara Parker-Pope

Ever since the Nobel Prize-winning biochemist Linus Pauling first promoted "megadoses" of essential nutrients 40 years ago, Americans have been devoted to their vitamins. Today about half of all adults use some form of dietary supplement, at a cost of \$23 billion a year.

But are vitamins worth it? In the past few years, several high-quality studies have failed to show that extra vitamins, at least in pill form, help prevent chronic disease or prolong life.

The latest news came last week after researchers in the **Women's Health Initiative study** tracked eight years of multivitamin use among more than **161,000 older women**. Despite earlier findings suggesting that multivitamins might lower the risk for heart disease and certain cancers, the study, published in **The Archives of Internal Medicine**, found no such benefit.

Last year, a study that tracked almost 15,000 male physicians for a decade reported no differences in cancer or heart disease rates among those using vitamins E and C compared with those taking a placebo. And in October, a study of 35,000 men dashed hopes that high doses of vitamin E and selenium could lower the risk of prostate cancer.

Of course, consumers are regularly subjected to conflicting reports and claims about the benefits of vitamins, and they seem undeterred by the news — to the dismay of some experts.

"I'm puzzled why the public in general ignores the results of well-done trials," said **Dr. Eric Klein**, national study coordinator for the prostate cancer trial and chairman of the Cleveland Clinic's Glickman Urological and Kidney Institute. "The public's belief in the benefits of vitamins and nutrients is not supported by the available scientific data."

Everyone needs vitamins, which are essential nutrients that the body can't produce on its own. Inadequate vitamin C leads to scurvy, for instance, and a lack of vitamin D can cause rickets.

But a balanced diet typically provides an adequate level of these nutrients, and today many popular foods are fortified with extra vitamins and minerals. As a result, diseases caused by nutrient deficiency are rare in the United States.

In any event, most major vitamin studies in recent years have focused not on deficiencies but on whether high doses of vitamins can prevent or treat a host of chronic illnesses. While people who eat lots of nutrient-rich fruits and vegetables have long been known to have lower rates of heart disease and cancer, it hasn't been clear whether ingesting high doses of those same nutrients in pill form results in a similar benefit.

In January, an editorial in *The Journal of the National Cancer Institute* noted that most trials had shown no cancer benefits from vitamins — with a few exceptions, like a finding that calcium appeared to lower the recurrence of precancerous colon polyps by 15 percent.

But some vitamin studies have also shown unexpected harm, like higher lung cancer rates in two studies of beta carotene use. Another study suggested a higher risk of precancerous polyps among users of folic acid compared with those in a placebo group.

In 2007, *The Journal of the American Medical Association* reviewed mortality rates in randomized trials of antioxidant supplements. In 47 trials of 181,000 participants, the rate was 5 percent higher among the antioxidant users. The main culprits were vitamin A, beta carotene and vitamin E; vitamin C and selenium seemed to have no meaningful effect.

“We call them essential nutrients because they are,” said **Marian L. Neuhouser**, an associate member in cancer prevention at the **Fred Hutchinson Cancer Research Center** in Seattle. “But there has been a leap into thinking that vitamins and minerals can prevent anything from fatigue to cancer to Alzheimer’s. That’s where the science didn’t pan out.”

Everyone is struggling to make sense of the conflicting data, said **Andrew Shao**, vice president for scientific and regulatory affairs at the **Council for Responsible Nutrition**, a vitamin industry trade group. Consumers and researchers need to “redefine our expectations for these nutrients,” he said. “They aren’t magic bullets.”

Part of the problem, he said, may stem from an inherent flaw in the way vitamins are studied. With drugs, the gold standard for research is a randomized clinical trial in which some patients take a drug and others a placebo. But vitamins are essential nutrients that people ingest in their daily diets; there is no way to withhold them altogether from research subjects.

Vitamins given in high doses may also have effects that science is only beginning to understand. In a test tube, cancer cells gobble up vitamin C, and studies have shown far higher levels of vitamin C in tumor cells than are found in normal tissue.

The selling point of antioxidant vitamins is that they mop up free radicals, the damaging molecular fragments linked to aging and disease. But some free radicals are essential to proper immune function, and wiping them out may inadvertently cause harm.

In a study at the University of North Carolina, mice with brain cancer were given both normal and vitamin-depleted diets. The ones who were deprived of antioxidants had smaller tumors, and 20 percent of the tumor cells were undergoing a type of cell death called apoptosis, which is fueled by free radicals. In the fully nourished mice, only 3 percent of tumor cells were dying.

“Most antioxidants are also pro-oxidants,” said **Dr. Peter H. Gann**, professor and director of research in the department of pathology at the **University of Illinois at Chicago**. “In the right context and the right dose, they may be able to cause problems rather than prevent them.”

Scientists suspect that the benefits of a healthful diet come from eating the whole fruit or vegetable, not just the individual vitamins found in it. “There may not be a single component of broccoli or green leafy vegetables that is responsible for the health benefits,” Dr. Gann said. “Why are we taking a reductionist approach and plucking out one or two chemicals given in isolation?”

Even so, some individual vitamin research is continuing. Scientists are beginning to study whether high doses of whole-food extracts can replicate the benefits of a vegetable-rich diet. And Harvard researchers are planning to study whether higher doses of vitamin D in 20,000 men and women can lower risk for cancer and other chronic diseases.

“Vitamin D looks really promising,” said **Dr. JoAnn E. Manson**, the chief of preventive medicine at **Brigham and Women’s Hospital** and an investigator on several Harvard vitamin studies. “But we need to learn the lessons from the past. We should wait for large-scale clinical trials before jumping on the vitamin bandwagon and taking high doses.”

Dr. Bleyer:

- ☑ The number of studies of late that have shown no benefit of supplemental vitamin C, D, and E in preventing cancer is almost overwhelming
 - ☑ Unless one is deficient in vitamin D, there is no need to load up on any vitamins that are not provided in a daily, nutritious diet or plain one-a-day multivitamins
 - ☑ DEFEAT Cancer has been on the record of not promoting vitamins *per se*, and will continue to do so even more avidly given studies like this
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