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April 2007: In this issue!

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● **Sleep Duration and Health**

Sufficient and quality sleep is an important indicator of good health. The *Archives of Internal Medicine* devoted their entire September 18, 2006 issue to sleep and its relationship to health. The editorial in this issue makes this key conclusion:

"Sleep is an indicator of health, and sufficient sleep quantity and good quality should be considered as an essential component of a healthy lifestyle, as much as exercise and nutrition."

This relationship between sleep and health is a two-way street. Poor sleep affects health and poor health has a detrimental affect on sleep. Here are some of the findings on sleep and health.

Sleep duration and health in young adults. One study looked at the relationship between sleep duration and health status in 17,465 university students in 27 universities. Here is what they found on sleep duration:

- 63% were healthy sleepers, getting 7-8 hours per night
- 15% were short sleepers, getting 6-7 hours per night
- 6% were very short sleepers, getting less than 6 hours per night
- 16% were long sleepers, getting 8-10 hours per night or more

Sleep amounts were similar for both men and women so results were combined. The researchers then correlated the health status of the students based on their amount of sleep per night. Students getting less than 7 hours of sleep daily were found to have poorer health even after adjusting for possible confounders including age, smoking status, physical activity, alcohol consumption, parental education, BMI, depression scores, and use of student health services. The odds ratio for self-rated poor health was:

- 1.56 times more common in those getting 6-7 hours sleep daily
- 1.99 times more common in those getting less than 6 hours sleep per night

The researchers point out that it's hard to know whether the poor sleep caused poor health or the poor health resulted in poor sleep. They did adjust for depression and use of health services and visits to the physician to try to control for any health problems. This seems to indicate, especially in young people, that their poor sleep habits were a strong contributor toward poorer health. The loss of sleep contributes to daytime fatigue and a loss of restorative sleep-related biological processes needed for good physical and mental health.

Students getting more than 8 hours of sleep daily did not show an increase in poor health as some previous studies suggested in older adults.

Sleep and immune function. Another study looked at cellular immune function and sleep. Researchers found that inadequate sleep significantly altered immune function similar to what is found in certain disease patterns such as rheumatoid arthritis and HIV infections. Lack of sleep tends to increase markers of inflammation. Inflammation plays an important role in causing coronary artery disease, which is now known to be related to sleep disorders. Inflammation is also related to respiratory disorders, diabetes, and arthritis.

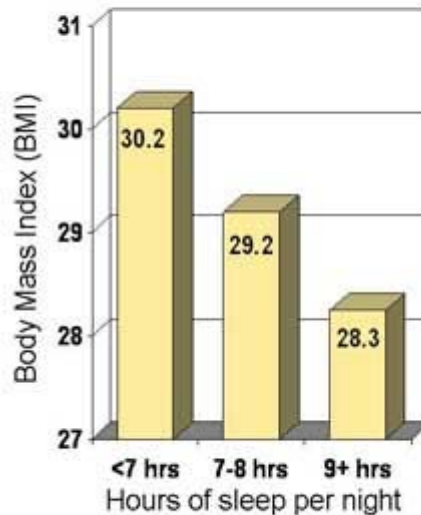
Lack of sleep has also demonstrated a decrease in antibody response to the influenza vaccine. The researchers concluded that adequate sleep is essential for good cellular immunity and health.

Sleep duration and weight gain. A third study looked at a group of nearly 1,000 people in rural communities to see if lack of adequate sleep was related to weight gain over a 5-year period. Researchers found that body mass index (BMI) was highest for those with the shortest sleep duration (less than 6 hours per night). BMI decreased as sleep duration increased. These findings remained even after adjusting for sex, age, educational level, physical job demands, income, depressive symptoms, marital status, and alcohol consumption.

People who got less than 6 hours of sleep daily had a mean BMI of approximately 30 (in the obese stage 1 category). They found that a 1-hour decrease in sleep was associated with an increase in body weight of about 3 pounds. This may not seem like much, but consider that the average young adult in the U.S. gains only about 1.1 pound per year. Therefore, as with diet and physical activity, modest sustained changes in sleep duration could have a significant effect of weight.

Sleep Duration and BMI

- Study of sleep habits and body mass index (BMI) in 990 rural residents
- BMI was highest for those with the shortest sleep duration



Source: *Archives of Internal Medicine*, Sept. 18, 2006.

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The researchers point out that the percentage of adults sleeping less than 6 hours or less per day increased markedly between 1985 and 2004, coincident with substantial increases in BMI nationally. In addition to obesity, short sleep duration has been linked in other prospective studies to increased risk for diabetes, coronary heart disease, and elevated total mortality. The researchers conclude, "Our study adds to an expanding number of studies linking short sleep duration with obesity."

Reference: Kohatsu ND et al. Sleep Duration and Body Mass Index in a Rural Population. *Arch Intern Med*. 2006;166:1701-5. September 18, 2006.

Vitamin E and Longevity

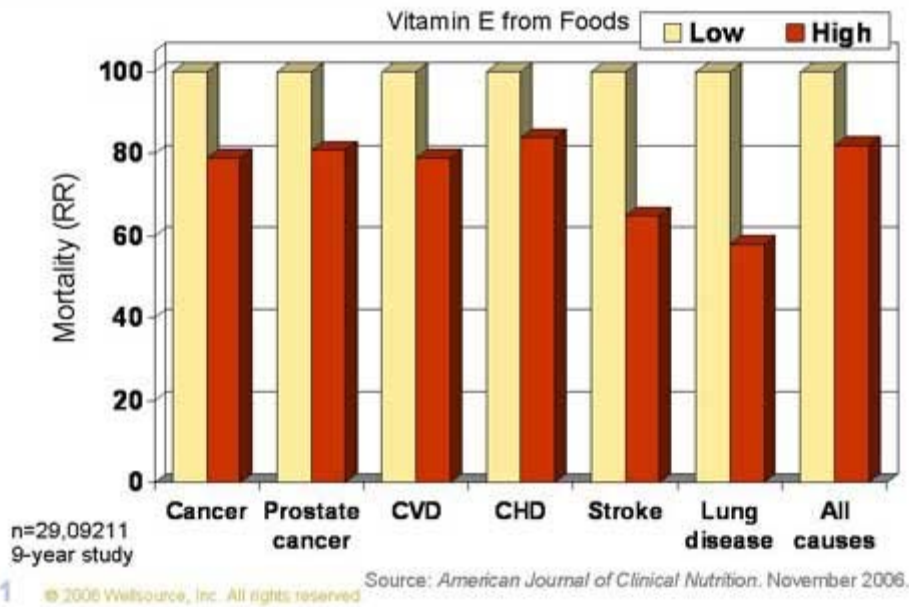
Early studies in nutrition suggested that vitamin E may be linked to lower mortality levels for heart disease and cancer. A clinical trial giving large doses of vitamin E (alpha-tocopherol) to heart patients did not decrease mortality. In fact, a recent review of 19 clinical trials giving vitamin E (alpha-tocopherol) to patients showed a small but significant increase in mortality. Based on this information, doctors suggested to their patients that taking large doses of vitamin E is not a good idea.

A new study in Finland gives additional light on this controversial topic. Researchers studied 29,092 male smokers and looked at their dietary (not supplements) intake of vitamin E. To be more exact, they measured serum levels of vitamin E (alpha-tocopherol). They found that the higher the men's blood levels of vitamin E (indicating that they were eating more vitamin E rich foods) the lower their risk of dying during the 19 years of follow-up.

Comparing the top 20% of people with the highest intake of vitamin E to the 20% of people with the lowest intake:

- Overall mortality decreased by 18%
- Cancer decreased by 21%
- Prostate cancer decreased by 32%
- Cardiovascular disease decreased by 19%
- Coronary heart disease decreased by 16%
- Stroke decreased by 35%
- Respiratory disease decreased by 42%
- And all other causes of death decreased by 30%

Serum Vitamin E and Mortality



How do you explain that vitamin E taken in large doses increases mortality rates but when eaten in the foods, a higher intake decreases mortality? Other research has shown that taking large doses (i.e., supplements) of alpha-tocopherol has been shown to lower your absorption of gamma-tocopherol, another important source of vitamin E that has high antioxidant capacity. By eating more foods high in vitamin E, you get a mixture of both alpha- and gamma-tocopherol. This proper balance found in food lowers risk of mortality.

The authors concluded that higher concentrations of vitamin E in the blood were associated with lower mortality rates even after adjusting for age, smoking, cholesterol levels, history of cardiovascular disease, and HDL cholesterol levels. They further recommended that supplements are not effective but that efforts to increase dietary vitamin E may be warranted; **increasing foods rich in vitamin E such as nuts (e.g., almonds and hazelnuts), seeds (especially sunflower seeds), whole grains, vegetable oils, and dark green leafy vegetables.**

These foods are healthy choices anyway, certainly are not any health hazard, and may cut your risk of dying in the next 19 years by as much as 18%. Sounds like a good health investment to me.

Reference: Wright ME, Lawson KA, et al. Higher baseline serum concentrations of vitamin E are associated with lower total and cause-specific mortality. *Am J Clin Nutr.* 2006;84:1200-7. November 2006.

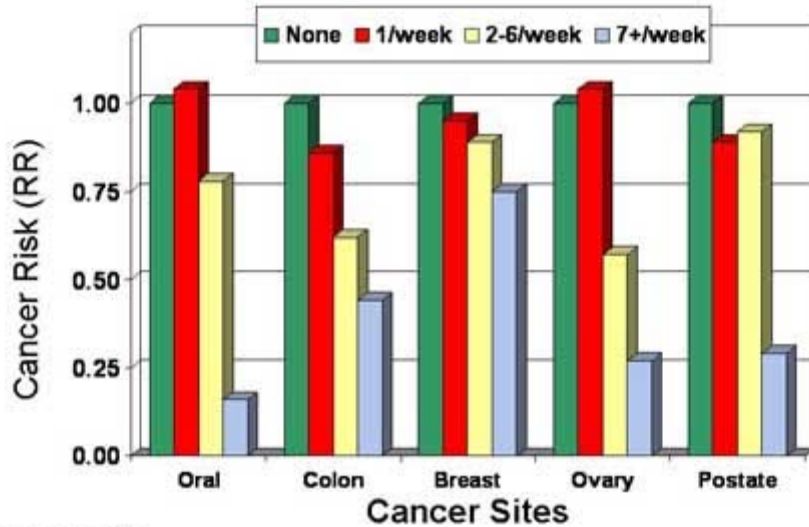
Onions and Garlic May Lower the Risk of Cancer

Do you enjoy the flavor of onions and garlic in your meals? If you do, you may be in luck. New research from southern Europe indicates that these foods may be protective for several cancers. Large case controlled studies compared people eating the most onions and garlic with those eating little if any.

Here is what they found. Those eating the most onion-family foods had:

Cancer site	High onion intake	High garlic intake
Mouth and pharynx	84% lower risk	39% lower risk
Esophagus	88% lower risk	57% lower risk
Colorectal cancer	56% lower risk	26% lower risk
Larynx	83% lower risk	44% lower risk
Breast	25% lower risk	10% lower risk
Ovaries	73% lower risk	22% lower risk
Prostate	71% lower risk	19% lower risk
Kidneys	38% lower risk	31% lower risk

Onion Intake and Cancer Risk



European Data

Source: *American Journal of Clinical Nutrition*, Nov. 2006.

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As you can see, those people eating the most onions and garlic had significantly less cancer. The good part is that it's fun to eat these foods. Other studies in the United States, France, and China have also found protective effects for these vegetables against cancer. While more research needs to be done, the data is quite convincing and the treatment is quite pleasant. So eat up and enjoy your favorite onion and garlic dishes. You may be practicing preventive medicine and it never tasted so good!

Reference: Galeone C et al. Onion and garlic use and human cancer. *Am J Clin Nutr*. 2006;84:1027-32. November 2006.

Office Hours.

betterHEALTH Clinic

Monday	9:15 - 12:00/2:30 - 7:00
Wednesday	9:15 - 12:00/2:30 - 7:00
Friday	2:00 - 6:00
Saturday	9:00 - 12:00 (every other Saturday including April 14th & 28th)

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Tuesday	Transcontinental Media / Rogers Barrie
Thursday	Rogers Cable York Mills
Friday	Rogers Cable Richmond Hill