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## AS WE SEE IT

### Dying From Deficiency

New scientific studies indicate that too many people are dying from simple nutrient deficiencies.

Dr. Bruce Ames recently published a paper stating that a deficiency of folic acid, vitamins C, E, B6, B12, niacin or zinc causes DNA strand breaks, oxidative lesions and increased susceptibility to cancer. Dr. Ames compared a deficiency of any one of these micro-nutrients to the DNA damaging effects of radiation.(1) When DNA strands are damaged, the body becomes more vulnerable to cancer.

Dr. Ames stated that a micro-nutrient deficiency may explain why people who eat the fewest fruits and vegetables have about double the rate for most types of cancer when compared to those with the highest intake. Fruits and vegetables are a rich source of the micro-nutrients that protect DNA against changes that can lead to cancer. Dr. Ames' conclusion was:

“Common micro-nutrient deficiencies are likely to damage DNA by the same mechanism as radiation and many chemicals... Remedying micro-nutrient deficiencies should lead to a major improvement in health and an increase in longevity at low cost.”

Dr. Bruce Ames is a well respected expert on cancer. He is a Professor of Biochemistry & Molecular Biology at the University of California-Berkeley and developed the internationally recognized “Ames Test” that is used for determining if a chemical damages cellular DNA.



William Faloon

### Weakened hearts



A group of British doctors just published a paper indicating that deficiencies of selenium, calcium and vitamin B1 lead directly to heart failure.(2) These doctors went on to point out that vitamin C, E and beta-carotene help protect the arterial system, vitamins B6, B12 and folic acid reduce homocysteine, whereas carnitine and CoQ10 help maintain energy output. The doctors concluded that malnutrition of certain micro-nutrients may play a role in the degenerative process humans undergo during heart failure.

There are a number of causes of heart failure. One of them is a viral attack on the heart muscle itself. A mouse study showed that selenium deficiency made hearts much more vulnerable to viral damage compared to mice with adequate selenium status.(3) Human studies consistently show that selenium exerts an immune-enhancing and anti-viral effect. Selenium has been shown to protect against the progression and lethality of HIV, hepatitis C and influenza viruses.(4-7) Scientific

studies repeatedly attribute selenium deficiency as an underlying reason for viral disease progression, yet conventional doctors seem oblivious to this established fact.

### Plant extracts protect against prostate cancer and artery disease

Lutein is a plant extract that Life Extension members have been taking in supplemental form since 1985. New reports indicate that in addition to protecting against macular degeneration, lutein also protects against atherosclerosis and prostate cancer.

One of these new studies conducted at the UCLA Center for Human Nutrition showed that lutein reduced prostate cancer cell growth by 25% while lycopene reduced cell growth by 20%. When lutein and lycopene were combined, prostate cancer cell growth was reduced by 32%. The UCLA scientists who conducted this study indicated that both nutrients together help protect against prostate cancer better than either nutrient alone.(8)



The UCLA scientists then looked at a region of China where the incidence of prostate cancer is very low. People in this region have minute intakes of lycopene, but high intakes of lutein. The study was then expanded to include Chinese Americans and Caucasian men in the United States. The UCLA researchers concluded:

“Lutein and lycopene in combination appear to have additive or synergistic effects against prostate cancer.”

Another group of scientists looked at the effects of lutein in protecting against vascular disease.(9) Doctors at the University of Southern California conducted a human study over 18 months and found that the presence of high amounts of serum lutein reduced the progression of early atherosclerosis as measured by intima-media thickness of the carotid artery. These doctors then looked at mouse models of atherosclerosis and found that greater lutein consumption resulted in an inhibition of atherosclerotic lesion formation. When these animals received supplemental lutein, lesion size was reduced by 43%. The doctors then looked at LDL cholesterol damage to the arterial wall of these mice, and found that lutein conferred protection against a type of early injury that can lead to atherosclerosis. The doctors concluded:

“These epidemiological, in vitro, and mouse model findings support the hypothesis that increased dietary intake of lutein is protective against the development of early atherosclerosis.”

Life Extension members receive more than 15 milligrams of lutein a day in supplements recommended by The Foundation. Commercial companies are advertising lutein supplements on national TV. The problem with some of these supplements is that they only provide 300 micrograms of lutein. . . an amount too low to provide benefit.

Continued government inaction

Despite a wealth of new scientific studies showing the importance of micro-nutrients, the FDA continues to suppress this information by censoring health claims on the labels of dietary supplements.

The U.S. government says that Medicare will run out of money in the year 2023.(10) Private estimates project it will happen sooner (11)—year 2007. Healthcare outlays could be reduced, and the date of Medicare insolvency postponed, if Americans obtained enough micro-nutrients everyday.

Educated Americans who read publications like Life Extension magazine learn what they can do to reduce their risk of contracting a degenerative disease. Those who choose to believe the government’s anti-supplement propaganda may be dramatically shortening their healthy life spans.

For longer life,

A handwritten signature in black ink, appearing to read 'William Faloon'. The signature is stylized and cursive.

William Faloon

## References

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11. <http://www.clev.frb.org/research/may97et/medins.htm>

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