

Dr. Michael Janson's

HEALTHY LIVING™

Volume 7 No. 11

Free on the web at www.drjanson.com

November, 2005



Michael Janson, M.D.
Editor, Healthy Living

In This Issue

| | |
|--------------------------------------|---|
| Pandemics and Protection | 1 |
| Curcumin Against Cancer | 2 |
| Curcumin-Further Benefits | 2 |
| Obesity, Exercise and Dementia .. | 3 |
| Ask Dr. J: Is Coconut Healthy? | 3 |
| References | 3 |
| In The Health News | 4 |
| Diet and Disease | 4 |
| Lentil-Tomato Soup | 4 |

Dear Friends,

As the avian flu spreads across continents, infecting mainly birds and occasional humans, epidemiologists and infectious disease specialists are concerned about the possible development of a pandemic. Based on the history of viruses like this, it is reasonable to be concerned and to take appropriate and manageable precautions. As the virus spreads and mutates, it may develop resistance to antiviral drugs, but so far they are still effective, and I would suggest other measures in addition. A vaccine is still being tested, but may not be available when it is needed, and we do not yet know if it will be effective.

In 1918, returning soldiers from the first World War helped to spread influenza (then called the “Spanish flu”) around the globe, leading to a pandemic that killed 25 to 50 million people in less than two years. In the United States, about a quarter of the population became ill, and over half a million people died. It was particularly virulent, with a high mortality rate of over 2 percent of infected people (in Japan, the mortality was strikingly lower, at about 0.5 percent, likely because they had no returning weakened, fatigued, and malnourished soldiers).

The possibility of a new pandemic leads to considerable media attention, and dire predictions of societal collapse, as people stay

out of work, goods and services stop flowing, financial markets close, and conventional amenities such as electricity, running water, and other modern conveniences cease to be available. I can't say that these predictions won't come true, but more recent pandemics have not been as devastating as in 1918, and even then, 98 percent of people in developed countries survived their encounter with the influenza virus. Any infectious disease is more likely to be a problem for people who are malnourished or have compromised immune systems (the 1918 flu was unusual in that the highest mortality was in people from 20 to 40 years old, many of them the above-mentioned soldiers).

If this virus mutates into a bigger problem, I would recommend being diligent with the usual care of personal hygiene, particularly with hand washing and using hand sanitizers, avoiding large public gatherings (the virus can be transmitted before symptoms), and maintaining a strong immune system with a healthy diet and dietary supplements. If you get infected, I'd recommend high doses of vitamin C, including intravenous doses, plus elderberry extract, vitamin E, coenzyme Q10, echinacea, garlic, and a variety of other supplements.

It will be almost impossible to keep adequate food and water on hand for a lengthy emergency. Once again we have to make some choices about reasonable precautions versus hyper anxiety. Living in fear and anxiety can only add to the risks, and the vast majority of people survive pandemics. You can't protect yourself completely, but you can do your best, and chances are that will be enough.

Curcumin and Cancer

I've written several times about curcumin, as it is a powerful spice that reduces inflammation, protects the brain through its antioxidant activity, and inhibits the formation of new blood vessels in tumors ("angiogenesis") that allows them to grow. New information confirms many of these benefits. Curcumin is one of the principal phytochemical components of turmeric, a main ingredient in curry powder. Turmeric is in the ginger family (and, indeed, ginger has some of the same benefits as curcumin).

A recent animal study shows that curcumin (its chemical name is diferuloylmethane) can reduce the toxicity of cancer chemotherapy without reducing its effectiveness. A protein called nuclear factor kappa-B (NF-kappaB) helps breast cancer cells survive. NF-kappaB also increases cancer cell growth, invasion, and spread. Taxol (paclitaxel), a breast cancer drug, actually increases the activation of NF-kappaB, creating potential problems in cases where the tumor is resistant to the drug.

In breast cancer cell cultures, administration of curcumin along with the paclitaxel blocks the activation of NF-kappaB, thus potentially reducing the growth and spread of the tumors. Curcumin also promotes the natural process of programmed cell death (called "apoptosis") in cancer cells, without any side effects, further helping to prevent tumor growth and spread.

The same researchers also studied breast cancers grafted onto mice. In an untreated control group, 96 percent of the mice had metastases to the lungs. The other groups were given dietary curcumin, with or without paclitaxel, or just the drug. Paclitaxel reduced lung metastases slightly, but in those given curcumin, only 28 percent showed evidence of lung tumors. This information is very promising, as no treatments are consistently effective in advanced breast cancer.

Breast cancer is not the only tumor that may be helped by curcumin. Colon cancers (and other related tumors) have a high level of activity of a receptor for a substance called epidermal growth factor. A study of cultured colon cancer cells showed that curcumin can inhibit the gene expression for this receptor, and thus block the growth of the tumor cells.

Some neurological tissue tumors are also difficult to treat. A brain tumor called astrocytoma can be very invasive, spreading rapidly through the brain, although not all such tumors are so aggressive. The spread of these tumors is promoted by the same NF-kappaB protein. In a new study, curcumin was shown to inhibit NF-kappaB in five different astrocytoma cell lines. It also promoted apoptosis in these cultured cells.

Similar studies show that curcumin inhibits proliferation of non-Hodgkin's lymphoma cells while not harming normal blood cells. It also inhibits squamous cell cancer growth, and applied topically to squamous cell cancer grafts, curcumin inhibits the growth and spread of these tumors. In addition, through similar mechanisms it induces apoptosis in leukemia cells.

Curcumin-Further Benefits

Overall, curcumin is turning out to be a very desirable spice, both in cooking and as a dietary supplement. In addition to its many cancer-fighting properties, it protects the kidneys from the side effects of toxic drugs and oxidative stress, and has been used in traditional medicine in India for rheumatic disease, sinusitis, diabetic wound healing, and liver disorders.

Because chronic inflammation is a contributor to aging and age-related vascular disease, curcumin is likely to be beneficial as an anti-aging supplement. It protects against degenerative brain disorders such as Alzheimer's disease (AD). In AD, the brain accumulates a substance called amyloid. Curcumin binds with amyloid, reversing the process. Curcumin fed to aged animals crosses the blood-brain barrier to bind with amyloid and reduce brain plaques.

Curcumin inhibits oxidative and inflammatory contributors to degenerative diseases, and is better than anti-inflammatory drugs without side effects. It is useful for injuries and chronic arthritis, it lowers CRP, the inflammatory marker of cardiac risk, and it also binds with excessive iron accumulation to reduce oxidative damage.

It is easy to incorporate curcumin into the diet by eating a variety of curry dishes that are so common in India. They are delicious and healthy. An alternative is to take supplements of standardized extract. Typical daily doses range from 300 to 600 mg twice per day.

Obesity and Dementia

Last month I reported on research showing that obesity is related to heart disease in part because fat cells produce the inflammatory marker, CRP. Fat cells also produce substances that increase insulin resistance, worsening another risk factor. New research shows that obesity is related to an increased risk of Alzheimer's disease and other dementias.

Researchers followed 1449 Finnish middle-aged adults from the 1970s for an average of 21 years. They found that those who were obese had a higher risk of Alzheimer's compared to their peers who were thinner. Although high blood pressure, smoking, and high cholesterol were also found to be risk factors, when the researchers controlled for those risks, the data showed that obesity by itself was associated with double the risk of dementia.

High blood pressure and cholesterol were independently associated with about double the risk. Because some dementias are related to vascular disease, it is not surprising that smoking, high cholesterol, and hypertension are likely to contribute to this risk. It is not yet clear that weight reduction will lessen the risk, but it is clearly beneficial for many other reasons.

For even more protection, it is important to engage in regular exercise. A new study on the same Finnish population shows that mid-life physical activity at least twice a week reduces the risk of dementia in half, and the risk of Alzheimer's disease by 42 percent. (I would add curcumin, vitamin E, lipoic acid, ginkgo, and other supplements to your program.)

Ask Dr. J

Q. Is eating coconut or coconut milk a problem for heart disease risk? I know it is high in saturated fat.

GK, Quebec, Canada, via Internet

A. I have often been asked whether coconut is a risk factor for the heart because of its saturated fat content. The information is mixed, but in moderation it is unlikely to be a problem. A recent study of West Sumatrans who consume a lot of coconut helps to clarify this. The researchers evaluated heart disease patients and case controls. (Lipoeto NI, et al., Dietary intake and the risk of coronary

heart disease among the coconut-consuming Minangkabau in West Sumatra, Indonesia. *Asia Pac J Clin Nutr.* 2004;13(4):377-84.) They found that both groups had a high intake of coconut, but it was unrelated to the risk of heart disease. The subjects with heart disease consumed the same amount of coconut as the controls. However, those with heart disease had a higher intake of animal fat and cholesterol, and a lower intake of carbohydrate than the controls.

The researchers also noted that the heart patients had a higher animal protein intake. Coconut contains medium chain triglycerides and tocotrienols (in the vitamin E family of nutrients) but no linolenic acid (an essential fatty acid). Other research suggests some increase in certain risk factors compared to eating fish oils.

I think that eating coconut is unlikely to be a problem (other than being careful of total calorie intake in overweight people), if it is not excessive and is balanced with other essential fatty acids. My August curry recipe includes coconut milk and shredded coconut. I also use these in smoothies (and add flaxseeds for linolenic acid).

References

Curcumin Against Cancer

- Aggarwal BB, et al., Curcumin suppresses the Paclitaxel-induced nuclear factor-kB pathway in breast cancer cells and inhibits lung metastasis... *Clin Cancer Res* 2005, 15 Oct;11:7490-7498.
- Chen A, et al., Curcumin inhibits human colon cancer cell growth by suppressing gene expression of epidermal growth factor receptor ... *Oncogene.* 2005 Sep 19; [Epub ahead of print]
- Nagai S, et al., Inhibition of cellular proliferation and induction of apoptosis by curcumin in human malignant astrocytoma cell lines. *J Neurooncol.* 2005 Sep;74(2):105-11.
- Sun C, et al., Anticancer effect of curcumin on human B cell non-Hodgkin's lymphoma. *J Huazhong Univ Sci Technol Med Sci.* 2005;25(4):404-7.
- LoTempio MM, et al., Curcumin suppresses growth of head and neck squamous cell carcinoma. *Clin Cancer Res.* 2005 Oct 1;11(19 Pt 1):6994-7002.
- Tirkey N, et al., Curcumin, a diferuloylmethane, attenuates cyclosporine-induced renal dysfunction and oxidative stress in rat kidneys. *BMC Pharmacol.* 2005 Oct 15;5(1):15 [Epub ahead of print]
- Banjerdpongchai R, Wilairat P., Effects of Water-soluble Antioxidants and MAPKK/MEK Inhibitor on Curcumin-induced Apoptosis in HL-60 Human Leukemic Cells. *Asian Pac J Cancer Prev.* 2005 Jul-Sep;6(3):282-5.
- Yang F, et al., Curcumin inhibits formation of amyloid beta oligomers and fibrils, binds plaques, and reduces amyloid in vivo. *J Biol Chem.* 2005 Feb 18;280(7):5892-901.
- Baum L, Ng A, Curcumin interaction with copper and iron suggests one possible mechanism of action in Alzheimer's disease animal models. *J Alzheimers Dis.* 2004 Aug;6(4):367-77.

Obesity and Dementia

- Kivipelto M, Obesity and vascular risk factors at midlife and the risk of dementia and Alzheimer disease. *Arch Neurol.* 2005 Oct;62(10):1556-60.
- Rovio S, et al., Leisure-time physical activity at midlife and the risk of dementia and Alzheimer's disease. *Lancet Neurol.* 2005 Nov;4(11):705-11.

In the Health News

- Common environmental toxins are more pervasive and dangerous than is suggested by health authorities. Of particular concern, according to researchers, are lead, radon, tobacco smoke, and byproducts of chemicals used to disinfect municipal water supplies, including trihalomethanes (THM). They suggest that allowable levels (80 parts per billion in the USA) are far too high. As little as 1 ppb can increase the risk of bladder cancer. (Wigle DT, Lanphear BP, Human Health Risks from Low-Level Environmental Exposures... *PLoS Med.* 2005 Oct 18;2(12):e350 [Epub ahead of print].) Using a solid carbon block filter can virtually eliminate the lead and THM from drinking water. Ventilation of homes can reduce the radon risk.
- Chronic back pain is a leading cause of lost work days. An exercise program with both strength and flexibility training for 2-4 months is effective treatment, and is better than ultrasound, electrical stimulation, and hot packs. More intensive activity appears to be even better than less intense regimens, refuting the myth that bed rest is a good treatment for back pain, but it requires some effort. (Exercise training may ease chronic back pain. Reuters Health, October 4, 2005.)

Diet and Disease

- Consuming more beans, nuts, and cereal grains provides protection against cancer. These contain inositol pentakisphosphate (similar to phytate, or inositol hexaphosphate—IP6, already shown to help with cancer), which blocks PI3K, an enzyme that promotes tumor growth through angiogenesis (Maffucci T, et al., Inhibition of the phosphatidylinositol 3-kinase/Akt pathway by inositol pentakisphosphate results in antiangiogenic and antitumor effects. *Cancer Res.* 2005 Sep 15;65(18):8339-49). These foods have many other benefits (fiber and flavonoid content) and many tasty recipes include them.

Dr. Janson's Healthy Living™

Published by
VITALITY NOW![®]
PO Box 384
Greenville, NH 03048
Subscriptions: Free online
or call 888-922-4848

Information herein is not medical advice or direction. All material in this newsletter is provided for information only. Its contents should not be used to provide medical advice on individual problems. Consult a health care professional for medical or health advice.

Email: drjanson@drjanson.com

Copyright, 2005:
Michael Janson, M.D.

Lentil-Tomato Soup

This is a Mediterranean-style hearty soup for chilly fall days. Sauté onions and garlic with diced carrots and celery in olive oil, adding chopped fresh basil and parsley, thyme, rosemary, and some freshly ground pepper. When the garlic starts to turn brown, add boiling water, lentils, cubes of potato, barley (about half as much as the lentils), and a can or two of organic fire-roasted tomatoes or fresh, grilled tomatoes). Let this simmer until the potatoes, lentils, and barley are all soft. Add chopped green leafy vegetables (chard, spinach, or kale), and when these are wilted, add some lemon juice and a small amount of salt or soy sauce. As a final step, turn off the heat and fold in some chopped fresh cilantro. You can use brown rice or millet instead of the barley, or you can leave the grain out and serve the dish with a side of whole grain bread.

From November to May, I see patients in New Smyrna Beach, Florida. For appointments during this time, call **386-409-7747**. I also do phone consults.

From June to October, I see patients in Arlington, MA, and Amherst, NH. Call **603-878-2256**.

My newest book is *The User's Guide to Heart Healthy Supplements*. You can order it from **QCI Nutritionals** at **888-922-4848**. *Dr. Janson's New Vitamin Revolution* and my other books are also available at my website, from QCI Nutritionals, or health food stores. You can visit the QCI Nutritionals website at www.qcinutritionals.com for quality supplements at reasonable prices.

Sign up for *Healthy Living* by email at my website, www.drjanson.com