

Tai chi gives immune system a boost

Fighting off diseases is a young person's game. With age, our immune systems become less nimble and not quite as ruthless. The number of T cells drop. The B cells also start to wind down, making fewer antibodies that respond to outside intruders and more errant ones that turn on the body itself.

As a result, even those of us who age gracefully are more vulnerable to getting sick as we tack on the years. What's more, our immune systems don't respond as vigorously to the vaccinations—such as the annual flu shot—that we get to prevent some of those illnesses.

Small studies have yielded some evidence that exercise seems to re-energize the immune system, so when UCLA researchers decided to test whether tai chi might do the same, they weren't starting from scratch. On the other hand, the slow, controlled movements of tai chi aren't a typical form of exercise.

The study involved 112 healthy people whose average age was about 70. Half of the volunteers were randomly assigned to attend three, 40-minute tai chi sessions a week. They were taught tai chi chih, a Western variation of the martial art. The control group attended health education classes that included group discussion.

After four months both groups were given the chickenpox

vaccine, Varivax. The shingles vaccine, Zostavax, wasn't available at the time.

The researchers drew blood from the study subjects and conducted tests that assess how active T cells are in response to the chickenpox virus. The tests were done periodically during the study, which lasted a total of 25 weeks.

The results were reported in the April 2007 issue of the *Journal of the American Geriatrics Society*. The T cell activity levels of the tai chi group had risen 38% by the end of the study, compared with a 28% increase for people in the control group, although the immunological boost from tai chi came mainly before vaccination. After the chickenpox shot, the T cell activity levels of the tai chi and the control group went up by about the same amount (14% vs. 15%).

The UCLA researchers noted that tai chi alone induced an immune response that was comparable to the vaccine.

Tai chi might have a strong effect on the immune system because it manages to bring exercise, relaxation, and meditation together in "one behavioral intervention," the researchers said. They theorized that tai chi enhances T cell activity by quieting the nervous system's "fight or flight" response, which can, in certain circumstances, interfere with the immune system.



Cocoa beats tea

Researchers in Germany conducted a meta-analysis comparing the effects cocoa products and tea had on blood pressure. It wasn't close: While cocoa significantly reduced blood pressure according to the five studies in the analysis, the five studies of tea showed no effect. Systolic blood pressure (the top number) fell, on average, by 4.7 mm Hg in the cocoa studies, and diastolic blood pressure (the bottom number) by 2.8 mm Hg.

That may not seem like very much of a decrease, but it's comparable to the effect you get from taking a beta blocker or an ACE inhibitor. And a drop that size translates into a 20% lower risk for stroke and 10% lower risk for heart attack.

Like cocoa, tea is loaded with polyphenols, the chemicals that are presumably responsible for relaxing blood vessels so blood pressure drops. The quantity of polyphenol intake is pretty similar in the tea and cocoa studies.

The big difference seems to be in the type of polyphenol. Chocolate contains procyanidins, which have been shown to relax blood vessels, whereas tea contains flavonols and gallic acid—both of which may have many wonderful healthful attributes, but soothing blood vessels is not among them.

(Researchers take into account that the caffeine in tea might offset any lowering effect on blood pressure.)

Reports of cocoa's health benefits go back a few years now. Chocolate lovers savor them because it gives their somewhat guilty pleasure a nice medicinal purpose. But hold on. Read the label: You've got to consider the sugar, fat, and calories that are riding into your diet on the back of virtuous cocoa.

If you love chocolate, go ahead and enjoy it (life is too short not to). But for your health and your weight, think about cutting back on some other high-calorie, high-sugar "loves," such as ice cream, cookies, and sugary candy.



Prescription fish oil

With all of the over-the-counter fish oil that's for sale, why is there a prescription product? The FDA approved Omacor several years ago to be used in conjunction with diet for treatment of high triglyceride levels (500 mg/dL or more). Fish oil is famed for its omega-3 fats, but in its natural state it's a mixture of other fats—including quite a bit of saturated fat—and triglycerides. The fish oil used to make Omacor has been chemically processed and purified so that it's close to being pure omega-3s (about 900 milligrams in total), although there's some vitamin E in there as an inactive ingredient.

In one study, people on special diets who took 4 grams of Omacor daily for four months reduced their triglyceride levels by 45%, although their LDL levels went up quite a bit. The statin drugs (Lipitor, Zocor, other brands) also pull down triglycerides, but are less effective in doing so when levels are very high. So Omacor fills a very specific need as a treatment for people with extraordinarily high levels of triglycerides. For most of us, one or two fish meals per week, or the over-the-counter fish-oil capsules, will provide an ample supply of omega-3 fats.