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Michael Janson, M.D.
Editor, Healthy Living

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Dear Friends,

This year is the first time that I have been able to grow a vegetable garden in Florida, and it seems miraculous to me that I can harvest tomatoes, basil, broccoli rabe, lettuces, and summer squashes as early as April! I look forward to watermelons when I return in the summer for visits.

As I start my garden in New Hampshire, I realize that growing food always seems somewhat of a miracle, and it keeps me in touch with the earth (literally) and with the natural environment. It also enhances my understanding of the food that I eat, and I can feel sure that there are no unwanted chemicals in the produce from my own garden.

Increasingly, people are demanding higher quality, better flavor, and fresher, locally grown food; vegetable and fruit gardening satisfies all of these desires. Also, when you grow your own food, you will not be eating genetically engineered foods (sometimes called “ Frankenfoods”), which have not been shown to be safe for consumers or the environment. Farms and markets that grow and distribute fresh, local produce are developing rapidly around the world, and you can be part of this growing trend (pun intended) with your own garden (and if you have too much for your own needs, you can share or sell the extra!).

To some extent, anyone can participate in growing their own food. I have a large garden, but even a small yard is enough to grow quite a bit of food. I saw one small plot in front of a house in Cambridge filled with tomatoes, basil, scallions, zucchini, carrots, and trellised snap peas and cucumbers. It was all of eight by ten feet. Even if you do not have this amount of space, you can cut a one foot row of any length and put in a few plants, and use a trellis to take advantage of vertical space (which also captures more sunlight if you are not in a full sun area).

If you have no outside land of any size, such as apartment dwellers, you can have window boxes with lettuces and herbs always ready to pick and eat, and you can grow tomatoes and strawberries in containers on a balcony. Another option is to participate in the urban community gardens that are popping up in many cities. These are plots in unused areas that are developed into thriving organic gardens. You might find that there is a waiting list to get space, but put yourself on the list. Many immigrants find that the spices and vegetables that they are used to in their home countries are not available in supermarkets, but they are growing them in their own or in community gardens.

You can also grow heirloom varieties that are not available in markets. You do not have to be totally dependent on large, industrial farms for all of your food, and you can find relaxation, exercise, and personal and aesthetic development by getting in touch with the earth and your food.

Resveratrol Health Benefits

Last month I mentioned some benefits of resveratrol in blocking growth in cell cultures of brain tumor cells, but it has many other properties that support health. It is a polyphenol found in red wine and other food sources, similar in structure to flavonoids and proanthocyanidins. Although wine is perhaps the best known source of resveratrol, it is also found in peanuts, grapes, berries, and in *Polygonium cuspidatum*, a component of traditional Asian herbal remedies.

Some research suggests that the resveratrol in red wine is the reason for the so-called “French paradox.” While dietary fat is high in France, heart disease rates are lower than in the US. (but heart disease is still the number one cause of death in France). Although many other health habits might explain the difference (more vegetables, more exercise, higher vitamin E intake), or even other components of red wine (such as antioxidant catechins), resveratrol consumption from wine might be part of it.

In any case, resveratrol has a number of health benefits that make it valuable as part of the diet and as a supplement. It is a potent antioxidant, helping to prevent the oxidation of LDL cholesterol (the bad form of cholesterol), while increasing the level of the good HDL-cholesterol. It protects the arterial lining (endothelium), enhancing the production of nitric oxide, which in turn relaxes the arteries to improve blood flow. Resveratrol also reduces the proliferation of arterial cells involved with progression of atherosclerosis, and it inhibits excessive blood clot formation that can block arteries.

A review of the properties of resveratrol in relation to colon cancer suggests a number of ways that the compound could inhibit the activity of certain enzymes and the expression of certain tumor-related genes (oncogenes). One of the enzymes that resveratrol inhibits is ornithine decarboxylase, which has been linked with increased cell growth and carcinogenesis.

Resveratrol also appears to inhibit the development of breast cancer. In a case-control epidemiologic study from 1993 to 2003 in Switzerland, researchers evaluated the relationship of resveratrol intake to the rate of breast cancer in 971 women, 369 of whom had breast cancer and

the rest serving as controls. The third of women with the lowest intake had double the risk of those in the middle level of intake. Those women with the highest resveratrol intake had a 61 percent reduction in breast cancer risk. Interestingly, in this study the favorable association was only noted with resveratrol from grapes, but not from wine. It appears that this benefit was not just associated with higher fruit intake in general, nor with alcohol intake.

Resveratrol and Aging

Resveratrol appears to have a number of other anti-aging properties. It influences the signal transmission between cells and regulates inflammatory pathways through its effects on cytokines, which are cell messengers that control a number of different cell functions. It can block a number of steps in the development of cancer, including the initiation, promotion, and progression phases, and it can help regulate overactive immune cells.

Aging studies are virtually impossible to do in humans, but evidence from other organisms suggests that resveratrol can favorably influence lifespan. While it might seem that information drawn from studies of yeasts and fruit flies would not relate to humans, their aging characteristics, in spite of shorter lifespans, have much in common with us. For example, their susceptibility to toxic aging factors, such as pesticides and oxidants is similar, as these substances reduce the ability of the cells to replicate.

A study in fruit flies, using a biomarker for aging, showed that resveratrol (as well as alpha-lipoic acid) could extend lifespan. Somewhat surprisingly, fruit flies and humans have many genetic similarities. A study in yeasts (*Saccharomyces cerevisiae*, the same organism used to make bread and beer) shows that resveratrol has effects that mimic those of caloric restriction, which has been shown to extend lifespan in many animals and other organisms.

Levels vary widely, but red wine typically contains 160 mcg of resveratrol per ounce (about 1 mg per 6 ounces). Peanuts contain about 73 mcg per ounce. Alcohol also has its drawbacks, so supplements of 2 to 4 mg or more of resveratrol may be beneficial to slow aging without the risks associated with frequent alcohol consumption.

Menopause and Black Cohosh

Menopausal symptoms include hot flashes, depression, nervousness, and other mood disorders, as well as night sweats and sleep disturbances. Black cohosh is an herb that reduces the symptoms of menopause without the side effects of conventional hormone therapy. A new study shows that a standardized extract of black cohosh is as effective as the hormones in relieving all of the above menopausal symptoms, especially hot flashes.

In this multi-center, randomized, controlled trial, 304 patients were given 40 mg of black cohosh extract or a placebo. The herb relieved symptoms as effectively as hormone treatment with no side effects, and the results were both statistically significant and clinically relevant.

Typical treatments have been with hormone replacement therapy, but the horse-derived estrogens (Premarin) and synthetic progestin (Provera) have been shown to create significant health risks. In addition, for older women on long-term treatment they do not provide much protection against osteoporosis.

The medical profession long presumed that such hormone replacement would reduce both heart disease and cognitive decline, but scientific data showed this not to be true—women on long term Premarin or Premarin and Provera had a greater decline in mental function than those who never took them and no reduction in heart disease. They also had a higher incidence of strokes. None of these risks have been demonstrated for women on bio-identical hormone replacement.

Ask Dr. J

Q. What is the difference between calcium citrate and calcium D-glucarate? Is one better absorbed than the other?

VR, via email

A. I often have to clarify the difference between calcium citrate (or other sources of calcium) and calcium D-glucarate, as the latter is quite different from all the others. Calcium citrate is one of the best absorbed supplemental forms of calcium, and it is also somewhat more concentrated than some other supplements, such as calcium lactate and calcium gluconate, so you can get more into each pill.

Calcium D-glucarate does not contain significant amounts of calcium, and it is not recommended as a supplement for this purpose. It is an aid in detoxifying the body because of a special metabolic effect that it has in the digestive tract. When the liver detoxifies a number of chemicals, it attaches them to a substance called glucuronic acid so they can be excreted. A bacterial enzyme in the intestinal tract, called beta-glucuronidase, breaks this attachment, allowing the toxin to be reabsorbed into the blood stream, placing a greater burden on the liver.

Calcium D-glucarate inhibits beta-glucuronidase allowing the toxin to stay attached to the carrier and reducing the detoxification load on the liver. As a result, the liver functions better and the healing process is improved. More specifically, calcium D-glucarate helps block several stages of carcinogenesis, including initiation, promotion, and progression, partly by reducing sensitivity to chemical carcinogens. Typical doses of calcium D-glucarate range from 1000 to 5000 mg daily for prevention or treatment.

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In the Health News

- The combination of too much iron in the diet and high levels of iron in the blood, as measured by transferrin saturation, increases the risk of death from cancer. Transferrin is an iron transport protein, and the percent saturation reflects the amount of iron stored in the body. (Mainous AG, et al., Transferrin saturation, dietary iron intake, and risk of cancer. *Ann Fam Med*. 2005 Mar-Apr;3(2):131-7.) The researchers noted that it is the combination of high iron storage with high dietary iron that makes the difference. Dietary iron comes from red meat, liver, and fortified foods.
- Exercise improves survival in breast cancer patients. In a study of 2987 nurses diagnosed with breast cancer from 1984-1998, those who walked at least 3 to 5 hours per week cut their risk of dying of the disease in half (Holmes MD, et al., Physical activity and survival after breast cancer diagnosis. *JAMA* 2005 May 25;293(20):2479-86). Even one hour of exercise per week was helpful, but less than the higher level of activity. Unfortunately, for many reasons, women often reduce or abandon exercise after a diagnosis of breast cancer, especially if they are overweight.

Diet and Disease

- A large European study confirms that a diet high in fruits, vegetables, beans, grains, fish, and olive oil not only prevents heart disease and cancer, but also prolongs life. The study of almost 75,000 people over 60 years old showed that this Mediterranean diet, low in meat, dairy, and saturated fat and rich in antioxidants, can add at least one year to the life of these individuals. (Trichopoulou A, et al., Modified Mediterranean diet and survival: EPIC-elderly prospective cohort study. *BMJ*. 2005 Apr 30;330(7498):991.) The extra lifespan could be much greater by starting the diet earlier in life.

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Email: drjanson@drjanson.com

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Michael Janson, M.D.

Quick Oat Cake Snacks

We are all sometimes in too much of a hurry to prepare a full meal, and healthy snacks are essential. I love Scottish oat cakes, and have found an organic variety from Nairn's, one of the oldest oat cake purveyors. They are available from The Scottish Grocer (www.thescottishgrocer.com), and they are tasty, totally organic, with no hydrogenated oils or sugar (which is unusual in crackers). I top them with a slice of Tofu Lin (SoyBoy) and mustard, nut butter with banana or a fresh Medjool date (organic, available by mail from Ehrlich's Date Garden in Arizona at 928-783-4778), hummus, or guacamole, or I just eat them plain. They are high in fiber to help lower cholesterol. You can also try Real Foods Corn Thins, a rice-cake-like puffed corn snack from Australia (only the sesame is organic; ask your health food store to order them if not in stock).

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

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.

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.

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