



PANTRY POST

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As we move toward the hoped for sunny autumn, you might wish to look out for the various events around the Soil Association

Organic Fortnight from 1-16 September, this is followed by the South Somerset Food Festival 29 September to 7 October. For the latter we are arranging for some of our existing as well as new suppliers to offer tastings, so do come in and try their local produce.

More on why organic

Plants contain a secret defence system. When stressed by insects, plants produce higher levels of polyphenolic compounds, which are natural pesticides. And these compounds just happen to be potent antioxidants. But when chemical pesticides are used on crops, extra protection is not needed, so fewer polyphenolics develop and antioxidant content is depleted.

A study published in the Journal of the Science of Food and Agriculture bears out one of the arguments in support of going to the extra trouble and expense to purchase organically grown foods. A comparison was



made of the nutritional value of kiwi fruits grown organically with those grown using conventional techniques (chemical pesticides, herbicides, and fertilisers). The kiwis were grown at the same time on the same farm in Marysville, California so both crops were grown in the same soil type, under the same environmental conditions, and were harvested at the same stage of maturity.

Whilst conventionally grown kiwifruit were firmer and had a lighter green colour compared to organically grown, the sugars and organic acids were the same in kiwifruits from both growing methods. The organically grown kiwifruit had less flesh area and thicker skin. However, the authors of the study offered this comment about nutritional value: "All the main mineral constituents were more concentrated in organic kiwifruits, which also had higher levels of ascorbic acid and total phenol content, resulting in a higher antioxidant activity." This has more recently been added to by a 10 year long study on tomatoes by University of California, Davis. The report in the New Scientist showed that the levels of the flavonoids quercetin and kaempferol were on average 79 and 97 per cent higher in the organic variety!

These two flavonoids are known antioxidants and have been linked to reduced rates of heart disease, some forms of cancer and dementia. The New Scientist pointed out that flavonoids are produced as a result of nutrient deficiency and it was suggested over-fertilisation may cause the lower levels of flavonoids in conventionally grown food.

The Eyes need it!

Age-related macular degeneration (AMD) is the leading cause of blindness in people over the age of 50. As the name of the condition suggests, age is the primary risk factor for AMD. But there are two modifiable risk factors that anyone with AMD or at high risk of the disease should consider changing: cigarette smoking and ACE (hypertension inhibitor) prescription drugs use.

In past Pantry Posts we mentioned an Australian study that examined vision health and fish consumption in more than 2,300 middle-aged and elderly subjects. Results showed the risk of AMD was reduced by 70 per cent among subjects who regularly ate three or more servings of fish each week. More recently in the Archives of Ophthalmology, researchers reported on a study of over 1,700 women over the age of 50. This revealed that a steady intake of lutein and zeaxanthin (antioxidant-rich plant pigments) might reduce AMD risk even further.

The study showed that those women under the age of 75 who had high and stable intake of both lutein and zeaxanthin, compared to women with the lowest intake of the carotenoids, the risk of: - intermediate stage AMD was 43 per cent lower; and late stage AMD was 74 per cent lower. No risk reduction was observed in women over the age of 75 who regularly consumed high levels of the two carotenoids.



Two further studies have revealed another benefit of lutein. The studies concluded that the nutrient may not only help prevent AMD, but may also help improve visual function for those with early and even advanced AMD.

Leafy green vegetables are the best sources of lutein. Zeaxanthin is plentiful in yellow corn, orange pepper, kiwifruit, squash, mango, honeydew, broccoli, and egg yolks.

For those who develop AMD, a National Eye Institute (NEI) study showed vision loss might be inhibited when lutein is combined with other nutrients. Researchers tracked nearly 3,600 participants between the ages of 55 and 80 for more than eight years to examine the effect of antioxidant supplement intake on AMD. Results showed that when administered in the early stage of AMD, certain supplements significantly reduced predicted vision loss.

The NEI team recommended that anyone at risk of developing AMD should consider taking these supplements daily, in the same amounts used in the study:

- * Vitamin C - 500 mg
- * Vitamin E - 400 IU
- * Beta-Carotene - 15 mg
- * Zinc (as zinc oxide) - 80 mg
- * Copper (as cupric oxide) - 2 mg

Do talk to your doctor about AMD and supplement intake before adding new supplements to your daily regimen.

In case you forgot!

Recent studies published in the Lancet and Archives of Neurology have shown that taking folic acid helped people fare better on all cognitive tests than those taking placebos.

In the Dutch study men and women took 800 mcg of folic acid daily and at the end of three years had not only increased the level of folic acid in the blood by nearly 600 per cent but had a 26 per cent drop in homocysteine levels. The US study showed that those taking more than 487 mcg of folic acid daily were 50% less likely to develop Alzheimer's disease during the six years of their study.

Homocysteine is the amino acid that promotes plaque buildup in arteries and several studies have shown folic acid, along with other vitamins in the B group (most notably B-6 and B-12) reduce its

levels. The link between high folate levels and reduced stroke risk was confirmed in a study from Chicago's Children's Memorial Research Center. Conducting a meta-analysis of eight trials in which folic acid supplements were tested, results showed that subjects with no history of stroke who took folic acid supplements reduced their stroke risk by 25 percent. In addition, when folic acid was taken for more than three years, reduction of risk was 30 per cent. The result: folic acid or folate has earned a reputation for helping keep the heart healthy while also reducing risk of stroke and cognitive decline!

The best dietary sources of folic acid include spinach and other dark green vegetables, citrus fruits, broccoli, wheat germ, brewers yeast, lima beans, cantaloupe, watermelon, brown rice, peas, sprouts, poultry, shellfish, pork and liver from organically raised animals.

Bones and Gluten free

In 2005 a study published in the Archives of Internal Medicine showed that coeliac disease (CD) was much more common among people who suffered from osteoporosis.

When you have coeliac disease, gluten (a component of grain) creates an obstruction to the absorption by the small intestine of vital nutrients such as calcium. As we have reported before, calcium is ESSENTIAL for those at risk of osteoporosis, as are other vitamins such as magnesium to help fix the calcium. The main culprit behind coeliac disease is gluten, which is found in grains like barley, rye, oats and wheat. Also flour, pasta, and noodles and barley based drinks, barley fruit drinks, malted drinks, and beer.

So a gluten free diet means avoiding all of the above foods, unfortunately. For more free information on the link to osteoporosis, go to the National Osteoporosis Society website. Natural ways to put more calcium into your diet are by eating leafy green vegetables as well as cheese, sardines, seeds, nuts and broccoli. Add to this some calcium supplements and boost your intake of vitamin D and magnesium. They can help prevent the loss of calcium from your bones. This is particularly important after the menopause. You could try adding chickpeas, prunes and peanuts into your daily diet.

The major restriction is to avoid refined carbohydrates and sugar. They acidify the blood and drain the calcium from your bones. Then of course there is the question of some more exercise! Another article in the Archives of Neurology notes that research by the Mayo Center indicates a probable link between CD and progressive cognitive impairment, but that further research is needed to explain the mechanism behind the link.



A small selection from the range of 'Natures Aid' products stocked by Sue's Pantry.

Vitamin D



According to a study in the Journal of American Geriatrics Society, people taking 800 iu of vitamin D daily had 72 per cent fewer falls than those who took a placebo. Another study of subjects 65 years age or older found that men and women were five times more likely to fall two or three times if they had low levels of vitamin D!

According to the findings of a new study, people with low blood levels of vitamin D may be at an increased risk of high blood pressure - a problem that could be easily remedied with supplements!

Lead researcher, Robert Scragg, said: "This finding may have public health significance, as vitamin D levels can easily, and cheaply, be increased by a modest increase in sun exposure or vitamin D supplementation. However, first it needs to be confirmed by large, well-designed intervention studies".

In the UK alone, there are an estimated 10 million people with hypertension, defined as having blood pressure higher than 140/90 mmHg. The condition is a major risk factor for cardiovascular disease (CVD), which causes almost 50 per cent of deaths in Europe per year.

Vitamin D refers to two biologically inactive precursors - D3, also known as cholecalciferol, and D2, also known as ergocalciferol. The former, produced in the skin on exposure to UVB radiation (290 to 320 nm), is said to be more bioactive. The latter is derived from plants and only enters the body via the diet, from the consumption of foods such as oily fish, egg yolk and liver.

The benefits of the vitamin were emphasised in another recent study from a team at the Osteoporosis Research Center at Creighton University in Omaha, Nebraska. This is though not just a vitamin D study, actually it is more of a calcium study that included vitamin D!

Subjects were divided into three groups: one group receiving a supplement of 1,400-1,500 mg of calcium daily; another the same calcium supplements in addition to 1,100 iu of vitamin D daily; and one group placebos. Over the four-year intervention period, cancer rates were about the same in the calcium group compared to the placebo group but subjects in the calcium-plus-D group had a 60 per cent reduced risk of cancer compared to the other two groups. What was even more impressive was that cancer rates during the last three years of the study showed that those in the calcium-plus-D group had a 77 per cent reduced risk of cancer compared to the other groups.

Snippets

Fried Fish

Every day the media seems to contain another story about the emphasis on including fish in our diets. However, it bears repeating regular consumption of fried fish is very unhealthy. According to a 2003 University of Washington study, subjects who ate fried fish several times each week had a higher risk of heart attack and death due to heart disease. In the same study, subjects who ate baked or broiled fish three or more times each week had a significantly reduced risk of heart disease.

Local Scrumpy

A study from Glasgow University has revealed that cider may be as rich in antioxidants as red wine! Both contain phenolics - an antioxidant that has been found to be protective against cancer, heart disease and strokes. However, factors such as type of apple, exposure to light, soil composition and storage are all thought to affect the concentration in the cider.

Mushrooms

We have referred before to the benefits of olive oil, well, not too far behind it you will find mushrooms! However, unlike olive oil with its three or four different varieties, there are literally dozens of different kinds of mushrooms. The ones usually suggested for their health benefits are the Asian varieties like shiitake and maitake. While these mushrooms are undeniably good for you, they are not the most commonly consumed types. A study published in Cancer Research showed that you can obtain some significant protection against breast cancer from the mushrooms that most of us do eat on a regular basis - the white button variety! Field mushrooms of course do taste better!

Researchers studied how several different kinds of mushrooms affected aromatase, an enzyme that helps the body make oestrogen. (Excess oestrogen can lead to cancer formation.) They found that not only did some common varieties of mushrooms block the action of aromatase in the body, but that the extracts of some of these mushrooms actually reduced the growth of breast cancer cells in test tubes and slowed tumour growth in experimental animals. According to the study's lead researcher, Dr. Shiuan Chen, "You do not need a strong effect to cause cancer prevention. Eating 100 grams or even less of mushrooms per day could have an effect on preventing new breast cancers."

Bones dem dry bones

New research recently published in the Archives of Internal Medicine has indicated that common anti-depressants may increase the risk of osteoporosis in the elderly. Two separate studies in the US found that people who used Prozac and Seroxat developed thinner bones than those who did not take them.

The pills are both from a group of drugs known as selective serotonin re-uptake inhibitors (SSRIs). Depression affects up to one in five people at some point in their lives, with 1.5 million Britons aged 16 to 75 suffering from it at any time. In 2006, 16.2 million prescriptions for SSRIs were given, up from 14.7 million in 2005.

Research carried out by Yale University School of Medicine on girls of between eight to 14 years old found that by taking 150 mg of magnesium twice daily for one year provided higher bone-mineral content and density. The greatest increases were in bone minerals occurred in the hips and neck, but slight increases were also evident in the spine.

Remember to take it?

According to a study from the University of Montpellier, low selenium levels were associated with poor thinking processes and other aspects of cognition. Selenium is more usually associated with maintaining our physical health by helping to fight infections and inflammation as well as preventing some types of cancer. One such study published in the American Journal of Clinical Nutrition highlighted selenium's role as a prostate cancer fighter.

Examining selenium levels and nutrient intake in more than 1,600 subjects over eight years showed that among subjects with the highest selenium levels combined with the highest vitamin E intake (more than 28 iu per day), prostate cancer risk was reduced by more than 40 per cent. Similar results were found among subjects with the highest selenium levels combined with multivitamin use.

Even cigarette smokers who had high selenium levels were at lower risk of developing prostate cancer!

Diesel and cholesterol

A recent report in *Genome Biology* claimed that exposure to air pollution multiplies the increased risk of heart attacks and strokes caused by high cholesterol.

Dr Andre Nel, a medical expert at the University of California, Los Angeles and lead author of the study, asserted: "The combination of diesel particles and cholesterol fats creates a dangerous synergy that wreaks cardiovascular havoc far beyond what's caused by the diesel or cholesterol alone."

Neck massage?

Scientists at the University of Leeds have found that links between neck muscles and the brain play a role in controlling blood pressure and that manipulating the muscles can lower it without using drugs.

The study, published in the *Journal of Neuroscience*, identified neck cells that are connected to an area of the brain called the nucleus tractus solitarius, an area that helps to control blood pressure, heart rate and breathing.