It's good to be back after my one-year hiatus from writing for Townsend Letter. It has been a busy time, and I invite you to see our new free iPhone application called "Natural Cures." It was designed to guide both health professionals and the public in treating most common illnesses naturally (see the "A-Z" section). It also has a handy reference section on nutrition, discussing each of the major nutrients; a blog; a news section; and more. I invite you to send in your comments on what topics or tools you would like to see added (in the "Request a Feature" function under "Info"); like most things natural, it is a constantly growing application.

In this issue, we will discuss natural treatments for osteoporosis, as well as the role of the recurring epidemic of iodine deficiency in breast and thyroid health.

Osteoporosis

Osteoporosis, or decreased bone density/strength, can worsen with age, inactivity, and hormonal deficiencies (estrogen, testosterone, and DHEA). Currently, the rate of osteoporosis among older women is estimated to be about 29%. Yet only 13% of older women have been diagnosed with the disease. Osteoporosis can be easily diagnosed by performing a test called a DEXA (dual energy X-ray absorptiometry) scan. Fortunately, many treatments can be effective at restoring bone strength and eliminating pain.

Although using calcium to increase bone density has received most of the media attention, it is actually a rather small player when it comes to improving bone strength. In addition to weight-bearing exercise and natural estrogen, many other nutrients and treatments can dramatically improve bone density and decrease bone pain. Sadly, except for calcium, most doctors only hear about expensive prescriptions such as Fosamax. I would certainly start by adding the nutrients that are critical for bone production. These include magnesium, boron, folic acid, copper, manganese, zinc, and vitamins B6, B12, D, and C. In addition, I recommend:

- **Calcium, 1000 to 1500 mg daily.** Patients should not take calcium within 2 to 4 hours of thyroid hormone, or they will not absorb the thyroid hormone. You may choose to give the calcium at meals and bedtime (for example, 500 mg at lunch, dinner, and bedtime) because it is better absorbed with food, and calcium taken at night can help patients to sleep.

- **Strontium.** This mineral is highly effective at improving bone density. I am not speaking about strontium-90, the very dangerous radioactive compound released during nuclear testing. The strontium available in health food stores is nonradioactive and very safe—even in high doses. Studies using strontium in the treatment of 353 osteoporosis patients showed a dramatic 15% increase in lumbar spine bone mineral density (BMD) over two years in patients using 680 mg of strontium (2000 mg of strontium ranelate) a day. They then repeated the placebo-controlled study with 1649 osteoporotic women. New fractures decreased by 49% in the first year of treatment, and BMD in the lumbar spine increased by an average of 14.4% after 3 years. There was an 8.3% increase in hip BMD as well. Other forms of strontium have shown similar benefits, and 680 mg of elemental strontium daily appears to be a good dosage. Strontium gluconate is better absorbed than strontium carbonate. If possible, take the strontium on an empty stomach and at a different time of day than the calcium, as calcium can block strontium's absorption. Early data also suggest that the strontium may also be helpful in treating osteoarthritis. Although it took 3 to 36 months of therapy, taking strontium was associated with a marked reduction in bone pain in osteoporosis patients.

- **Hormonal support.** Make sure that estrogen, DHEA, and testosterone levels are optimized using bioidentical hormones, since these hormones can also considerably improve bone density.

- **Fish oil** also may decrease osteoporosis. You can either increase your intake of salmon and tuna or use fish oil 1 to 2 tsp a day.

In my practice I use a mix of Energy Revitalization System vitamin powder (by Integrative Therapeutics) for overall
nutritional support and Bone Health (by Ultraceuticals), which contains the calcium, magnesium, strontium, high-dose vitamin D, vitamin K and more.

**Iodine Deficiency: An Old Epidemic Is Back**

Iodine intakes (estimated by urine output) dropped by ~50% from 1971 to 2001. This is occurring for several reasons:

- Iodine deficiency with goiter has historically been widespread in the US (especially in the Great Lakes region). This is why iodine was added to salt. The current RDA for iodine is ~150 mcg/day. Much of this still comes from salt. Unfortunately, most of the salt used in food processing does not have iodine, and people are using less iodized table salt at home because of the misguided medical advice (except for those with heart failure) to avoid salt. People who eat more salt live longer.

- Until recently, a lot of our iodine intake was also from wheat (~25%). Unfortunately, flour mills have switched to using bromides instead. Bromides in flour were banned as being toxic in the UK in 1990 and in Canada in 1994, but the FDA still allows their use in the US.

- As iodine and bromine (and fluorides) are all related chemically (called halides), they can act as competitive inhibitors to each other. Because of this, we are seeing both iodine deficiencies from decreased intake and from competitive inhibition from increased bromine and fluorine.

- Another problem is that the addition of large amounts of unfermented soy (for example, soy milk, soy cheese, soy protein added to food) inactivates the enzyme thyroid peroxidase and can cause hypothyroidism. This is less of a problem with fermented soy products like tempeh and tofu.

**What Are the Implications of Iodine Deficiency Coming Back?**

- An epidemic of thyroid problems. Bromides, which may block iodine function, are implicated in many thyroid disorders (bromides are reported to be 50 times higher in the thyroid tissue of thyroid cancer patients). Low iodine can contribute to an increased risk of both an under- or overactive thyroid.

- Iodine plays a key role in breast tissue health, and breast tissue from women with breast cancer has lower iodine levels than that from healthy controls. This effect is so marked that women with hypothyroidism (which frees up more iodine for breast tissue use) actually have lower levels of breast cancer. I will add, though, that inducing hypothyroidism is being used to treat a number of cancers, so other issues are likely also at play. Nonetheless, women in Japan (who get much more iodine in their diet) have a two-thirds lower risk of breast cancer than those in the US. It is probable that low iodine is a significant risk factor for breast cancer. Our foundation is planning a study that involves adding high-dose iodine (4 to 5 iodoral tablets a day – see below) to the treatment protocol of women with breast cancer.

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**ResveraCaps**

*Resveratrol Extract*

**60 Vegetarian Capsules**

*One Capsule provides:*

- Resveratrol .................................................. 500 mg
  (polygonum cuspidatum) extract
  (standardized to contain 20% trans resveratrol)

**Other Ingredients:** Silicon dioxide, Kosher rice flour, VegiCap (hypromellose)

**Recommended Usage:** As a dietary supplement, take one capsule per day between meals or as recommended by your health care professional. Consult a physician before using, if pregnant or lactating.

*ResveraCaps features 500 mg of high-quality polygonum cuspidatum standardized to contain 20% (100 mg) total resveratrols. Resveratrol promotes cardiovascular health through its antioxidant action, and ongoing research is revealing that resveratrol may possess benefits that prevent the loss of vital metabolic functions required for long life.*
Low iodine may increase the risk of heart disease. For a review of this issue, see http://www.jcn.org/cgi/content/full/25/1/1.

Low iodine may also contribute to fatigue and chronic fatigue syndrome (CFS). A study showed that those with low body temperature and fatigue felt better on iodine (1500 mcg a day) — even though their temperature did not rise with treatment. It is reasonable for those with chronic fatigue, CFS, and fibromyalgia to try added iodine for 3 months to see if it helps.

Testing

The accuracy of iodine testing has not been confirmed to my satisfaction, and I find that it often works best to treat clinically based on symptoms and then see if it helps. Much as we like to have a piece of paper that gives definitive answers (lab and X-ray results), these results, sadly, are often not reliable. I would simply treat without testing those who have:

- breast cysts, tenderness, or cancer. I consider these markers for iodine deficiency
- CFS or fibromyalgia
- thyroid disease or thyroid cancer
- low body temperature (under 98.0°F Fahrenheit).

If you prefer to have lab confirmation, Dr. Kent Holtorf is using urine iodine testing from Nitek and subsequent treatment with iodine when low. He estimates that about 50% to 60% are low, and about 20% to 30% very low. Dr. David Brownstein, a wonderful physician who wrote the book *Iodine* (available at www.dbrownstein.com), does an iodine-loading test discussed in his book, which also shows about 95% of folks he tests to be low. The question with iodine testing is how one defines “low,” and I personally am not eager to do a test that does not affect how I treat.

Both simply treating without testing or doing lab testing are reasonable options; and a good case could be made for treating everyone who has fibromyalgia or CFS, unexplained fatigue, or breast symptoms, it is reasonable to take an iodine supplement (lodoral) once a day for 90 days. After this, if patients feels much better on it, they can stay on it or stop and see if they still need it. They may find that the one course is enough to “fill their tank” and correct any deficiencies. For those with breast cancer, I would add the one lodoral a day long term, and if working with a holistic practitioner to take 5 a day while waiting for the research to be done. This higher dosage may cause significant and persistent gastritis; so, especially in those with stomach problems, begin with the lower dose and monitor free T4 (the active form of thyroid hormone) to be sure it is not causing hypothyroidism.

**Diet and Lifestyle Recommendations**

- Eat seafood, which tends to be high in iodine — especially seaweed, such as kelp. Thus the average Japanese woman who eats a lot of seaweed gets 12,500 mcg of iodine in her diet daily, while in the US most are lucky to barely get their 150 mcg a day. This may be why breast cancer and breast cysts are much less common in Japan than in the US and England (the incidence of breast cancer is over 300% higher in the US than Japan).
- Cut back on soy products if you eat a lot of them.
- Consider using less fluoride (I prefer that it be in toothpaste instead of drinking water) and bromide (often found in hot tubs to keep down bacteria — other options are available).

**Summary**

Bottom line? For those with CFS, fibromyalgia, unexplained fatigue, or breast symptoms, it is reasonable to take an iodine supplement (lodoral) once a day for 90 days. After this, if patients feels much better on it, they can stay on it or stop and see if they still need it. They may find that the one course is enough to “fill their tank” and correct any deficiencies. For those with breast cancer, I would add the one lodoral a day long term, and if working with a holistic practitioner to take 5 a day while waiting for the research to be done. This higher dosage may cause significant and persistent gastritis; so, especially in those with stomach problems, begin with the lower dose and monitor free T4 (the active form of thyroid hormone) to be sure it is not causing hypothyroidism.
