

## CHAPTER 5: Complementary Therapies: Herbs and Supplements

### *Introduction*

Our understanding of Parkinson's disease has evolved from one in which the motor symptoms were the primary focus of treatment to one where the broader effects of the disease process are more likely to be acknowledged and treated as well. Persons with PD who are seeking relief from their symptoms may decide to explore complementary therapies which can support or complement Western or traditional medicine. While there are many modalities of complementary medicine that might be of interest to someone living with PD, this chapter focuses on herbs, vitamins and supplements.

### *Herbs and Supplements*

There is genuine interest in, and some concern about, which herbal and nutritional supplements can be used to treat various health complaints, and how to obtain optimal benefit with the fewest risks. One concern is that herbal supplements in the U.S. are not regulated by the FDA, so there can be tremendous variations in potency and purity of these over-the-counter supplements. Those considering taking herbs or supplements not regulated by the FDA should consider the following precautions:

- Look for standardized products and supplements labeled with the U.S. Pharmacopeia USP Dietary Supplement Verified seal. This indicates that the product in question has met established manufacturing standards.
- Know the manufacturing company. A large, well-known company interested in preserving a good reputation may be more likely to insure a good quality product.
- European herbs and supplements are subject to standards and regulations. Supplements from other areas and some U.S. companies may be contaminated with harmful substances. For example, in 1998 the California Department of Health reported that 32% of Chinese patent supplements contained undeclared chemicals such as lead, mercury and arsenic.
- The Dietary Supplement Health and Education Act of 1994 does not require manufacturers to submit information about the safety of supplements (vitamins,

minerals, enzymes, herbs, amino acids). Reputable manufacturers will provide an address and sometimes a phone number or Web site on the product label although this is not a guarantee of content, safety or purity.

- Check the label of exact contents and listed side effects. If a product does not contain a detailed label, consider not taking it.
- Check to see if the package is sealed. If the package is not sealed, don't purchase the product.
- Contact reliable resources such as The American Academy of Family Physicians and The National Institute of Health's National Center for Complementary and Alternative Medicine. Such organizations provide fact sheets that list harmful interactions if certain supplements and prescription drugs are taken together.
- Consult with a licensed herbalist, naturopath, nutritionist or D.O.M. (Doctor of Oriental Medicine). These practitioners have specialized training in herbs and supplements for promotion of health and treatment of disease.

Some authors in the resource list at the end of this chapter offer guidelines to help consumers judge the quality of herbal remedies. While the eight products discussed in this chapter are commonly recommended and considered safe for persons who have Parkinson's disease, they should not be considered proven treatments. Rather, the information provided should be used as discussion points when consulting with a licensed healthcare professional.

### *Research and Medical Education*

In Chapter 4, the importance given to double-blind placebo-controlled studies and their role in modern science was briefly described. Physicians' training leads them to respect this vigorous scientific method, which is a context in which few herbs have been studied. Combined with the fact that most physicians trained in western medicine do not have formal training in complementary therapies, they are cautious, and perhaps uncomfortable, with the use of herbs and supplements.

For some supplements – including the antioxidant nutraceuticals creatine and Coenzyme Q 10 (discussed in chapter 4) – we have begun to collect data regarding potential benefit. The scientific community may view these with greater acceptance if further study confirms early results. Other supplements are used despite lack of any clear evidence of effectiveness.

When treatments continue to be used without measurable benefit, this may be due to the placebo effect, a well-recognized factor when assessing any PD treatment. The placebo effect refers to the commonly observed phenomenon that people in PD drug studies tend to have improvement in their symptoms even when they are actually receiving the placebo or sugar pill instead of the actual study medication. This spills over into other situations in which a person with PD may expect to get better, such as consuming a special juice touted to improve PD symptoms or trying some other treatment expected to result in improvement. The reason most drug studies are conducted with a control or placebo group is so that the difference between the placebo and treatment groups will be considered effective. Most doctors are quite skeptical of treatments that have not been subjected to this kind of study.

Fortunately, a growing number of U.S. medical schools now offer courses in complementary medicine, combining the best of Western tradition with other treatment modalities. The National Institutes of Health has also been instrumental in disseminating research data to practicing healthcare professionals through the National Center for Complementary and Alternative Medicine.

If you are considering complementary therapies, we strongly urge you to investigate the credentials and experience of anyone offering advice or product recommendations regarding such therapies.

#### KEY POINTS

- Most herbs and supplements have not been rigorously studied as safe and effective treatments for Parkinson's disease.
- The FDA does not strictly regulate herbs and supplements.
- There is no guarantee of safety, strength or purity of supplements not monitored by the FDA.



*Ginger (Zingiber Officinalis)*

Ginger in almost any form is excellent for nausea and vomiting, whether the nausea stems from something as simple as motion sickness or as a side effect of medications.

Fresh ginger root, available in the produce section of grocery stores and markets, can be prepared as a liquid decoction. Cover a 1 inch slice in water, bring to a boil, and simmer for 30 minutes. Ginger is also available in health food stores as a liquid; a drop or two can be added to tea or other beverages.

Crystallized ginger, available as a cooking spice, is another option. A small piece can be nibbled at the first sign of queasiness, offering an easy and convenient dose form. Zingerone, a compound found in ginger root, seemed to have a protective effect on dopamine-containing neurons in a study done in Japan using a mouse model of PD (*Kabuto H 2005*).

*St. John's Wort (Hypericum Perforatum)*

This herbal supplement is a popular anti-depressant, working in a pharmacologic manner similar to the prescription serotonin re-uptake inhibitors (SSRIs). It may be effective in mild to moderate depression but two studies reported no benefit in major depression. In Germany, where it is the most frequently prescribed antidepressant medication, the dose commonly used is 300 mg three times daily. Although *Hypericum Perforatum* is one substance known to be present in the flowers and leaves of this plant, it also contains other unidentified compounds which appear to be very active. In one study of *Hypericum Perforatum* in a mouse model of PD, there appeared to be some inhibition of the effect of the toxin (MPTP) used to cause parkinsonism.

**Caution:** 

- St. John's Wort should not be used concurrently with other antidepressant medications. People taking Prozac®, Zoloft®, Paxil® or other SSRIs risk serious overdose effects by using *Hypericum*.
- St. John's Wort should not replace traditional prescription medicine for the treatment of a serious or major depressive episode.
- Those who take blood thinners such as aspirin, heparin or warfarin (Coumadin®) should not take St. John's Wort.

- People with PD who also take asthma medications, steroids or birth control pills should consult their physicians or healthcare providers before taking St. John's Wort.

### *Ginkgo Biloba*

Ginkgo research in the U.S. has been limited to stroke recovery and Alzheimer's disease, but Dr. James A. Duke, author of *The Green Pharmacy*, suggests that it might be helpful in PD because it improves blood circulation through the brain, possibly delivering more levodopa to its target. No clinical trials have been conducted to verify this claim.

Capsules typically contain 30 to 40 mg of a standardized 50:1 ginkgo extract and 25% flavonoids, and are commonly taken in three capsules per day. While Dr. Duke suggests that significantly higher doses might be useful in people with Parkinson's disease, doses in excess of 240 mg per day may cause diarrhea. Ginkgo has some "alerting" properties and may be helpful to counter the daytime sleepiness some people experience as a side effect of levodopa/carbidopa. It is important not to confuse ginkgo biloba with ginseng, which may be over-stimulating in some older adults.

**Caution:** 

Ginkgo may raise blood pressure when taken with a thiazide diuretic such as hydrochlorothiazide. In addition, it tends to have an anti-clotting effect. Therefore, if you are taking any other anti-clotting medication such as aspirin or warfarin (Coumadin®), you should not take Ginkgo without consulting your health care provider.

### *Milk Thistle (Silybum Marianum)*

Many drugs and environmental toxins are processed through the liver. Milk thistle has been used to treat disorders of the liver and gallbladder for at least 2,000 years. Research shows that the silymarin in milk thistle helps protect the liver from many industrial toxins, such as carbon tetrachloride. There is also evidence that compounds from milk thistle seeds help protect the liver against damage from alcohol and hepatitis, and can even regenerate liver cells that have been damaged. Milk thistle helps improve liver function by helping to remove toxins from the body. In his book, *The Brain Wellness Plan*, neurologist Dr. Jay Lombard advises people with PD who take anti-parkinson drugs

(metabolized through the liver) to add 300 mg of standardized milk thistle extract to their daily medication regime. Milk thistle is also available in capsules. The compound appears to be safe, although more testing is needed to determine if there are any negative long-term effects. There are not currently any published studies of milk thistle in the treatment of PD.

### *Vitamin B12*

Vitamin B12 is an important factor in brain and nerve health, especially memory. Dietary Vitamin B12 is found in animal protein sources such as meat, eggs, fish and dairy products. As people age, they may develop difficulty absorbing B12 from the gut, even if the amount in their food sources is adequate. Oral supplements (usually 1000 mcg) may help, although persons with severe B12 absorption problems or deficiencies may require injections. Vegetarians may also develop a B12 deficiency. A chemical called homocysteine sometimes becomes elevated in persons with PD, often in conjunction with levodopa therapy. Elevation of homocysteine may be related to memory loss in some patients, although this is unproven. Increasing B12 and folic acid will often result in a decrease in homocysteine levels, though it is not yet known whether this will improve memory.

### *Folate (folic acid)*

Folate (Vitamin B9) is another vitamin that is important for brain health and good memory. It is vital for the development of the nervous system and insuring adequate amounts during pregnancy can prevent certain types of birth defects. Folic acid, along with B12 and possibly B6, can decrease levels of homocysteine which may prevent strokes and heart attacks, and may help memory as well.

### *Antioxidants: Vitamins C and E*

Free radicals are toxic molecules produced by virtually every cell in the body, usually in response to stress or injury. For example, sunlight exposure, cigarette smoking, and infection can generate free radical formation in some cell types. These particles are thought to be particularly toxic to brain cells. Antioxidants “soak up” or scavenge free radicals. Vitamins C and E are antioxidants that fight free radicals, and may protect brain cells.

The DATATOP study failed to demonstrate a neuroprotective effect of Vitamin E in patients with early Parkinson's disease. Some concerns have been raised about possible side effects of Vitamin E supplements; this may result from the form of Vitamin E commonly available, alpha-tocopherol. A "mixed" supplement, containing multiple forms of Vitamin E, may turn out to be safer or more effective. More research is needed; meanwhile dietary sources include whole grains, wheat germ, avocados, nuts and vegetable oils.

### *Summary*

It is important for persons with Parkinson's disease to let their healthcare providers know of any herbal products, vitamins and over-the-counter medications they are using on a regular basis. This encourages open communication toward the goal of achieving optimal control of symptoms with minimal risk of side effects.

Resources for further study are included at the end of this chapter. Persons with Parkinson's disease and family members are encouraged to research books, journals and the internet, and to seek out the assistance of a licensed holistic health care professional. A personalized integrative therapy program can help to optimize health!

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