

New Insights on Parkinson's Disease

Researchers still don't know the cause of Parkinson's disease (PD), which gradually destroys brain cells that produce dopamine, a neurotransmitter that coordinates muscle movement. Until now, treatment mostly managed PD's symptoms—muscle stiffness, tremors, loss of balance, and reduced mobility. But promising research offers hope for preventing or better managing the disease itself.

Strategies for Preventing Parkinson's

Environment. I believe PD is mostly due to environmental injury to sensitive parts of the brain. In fact, three recent trials link pesticide exposure with an increased risk of PD—by up to 41 percent in one study (*Occupational and Environmental Medicine*, May 2007). Reduce your exposure to agricultural chemicals by eating organic foods, avoiding pesticides, and using a home water filter, especially in an agricultural area.

Diet and supplements. New data suggest caffeine may reduce PD risk. "Caffeine affects an enzyme that mediates free radical damage to neurons," says Florida-based neurologist David Perlmutter, MD, author of *The Better Brain Book* (Riverhead, 2004). Instead of coffee, I advise drinking green or white tea—both contain antioxidants as well, and research shows that just two or three cups of tea daily reduces risk.

Inflammation also plays a role in PD. One recent study concluded that PD risk is lower in people who regularly take nonsteroidal anti-inflammatory drugs, or NSAIDs (*Experimental Neurology*, June 2007). While I don't generally suggest taking NSAIDs because they can cause stomach irritation and bleeding, you might discuss taking low-dose aspirin with your doctor, since aspirin offers many other benefits. In addition, I recommend an anti-inflammatory diet containing a wide variety of fresh, whole foods that's rich in fruits and vegetables and low in saturated and trans fats. Research shows that the spices ginger and turmeric work powerfully

against inflammation; use them liberally in cooking and consider taking 1 gram of ginger and 400 mg of turmeric (preferably the whole extract rather than just curcumin) daily with meals. Or take Zyflamend, an herbal anti-inflammatory blend (follow package directions). Dr. Perlmutter also suggests taking fish oil or algae daily. Choose a product with at least 300 mg of DHA, an omega-3 fatty acid vital to brain health.

Exercise. In research presented at the American Academy of Neurology annual meeting in May, middle-aged and older adults who got at least a half-hour a day of moderate to vigorous exercise lowered their odds of PD by up to 40 percent. Previous research indicates that exercising strenuously as a young adult can also reduce risk—up to 60 percent in men (*Neurology*, February 2005). Although researchers aren't sure how physical activity reduces PD risk, one recent animal study suggests exercise changes the way neurons release dopamine (*Journal of Neuroscience*, May 2007).

Overweight. Several studies have found that a higher body mass index increases PD risk. Carrying extra pounds around the middle may up risk even more. One possible reason: Obese people have decreased dopamine receptors (dopamine helps regulate appetite). Also, "fat is metabolically active in terms of inflammation, and it stores pesticides, damaging the brain for years to come," says Dr. Perlmutter.

The Latest Treatment Options

Diet. Neurodegenerative diseases have an inflammatory component, so I advise an anti-inflammatory diet (see above).

Supplements. Recently, researchers have investigated Coenzyme Q10 as a potential treatment for relieving symptoms and actually slowing PD's progression. One promising study found that subjects taking a very high dose—1,200 mg a day—developed less disability during a 16-month trial. However, a more recent study found no benefit from taking 300 mg daily over three months (*Archives of Neurology*, May 2007); these researchers admit their study wasn't conclusive and called for a longer-term study of higher doses. Although the evidence is only suggestive so far, I recommend CoQ10 to PD patients. Dr. Perlmutter says that taking other antioxidants along with CoQ10 regenerates the CoQ10 so you don't have to take as high a dose to see improvement. Since research suggests that oxidative damage likely plays a role in PD, "antioxidants are fundamental," says Dr. Perlmutter. He advises taking 400 mg of CoQ10, 800 IU of vitamin E, 1,000 mg of vitamin C, and 300 to 400 mg of alpha-lipoic acid daily with meals. (I recommend taking only 400 IU of natural vitamin E and 250 mg of vitamin C a day.)

Exercise. Many studies show that gentle exercise such as tai chi, qigong, or physical therapy can improve mobility, balance, flexibility, and strength. Moderate exercise seems to improve the effectiveness of levodopa, a drug used to treat PD symptoms (*Movement Disorders*, February 2007). **SP**

For more, visit parkinsonsaction.org or call (800) 850-4726.

On the Horizon: Creatine

In March, the National Institutes of Health launched a seven-year study on whether creatine, an amino acid sold as a supplement and thought to increase exercise performance, can help slow the progression of PD. Early research suggests creatine might work by protecting mitochondria, which produce energy inside cells, or by acting as an antioxidant. "This is exciting...it's the first time that there is research [on creatine or CoQ10] to target the disease, not just the symptoms," explains Dr. Perlmutter. One study found another potential benefit for PD patients, who typically lose muscle mass as the disease progresses: Those using creatine got better results from strength training than a placebo group (*Neuro-rehabilitation and Neural Repair*, March/April 2007).