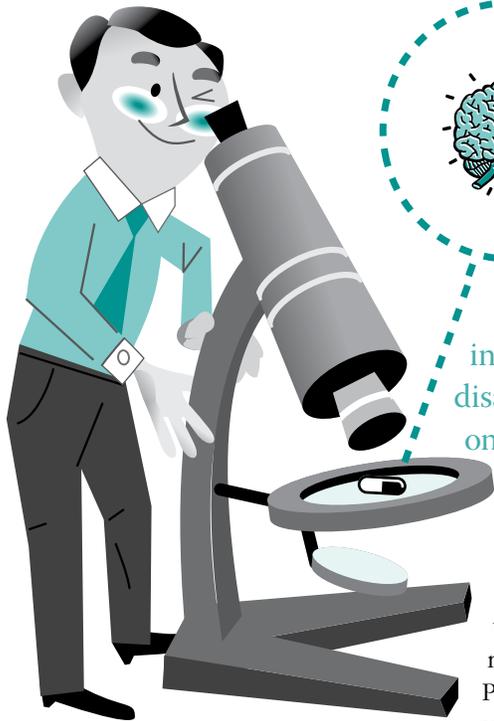


CoQ10 & Parkinson's

by Margy Squires



Parkinson's hit the front pages when actor Michael J. Fox publicly announced his diagnosis and asked for support in finding the cause. Typically Parkinson's Disease (PD) affects those aged 60 and older. Yet here was this young, vibrant 30 year old actor telling the world that he was about to take on one of the hardest roles of his life. Sometimes it takes a celebrity to provoke awareness and appeal for help. There's more than a million in the U.S. with this progressively disabling disorder. Ironically, it's one that affects more men than women.

Yet even with celebrity status, Parkinson's was relatively "quiet" until 2002. The first study that one nutrient could affect early or mild PD symptoms was published. The nutrient was Coenzyme Q10 (CoQ10).

Often studies on nutrients are questioned when the outcome is favorable; however, the results were clearly due to CoQ10—it was the only factor tested. Scientists began looking at CoQ10 in 1998 based on the theory that oxidative changes damaged specific cells in the brain (substantia nigra) that produce dopamine. By protecting these cells from further oxidative (free radical) damage with an antioxidant like CoQ10, perhaps they could slow down and even reverse cellular damage. To truly appreciate CoQ10's benefits, you need to know more about PD as a disease.

PD was named after the English doctor James Parkinson who depicted its characteristics so extensively in the 1800s. Cardinal symptoms include tremors at rest, slowed movements, problems with balance, and muscle rigidity. Due to neurotransmitter issues (dopamine, serotonin), PD also affects memory, cognition, mood and can disturb digestive and GI function as well. Several theories as to the cause of PD exist but the two predominant ones evolve around genetic and environmental factors. Some scientists believe it is an interaction of the two which determine who will ultimately develop PD.

The progression of PD varies. Early PD may start on one side of the body with small tremors in the hands and head, eventually involving both sides. Normal muscles stretch when they move and relax at rest. PD alters muscle tension, meaning muscles do not relax which restricts range of motion and causes painful cramping. Simple acts as starting and stopping a movement,

Parkinson's Just the Facts

Diagnosis:

- ◆ 1 in 100 over age 60
- ◆ 1 out of every 250 people over 40
- ◆ More men than women
- ◆ 40,000 diagnoses per year
- ◆ 1 million or more in U.S.
- ◆ 5 million worldwide
- ◆ More than MS, Lou Gehrig's & muscular dystrophy combined

Characteristics:

- ◆ 5-10% disease onset is at age 40, & as young as 30
- ◆ No biomarker; high rate of error in diagnosis
- ◆ Affects cells that produce dopamine & control movement
- ◆ Costs the U.S. \$25 billion a year in treatment, disability payments, lost work & income
- ◆ \$2,500 medical costs per patient
- ◆ 70% experience tremor on one side of body, hand or foot as initial symptom
- ◆ 50% or more have trouble with dysphagia (swallowing)

Continued on page 2

CoQ10 & Parkinson's

continued

swallowing, gait and balance are challenged as muscles weaken and stiffen. Symptoms are usually worse at rest and lessen during movement. A fixed, unblinking stare and slow speech are hallmark although behind the “mask” of PD, the person's mental ability is intact until the later, advanced stages.

As more about the brain and how it works is discovered, the roles of certain neurotransmitters (NTs) in thinking, movement and mood have been identified. In Parkinson's, when dopamine-producing cells are damaged, there is less of the NT to initiate and direct movement. A person with PD thus loses the ability to move at will and/or moves much more slowly. Because there is less dopamine, the NT serotonin is also low, which may affect mood, pain and sleep as well.

There is no biomarker for PD, making diagnosis difficult and treatment is often delayed. Like so many other disorders where the cause is not known, therapy is based on the severity of symptoms and/or disability. Thus mild cases may not require much intervention but as PD is progressive, symptoms worsen over time. Since tremor is the universal symptom, reducing tremors is an indication of effective therapy. Medication (levodopa) to supply the missing dopamine and facilitate movement may be prescribed. One side effect in increasing movement, however, when muscle control is limited is “thrashing around”, typified in a television commercial that Mr. Fox did to illustrate PD. A combo drug of levodopa with carbidopa, an agent that helps convert more dopamine in brain tissue, helps control this side effect. Given the very nature of PD and the side effects of drug therapy, you can see why CoQ10 offers a ray of hope in slowing down the progression of this insidious and irreversible disease.

Scientists suspect that antioxidant therapy may protect cells because glutathione, the master antioxidant at work in the body, is low in PD while oxidized glutathione levels are high. Or put simply, glutathione is being “used up”. This theory was confirmed on earlier studies with a combined vitamin C (3000 mg) and Vitamin E (3200 IU) daily therapy resulted in delay of medication use by 2.5 years in early PD. CoQ10 is more powerful than either. Since only about 5-10% of PD is recognized as genetic, perhaps toxicity to cells causes dysfunction and ultimately death and determines the risk of who develops PD. Protecting dopamine-producing cells at the very least could slow the rate of damage and prolong the progression. CoQ10 is common to all cells in the body and particularly protective of mitochondria, the very life of a cell. It made sense for the researchers to test CoQ10 as a potential therapy.

THE Study

Shultz and colleagues were behind the 2002 study that determined CoQ10 specifically impacts Parkinson's. Since

no drug or other nutrient cofactor was used, researchers contribute the results solely to CoQ10. Of the 80 participants, 44% improved, especially in daily motor skills such as walking, bathing and feeding. A total daily amount of 1200 mg (given in divided doses) was safe and well tolerated and showed the most improvements compared to 300 and 600 mg a day. Of note, the study showed the most benefit on those with early Parkinson's. Other studies which used only 300 mg daily failed to note improvements. It's possible that the lower amounts could not “protect” the cell as well. Since PD is a progressive and irreversible neurodegenerative disease, slowing it down is a very favorable outcome. More studies are planned.

CoQ10 & Quality

Compared to other supplements, CoQ10 is more expensive, which holds some consumers back from taking it a protective antioxidant. We decided to share Ray's story with you for two reasons. One, CoQ10 does make a difference, even at age 85! Two, not all CoQ10 products are alike. Since it is expensive for the true Japanese patented process form, consumers may be tempted to bite at a lower price. Quality, however, cannot be measured by price. *Let the buyer beware* is certainly a noble caution for this particular supplement, given its cost. Know your supplier and the company you keep. In the long run, your health may just be deemed “priceless” so that quality comes before the dollar sign.

Summary

Given all that PD is and all that CoQ10 does, supplementing may be an option you want to try. PD is a very complex disorder which requires medical monitoring and a combination approach to evaluate physical, psychological and cognitive needs that the short scope of this article does not address. Please note the 1200 mg of CoQ10 used in the study is above label recommendations. By law, products cannot empirically list a benefit that is not approved by the FDA. This is known as a structure-function claim. Still, most doctors are more agreeable to complementary therapies if a product is backed by research and shown to be safe as well as beneficial.

©2008-2010 TyH Publications (M.Squires)

Resources omitted for space considerations and are available on request.

Published in *Health Points*. This article is protected by copyright and may not be reproduced without written permission. For information on a subscription, please call TyH Publications, 1-800-801-1406 or write TyH Publications, 12005 N. Saguaro Blvd., Ste. 102, Fountain Hills, AZ 85268. E-mail editor@e-tyh.com. For information on TyH products, visit our website at www.e-tyh.com.

Medical Disclaimer: This article is for informational purposes only and not intended to diagnose, prevent, treat or cure any medical disorder. Consult your personal health care professional for individual medical advice.