

## **Exercise can ease Parkinson's symptoms**

Fitness and strength can be helpful in slowing the debilitating process

**By Bryant Stamford**

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Parkinson's disease is a disorder that results most noticeably in trembling or rigid muscles and difficulty walking and sustaining balance. It is likely to occur in mid to late life, but can occur earlier on occasion.

The problem arises in the brain, with the nerves that control muscular movements. These nerves release chemicals (neurotransmitters) that help parts of the brain communicate with one another, making it possible for the body to perform complex and coordinated muscular movements.

When these nerve cells are damaged or destroyed, there is a lack of neurotransmitters, and movement suffers.

Some loss of these valuable chemicals in the brain occurs naturally with the aging process. But the loss is much greater in Parkinson's disease. Why? Scientists don't know the answer yet, and intense research efforts are chasing the cause.

Genetics seem to be involved, along with potential environmental factors, such as certain drugs, or toxins in things like pesticides and herbicides.

Anything that impacts the nerves is serious business when it comes to the muscles. Every single skeletal muscle cell has its own nerve telling it what to do and when. Remove the influence of that nerve and the muscle is useless.

Thus, there is the tendency to believe that once a nerve problem starts, especially a progressive degeneration of the nerves as occurs with Parkinson's disease, the situation is hopeless.

Not so on two counts. One, although Parkinson's is progressive, it's slow moving. And, two, interventions can be helpful in slowing the progression even more.

### **The value of exercise**

I am aware that the shocking diagnosis of Parkinson's disease can be depressing. But giving in to depression and just sitting around and waiting for the inevitable is the worst thing you can do, because it will accelerate your decline in function.

You can sacrifice many good years of life if you don't take steps to avoid doing so, and a big step you can take is regular exercise.

Before I get into the specifics, let me say that there was a time early in my career when my zeal for exercise and my belief in its ability to cure all that ails you were insufferable. I know, because lots of folks have told me so.

As I became more realistic about what exercise can and cannot do, I became more cautious in my proclamations. So I'm not going to proclaim that exercise can prevent or reverse Parkinson's

disease. But it can slow the debilitating process for a number of reasons, and this is true not only in the early stages, but in the later stages as well.

A main benefit of exercise is that when you use the muscles and continue to make demands on them, they will sustain at least some capacity. When muscles are more fit and stronger, balance is improved, and this inspires confidence to move more. In turn, moving more creates more fitness and strength.

Not using muscles, on the other hand, causes a natural deterioration, and the muscles get smaller and weaker. This is going to happen whether you have Parkinson's or not, but having Parkinson's will make the situation worse. And if it goes on long enough, weakness can make any weight-bearing movements impossible and you could require a wheelchair.

An exercise prescription by a physical therapist is a good way to go for Parkinson's patients, if the doctor approves. When muscles don't move, joints freeze up, and muscles shorten. This makes any movement difficult and painful.

Exercises that go through the full range of motion stretch muscles, preserving flexibility, and they also help lubricate joints.

The good news is these exercises do not have to be exhausting to be beneficial. On the contrary, even modest exercises performed sitting in a chair can be very helpful.

Emphasizing the importance of exercise does not mean other interventions are not important. In fact, when it becomes evident that lifestyle interventions like exercise are not enough to sustain the quality of life, medications may be required.

This is not an either-or choice, and both exercise and medication therapy can be beneficial.

## **The bottom line**

My friend's mom asked me to write about Parkinson's disease. Things you read, the plight of actor Michael J. Fox and the sad downhill slide of Muhammad Ali can make it all seem like gloom and doom.

Yes, deterioration will occur and will be progressive. But the rate of decline can be lessened to some degree with exercise, if you are willing to make the effort.

The key is not allowing natural deterioration that occurs from disuse to compound deterioration caused by the disease.

"The Body Shop" runs Thursdays. Bryant Stamford is professor and chairman of the department of exercise science at Hanover College. If you have questions or suggestions, go to his Web site at [professorstamford.com](http://professorstamford.com). Or address questions to "The Body Shop," The Courier-Journal, P.O. Box 740031, Louisville, KY 40201-7431.