

# AMERICAN PARKINSON DISEASE ASSOCIATION

Parkinson Plaza - 135 Parkinson Avenue - Staten Island NY 10305-1425  
www.apdaparkinson.org

## Too Little Exercise and Too Much Sitting: A Recipe for Change

By

Terry Ellis, PT, PhD, NCS  
Tami DeAngelis, PT, DPT, GCS

### EDUCATIONAL SUPPLEMENT 28

It is well known that most adults in today's society don't exercise enough and sit too much. Studies reveal that adults with Parkinson's disease (PD) are even more sedentary (i.e., watching TV, working on a computer) and less likely to be engaged in exercise compared to adults without PD. This means that many persons with PD are even less physically active than a very sedentary comparison group! Too little exercise and too much sitting can negatively affect general health and can contribute to greater disability in persons with PD. However, there is good news. With some guidance, it is possible to get on track to better health by becoming more active and by engaging in exercise.

#### **What do we mean by engaging in "exercise" and being "physically active?"**

Engagement in exercise and adopting an active lifestyle are different but equally important issues. Exercising refers to engaging in a planned, structured program that may include cardiorespiratory exercise (fitness training), resistance exercises (strength training) or

flexibility exercises (stretching). Exercising may be accomplished in as little as 30 minutes per day. What you do in the remaining 15.5 hours per day (assuming eight hours of sleep) is also very important and can have a significant impact on your overall health. Your physical activity level can influence the effect that PD has on your general mobility. Being physically active includes engaging in non-sedentary behaviors throughout the day (e.g., walking the dog, grocery shopping, and house-hold chores). Sedentary behavior - sitting or lying for long periods of time - should be minimized. Participating in planned exercise and leading an active lifestyle are both important for people with PD.

#### **Can exercise and a more active lifestyle benefit people with Parkinson's disease?**

Over the last several years, a considerable amount of research has emerged demonstrating the benefits of exercise for people living with PD. Studies reveal that persons with PD who participate in planned exercise can become stronger, fit and more

flexible. Exercise can also lead to better walking ability, balance, moving in bed and rising from a chair – resulting in less disability and enhanced quality of life. Furthermore, studies reveal that persons with PD can increase their activity level and become less sedentary over the course of time – even while living with PD.

### Exercise Guidelines

Although many studies reveal the benefits of exercise for people with PD, there is little data on the optimal amount of exercise that is most beneficial. Therefore, we refer to The American College of Sports Medicine Guidelines, which publishes information on the

amount and type of exercise recommended for adults based on a large body of scientific evidence. The most recent revised guidelines, published in 2011, include recommendations for cardiorespiratory exercise (often called “cardio”), resistance exercise (strength training), flexibility exercise (stretching) and neuromotor exercise. Most individuals are familiar with the first three areas of exercise, described in more detail below. The term neuromotor exercise refers to a more functional type of exercise that includes activities to improve balance, walking and day-to-day activities such as standing up from a chair. This type of training is particularly important for people with PD.

#### Cardiorespiratory Exercise

- 150 minutes (2.5 hours) of moderate-intensity exercise per week.
- One continuous session (30 minutes) or multiple shorter sessions (of at least 10 minutes) count toward exercise
- Start slow and gradually add more
- People unable to meet these minimums can still benefit from some activity.

#### Resistance Exercise

- Train each major muscle group 2 or 3 days each week using a variety of exercises and equipment.
- Two sets of each exercise
- Eight-12 repetitions
- Wait at least 48 hours between resistance training sessions.

#### Flexibility Exercise

- Do flexibility exercises at least 2-3 days each week.
- Hold each stretch for 10-30 seconds to the point of tightness or slight discomfort.
- Repeat each stretch 2-4 times, accumulating 60 seconds per stretch.
- Flexibility exercise is most effective when the muscle is warm (after exercising).

#### Neuromotor Exercise

- Perform 2-3 days per week.
- 20-30 minutes per day is appropriate for neuromotor exercise.
- Exercises should involve motor skills (balance, agility, coordination and gait) and multifaceted activities (T'ai Chi and yoga) to improve physical function.

### Translating the Guidelines into a Program

Although exercise has been shown to be beneficial for people with PD, no one form of exercise has been shown to be better than another. This means there are many kinds of exercise, within each category, that you can choose to meet the guidelines. Choosing the type of exercise you enjoy most will help you stick to it. Whether you have a gym membership, prefer to exercise in your home or like the company

of others, choosing an exercise plan that fits your lifestyle is important. Although the different types of exercise can seem overwhelming at first, some forms of exercise, such as brisk walking, may meet with guidelines for both cardiorespiratory and neuromotor training. Yoga generally includes strength training, flexibility and balance exercises. Here are some different ways to participate in exercise while meeting the guidelines:

#### Cardiorespiratory Fitness

- Use of exercise equipment such as treadmill or a stationary bike
- Brisk walking
- Group exercise classes such as dance or aerobics

#### Resistance Training

- Weight machines or circuits at the gym
- Your own body weight (push-ups or squats)
- Group classes (some forms of Yoga)
- “Be Active” booklet available through APDA’s website

#### Flexibility Training

- “Be Active” booklet available through APDA’s website
- Group classes such as Yoga

#### Neuromotor Exercises

- Follow a home program with balance and functional activities (standing up from chairs) that was designed by a physical therapist.
- Group classes such as T’ai Chi or ballroom dancing

### Physical Activity Guidelines

Although there is much information revealing the benefits of an active lifestyle and the detrimental effects of being too sedentary, more information on how much time adults should be active is evolving. In general, it is important for people with PD to minimize the amount of time spent in sitting, reclining or lying down and to maximize the amount of time spent standing and walking. Too much sitting can contribute to greater stiffness making mobility more challenging.

- For every hour of sitting during the day, get up and walk for at least 5-10 minutes.
- Participation in routine activities such as housework and yard work
- Engaging in community recreational activities can help increase overall activity level.
- Try wearing a pedometer (step counter) and gradually increase the number of steps you take per day. This will help you monitor your physical activity level over time.

### Proceed with Knowledge

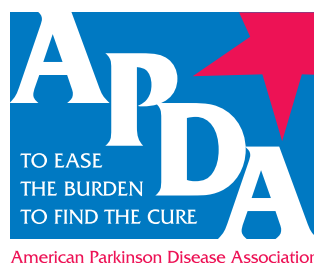
It is always important to consult with your physician and your physical therapist before starting an exercise program. A physical therapist can work with you to develop a safe exercise program that is individualized to meet your specific needs. It is recommended that you begin to increase your activity level gradually and add exercise routines slowly – some physical activity and exercise is better than none.

### APDA National Rehabilitation Resource Center

If you have questions about exercise, APDA's National Rehabilitation Resource Center can help you with your questions about rehabilitation and exercise. You can call our toll free exercise helpline at: 888-606-1688 or e-mail us at [rehab@bu.edu](mailto:rehab@bu.edu) where you'll communicate with a physical therapist who can help answer any questions you may have about exercise.

*Dr. Ellis is Assistant Professor and Director, and Ms. DeAngelis is Senior Physical Therapist of the Center of Neurorehabilitation, Boston (Mass.) University.*

The information contained in this supplement is solely for the information of the reader. It should not be used for treatment purposes, but rather for discussion with the patients's own physician.



© Copyright 2013

For additional free copies of this article, please write or call the  
**AMERICAN PARKINSON DISEASE ASSOCIATION**

Parkinson Plaza - 135 Parkinson Avenue - Staten Island, NY 10305-1425  
(800)-223-2732 - Fax: (718)-981-4399 - [apda@apdaparkinson.org](mailto:apda@apdaparkinson.org)