



Pedaling for Parkinson's®

SANFORD-SPRINGVALE YMCA

What is Parkinson's disease?

Breakdown in the brain's nerve cells cause Parkinson's disease. Affected nerve cells do not produce enough dopamine, which, in turn, affects the individual's ability to move in a directed manner. Tremors, stiff muscles, slow movements, and trouble with balance or walking are all symptoms of Parkinson's.

The Pedaling for Parkinson's® class mission is to improve the quality of life of Parkinson's patients and their caregivers. Educating patients, caregivers, and the public about the benefits of maintaining an active lifestyle after a Parkinson's diagnosis is a secondary class goal, as is research dedicated to prevention and treatment of Parkinson's.

Class programmatic goals are to provide application of recent data related to benefits of assisted or forced exercise in Parkinson's patients. Assisted or forced exercise is defined as a model of aerobic exercise in which voluntary efforts of an individual are augmented so that they can exercise at rates faster than they could achieve voluntarily. High speed pedaling/cycling has been proven to help afflicted patients delay or in some cases improve their symptoms. Rapid pedaling is not a cure for the disease, but there is compelling evidence to show that it does make a real difference for many who attend class.

Additionally, fast-paced or high cadence cycling is changing the lives of increasing numbers of participants who, before this, had no hope beyond medications and potential surgery to slow the progression of their disease.

Instructor Qualifications:

- Skilled cycling instructor
- comfortable teaching in a small group setting
- understands components of behavioral changes
- excellent relationship building skills
- ability to build a small community within the group
- proper responses to safety and emergency situations
- ability to be empathetic and inclusive when working with a diverse population
- utilize Listen First® communication skills
- provide accessibility/assistance to participants before and after class
- instruct and connect with participants during class with a focus on correct form and posture.

Class Offerings: three times weekly, 60 minutes in duration

Cost of Class: no cost for Y members, \$5 per class for community members

Who Can Participate?

- Must be 30-75 years old (older if approved by participant's physician)
- Must be diagnosed with idiopathic Parkinson's
- Must complete and submit and signed consent form
- Must complete and submit a medical clearance form with written consent from a physician
- Agree to periodically monitor progress

Who Cannot Participate? Parkinson's patients with the following medical conditions:

- Cardiac or pulmonary diseases
- Uncontrolled diabetes mellitus
- Uncontrolled hypertension or stroke
- Dementia
- Other medical conditions that are contraindications to exercise

Process for class enrollment: Participants obtain all forms, waivers, and class participation documents from Merilee Perkins. Once all forms are completed and returned, Merilee Perkins will follow up to schedule an orientation and initial class session.

RELEASE AND WAIVER OF LEGAL LIABILITY

The participant hereby & immediately releases the Sanford-Springvale YMCA and its officers, directors, board members, employees, volunteers, agents, independent contractors, other participants and/or others acting on its behalf (collectively the "YMCA"). You agree that this release is effective as of the date signed.

1) ASSUMPTION OF RISK: I assume expressly and specifically all risk of injury, illness, death, or property damage resulting from my participation at the YMCA's Pedaling for Parkinson's ® program. I understand that YMCA activities can be strenuous and dangerous and that it is impossible to predict everything that may occur. I understand that only persons of good health should engage in the activity. I understand that I should consult a physician before engaging in any physical activity and I accept all risks associated with this program.

2) GENERAL RELEASE, INDEMNIFICATION, NOTIFICATION, AND HOLD HARMLESS: I hereby agree for myself and /or my minor child, and our respective heirs, assigns, and any legal representatives to indemnify, defend, and hold the YMCA and its officers, directors, board members, employees, volunteers, agents, independent contractors, and other participants harmless from all claims and causes of action. This includes causes of action of any nature, including negligence for all personal and/or bodily injury or illness, including death, which may occur to my minor child, or myself, or which may be aggravated during or by any activity in which I have decided to allow my minor child, or myself, to participate. I further understand and agree expressly that the foregoing indemnity, release, and waiver are intended to be used as broadly and inclusively as permitted by the law of the State of Maine. If any portion is held invalid it is agreed that the balance shall, notwithstanding, continue in full force and effect.

I have read the above warning, waiver, and release, and understand that I give up substantial rights for myself and/or my minor child by signing. Knowing this, I sign voluntarily. I agree to participate of my own free will. I affirm that I am at least 18 years of age, or if I am under 18 years of age, I have obtained the required consent of my parent/guardian as evidenced by their signatures below.

Applicant/Participant Signature

Date

Pedaling for Parkinson's® at the Y: Medical Screening and Permission Form

Patient Name:

Gender Identity (may decline to answer):

Preferred Pronouns:

Diagnosis:

Date of Diagnosis:

Stage of Diagnosis:

Prescreening Questions:

Have you taken any heart medications?	Yes	0	No	0
Do you take blood pressure medication?	Yes	0	No	0
Have you ever had a heart attack?	Yes	0	No	0
Are you diabetic or do you take medicine to control blood sugar?	Yes	0	No	0
Have you ever had heart surgery?	Yes	0	No	0
Have you ever had heart failure?	Yes	0	No	0
Is your blood cholesterol >240 mg/dl?	Yes	0	No	0
Have you ever had a pacemaker or implantable cardiac defibrillator/ rhythm disturbance?	Yes	0	No	0
Females: Have you had a hysterectomy or are you postmenopausal?	Yes	0	No	0
Have you ever had a cardiac cauterization?	Yes	0	No	0
Have you experienced dizziness, fainting, or blackouts?	Yes	0	No	0
Have you had a coronary angioplasty?	Yes	0	No	0
Have you ever had a heart valve disease?	Yes	0	No	0
Do you smoke?	Yes	0	No	0
Have you had a congenital heart disease?	Yes	0	No	0
Do you have musculoskeletal problems that would prevent you from exercising?	Yes	0	No	0
Have you had a close blood relative have a heart attack before age 55 (father or mother) or 65 (brother or sister)	Yes	0	No	0
Do you have concerns about the safety of exercise?	Yes	0	No	0
Have you experienced unreasonable breathlessness?	Yes	0	No	0
Are you physically inactive, exercising less than 30 minutes/day, 3 days/week?	Yes	0	No	0
Have you ever experienced chest discomfort with exertion?	Yes	0	No	0

Eligibility Requirements:

[Answers to A, B, C, and D must be yes]

- A. Have you provided informed consent after being given a copy of the attached standards? Yes No
- B. Do you have a clinical diagnosis of idiopathic Parkinson's (the most common form of Parkinson's) in which the cause for the condition is unknown? Yes No
- C. Have you been graded at Hoehn and Yahr stage I, II, or III when off medication? Yes No
- D. Have you provided written clearance/permission by the physician for the patient to participate in the exercise program after the physician has been given a copy of the standards, which clearance must address all concerns identified in the prescreening questions above? Yes No

Patient is ineligible for participation if any of the following apply:

[Answers to E, F, and G must be no]

- E. Have you been diagnosed with a clinically significant medical disease that would increase the risk of exercise-related complications (e.g. cardiac or pulmonary disease, hypertension, or stroke)? Yes No
- F. Do you have dementia, as evidenced as a score of less than 116 on the Mattis Dementia rating scale? Yes No
- G. Do you have any other medical or musculoskeletal contraindications to exercise? Yes No

Please check one box:

I recommend that the applicant participate in the Pedaling for Parkinson's® class fitness program

I recommend that the applicant NOT participate in the Pedaling for Parkinson's® class fitness program.

Physician signature

Date

Physician Name (print): _____

Email Address: _____

Address: _____

Phone Number: _____

Fax Number: _____

Additional Physician Comments/Restrictions:

Assisted/Forced Exercise

Assisted or forced exercise is a mode of aerobic exercise in which the voluntary efforts of an individual are augmented so that the individual can exercise at rates faster than they could achieve voluntarily. Traditionally, in Pedaling for Parkinson's®, this occurs on a solo, indoor cycle.

Standards

1. Prescreening Requirements

All participating YMCAs of this exercise program must prescreen potential Parkinson's participants for the following questions. If any of the questions are answered "yes", the physician must address the identified concern(s) in their written clearance/permission for the patient's participation in the program.

Prescreening Questions:

Have you taken any heart medications?	Yes 0	No 0
Do you take blood pressure medication?	Yes 0	No 0
Have you ever had a heart attack?	Yes 0	No 0
Are you diabetic or do you take medicine to control blood sugar?	Yes 0	No 0
Have you ever had heart surgery?	Yes 0	No 0
Have you ever had heart failure?	Yes 0	No 0
Is your blood cholesterol >240 mg/dl?	Yes 0	No 0
Have you ever had a pacemaker or implantable cardiac defibrillator / rhythm disturbance?	Yes 0	No 0
Females: Have you had a hysterectomy or are you postmenopausal?	Yes 0	No 0
Have you ever had a cardiac cauterization?	Yes 0	No 0
Have you experienced dizziness, fainting, or blackouts?	Yes 0	No 0
Have you had a coronary angioplasty?	Yes 0	No 0
Have you ever had a heart valve disease?	Yes 0	No 0
Do you smoke?	Yes 0	No 0
Have you had a congenital heart disease?	Yes 0	No 0
Do you have musculoskeletal problems that would prevent you from exercising?	Yes 0	No 0
Have you had a close blood relative have a heart attack before age 55 (father or mother) or 65 (brother or sister)	Yes 0	No 0
Do you have concerns about the safety of exercise?	Yes 0	No 0
Have you experienced unreasonable breathlessness?	Yes 0	No 0
Are you physically inactive, exercising less than 30 minutes/day, 3 days/week?	Yes 0	No 0
Have you ever experienced chest discomfort with exertion?	Yes 0	No 0

2. Participant Selection Requirements

Before selecting and accepting any participants for the Pedaling for Parkinson's® program, each Y must determine that the patient satisfies all of the criteria for the inclusion and does not have any criteria for exclusion:

Eligibility Requirements:

[Answers to A, B, C, and D must be Yes]

- A. Have you provided informed consent after being given a copy of the attached standards? Yes No
- B. Do you have a clinical diagnosis of idiopathic Parkinson's (the most common form of Parkinson's in which the cause for the condition is unknown)? Yes No
- C. Have you been graded at Hoehn and Yahr stage I, II, or III when off medication? Yes No
- D. Have you provided written clearance/permission by the physician for the Parkinson's patient to participate in the exercise program after the physician has been given a copy of the standards, which clearance must address all concerns identified in the prescreening questions above? Yes No

Patient is ineligible for participation if any of the following apply:

[Answers to E, F, and G must be no]

- E. Have you been diagnosed with a clinically significant medical disease that would increase the risk of exercise-related complications (e.g. cardiac or pulmonary disease, hypertension, or stroke)? Yes No
- F. Do you have dementia, as evidenced as a score of less than 116 on the Mattis Dementia Rating scale? Yes No
- G. Do you have any other medical or musculoskeletal contraindications to exercise? Yes No

3. Exercise Program Requirements

Equipment and Fitting: Solo Cycling

1. Solo Cycle, which can be either a stationary bike (including a motor assisted bike if available) or a road cycle on a trainer.

2. For the road cycle, stationary fluid or magnetic adjustable resistance trainer for the rear wheel should be available.
3. Pedals should be either clipless pedals or pedals with cages. A clipless style is recommended. If the pedals are clipless, the patient should be familiar with or be taught about clipping in and out.
4. Step-stools for patients to get on and off the bike. It is preferable to have one of each side and stools with handles. This may or may not be necessary for some stationary bikes, e.g., recumbent style cycles with step through frames.
5. Bike computer for monitoring cadence, i.e., the pedaling rate during the cycling exercise.
6. Heart rate monitor (HRM): The patient should be fitted with a heart rate monitor. HRMs with unique coding are recommended to prevent interference among multiple HRMs in a group setting. The chest strap of the HRM should be coated with a conducting gel or water to facilitate its operation. After each use, the HRM strap should be rinsed off with warm water and dried with a towel. The heart rate readings should be available continuously so that the patient can adjust the cycling resistance to keep his or her heart rate within the target zone.
7. Bike Fitting: All Parkinson's participants must be fitted to the cycle by an experienced bicycle fitter/instructor who should teach them the correct form and posture for cycling. Extra care and attention should be dedicated to the fitting process if the participant has any lower extremity contraindications to exercise.

Heart Rate Determination:

1. For each Parkinson's participant, a maximum heart rate should be determined using a formula of 220 minus the age of participant. For example, the maximum heart rate for a 60 year old participant would be 160 beats per minute (220 minus 60). A more updated heart rate test from 2018 is 211 minus 64% of your age.
2. The target heart rate zone for each participant during exercise is 60-85% of their maximum heart rate.
3. The target heart rate zone can alternatively be calculated using the Karvonen Formula, which incorporates the participant's resting heart rate into the calculation and results in a slightly higher target zone.
4. If a sponsor / participant would like a more individualized determination of maximum heart rate zone for a participant they can have a cardiac stress test performed in a cardiologist's office, and use the results for the heart rate determination.

Program Duration:

The cycling program should be considered an intervention that is suitable on a long-term basis for those individuals who are exhibiting improvements in functioning and do not develop any contraindications to exercise.

Parameters for Exercise Sessions:

1. Each exercise session should last at least one hour.
2. There should be 3 sessions per week.
3. Each hour exercise should consist of a 10 minute warm-up, a 40 minute main exercise set, and a 10 minute cool-down. Rest breaks may be necessary during the early weeks of the program, especially for Parkinson's patients who have been sedentary or are unaccustomed to sitting in a bike saddle for a period of time.
4. During the warm-up, the patient's heart rate should gradually increase until the target heart rate is achieved after 10 minutes and the rate of pedaling should be gradually increased to 80 RPMs.
5. During the main exercise set, the pedaling rate must be maintained between 80 and 90 RPMs and the patient's maximum heart rate zone (as determined above, 60-85% of the patient's maximum heart rate). The patient is responsible for selection of resistance; they should be instructed on proper use of the cycle prior to use. For patients who are relatively fit from an aerobic standpoint at the start of the session, a heart rate higher in their zone may be suitable. As patients become more fit over time, a gradual increase in their heart rate is recommended.
6. During the cool-down, the patient's heart rate should gradually reduce to the level existing at the start of the warm-up which the cadence should gradually decrease to the preferred voluntary pedaling rate of the patient (typically 60 RPMs).
7. Patients should drink adequate amounts of water before, during, and after each session. ACSM recommends that approximately 20 ounces of water should be consumed during each hour of aerobic exercise.
8. The cycling cadence and the patient's heart rate must be monitored continuously and adjustments made in resistance to keep the exercise within the specified parameters. While the instructor should encourage the patient, learn about the patient, and remain positive, they should also be monitoring the patient for any erratic or overly strenuous exertion and respond promptly, e.g., with a rest break, should such be encountered.
9. Mounting and dismounting solo cycles: Provide assistance as necessary for the patient to mount and dismount the cycle.