



جامعة قطر
QATAR UNIVERSITY

GUIDEBOOK



الحركة حياة
QATAR PD باركنسون - قطر

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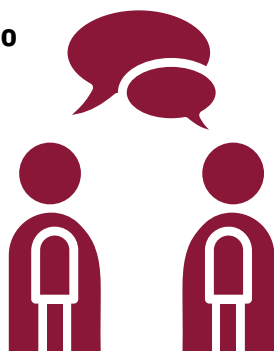
How To Use This Guidebook?

This guidebook has been developed with the support and advisement of people with Parkinson's disease (PD), their caregivers, and healthcare professionals. People with PD and their caregivers can use this guidebook when working in collaboration with their healthcare professionals or physical activity coach.



Depending on who you choose to work with, your coach may be a:

- Physical therapist
- Occupational therapist
- Expert with knowledge and experience in PD



How can a coach help me?

The purpose of your coach is to help you identify any barriers to your goals, and to support you along the way. Ideally, you and your coach will develop a partnership – you will work together to develop a program that best meets your needs and fits with your lifestyle.



The World Health Organization (WHO) recommends that everyone should be physically active as regular activity improves fitness and reduces the risk of heart problems, stroke and depression.



The American College of Sports Medicine (ACSM) also recommend that alongside **moderate intensity exercise**, people should also carry out:

- **Muscle strengthening exercises**
- **Flexibility exercises**
- **Balance and coordination exercises**

It is recommended to exercise at least:



150 minutes of moderate intensity throughout the week

- People with poor mobility should do physical activity to improve balance and prevent falls **3-4 days per week.**

Does this exercise or physical activity recommendations apply to individuals with Parkinson's disease?

READ NEXT



How To Use This Guidebook?

Does this exercise/ physical activity recommendations apply to individuals with Parkinson's disease?



Increasing physical activity is important for everyone whether they have a health condition or not.

You can use this Guidebook to help you to:

- Develop exercise goals.
- Develop a personalized activity plan.
- Track your current physical activity levels.

For example, you may want to:



Join friends for a camping trip



Walk 5 blocks to pray at the mosque



Walk safely across different surfaces

To be able to do these activities you need to:



Improve your balance



Improve your endurance



Improve your muscle strength

You will need to work with your physical activity coach to decide what exercises suit you for improving **balance** and how you can gradually increase the **distance that you can walk**. You may also want to add in **strengthening** and **flexibility** exercises.

To help you with exercising you may need to use:



DVD or Online videos



Exercise applications on phone or tablet



Smartwatch to measure physical activity levels

“ Don't forget to check the quotes from people with PD who have participated in exercise programs. They will be in a similar quotation bubble. This will help you get started and stay motivated to maintain physical activity. ”



1

Coaching for PD

How would you like to go through module 1?



Proceed by reading the pages



Proceed by watching the video

Scan the QR code



Coaching for PD

1



Your Physical Activity Coach

Your physical activity coach will work with you to find what works best for you to start and stay active.

The purpose of your coach is to help you identify any barriers to your goals, and to support you along the way.



Ideally, you and your coach will develop a partnership and work together to develop a program that best meets your needs and fits with your lifestyle.

My coach kept me engaged, motivated me, and helped me to keep to my commitments. I was able to ask her questions and get answers.

-PD Participant



What is coaching?

What is the role of the coach and participant (you)?

- **Coaching** is a collaborative process where a trained coach works with you to change habits, achieve goals, overcome challenges, and maximize your potential.
- It involves asking questions, active listening, and providing guidance and support to facilitate personal and professional development.
- Coaching can cover various areas of life, including career, relationships, personal growth, and most importantly **“health”**.

COACH

Coach's role is to listen attentively, ask thought-provoking questions, and provide guidance and support as you work towards your goals creating a safe and trusting environment for you.

PARTICIPANT

Your role is to actively participate in the process, be open to self-discovery, and take ownership of your actions and decisions.



Coaching for PD

1



What are the benefits of coaching for individuals with PD?

1 Empowerment

to actively manage their condition and make informed decisions about their health.



2 Goal Setting

to set up realistic and achievable goals related to patient's needs of improving mobility, managing symptoms, enhancing quality of life.



3 Problem-Solving

to help people with PD identify challenges or barriers they may face and explore strategies to overcome them.



4 Support and Accountability

ongoing support, encouragement, and accountability to help people with PD stay motivated and committed to their goals.



5 Personalized Exercise Plans

to develop personalized exercise plans tailored to their abilities, preferences, and specific needs, creating an effective and enjoyable program.



6 Education and Resources

to empower people with PD with the knowledge and skills they need to make informed decisions about their physical activity.



Coaching for PD

1

- In fostering good healthy physical activity habit among people with Parkinson's disease (PD), it's essential to integrate key behavior-changing concepts with guidance from a coach.



What are the behavior changing concepts that will help in self-management and becoming physically active?

- Drawing from different theories and frameworks, Engage Qatar PD coaching intervention integrates the following behavior-changing theories and concepts:

Bandura's Self-Efficacy Theory

Individuals can find inspiration through observing others, seeking social support, and cultivating self-belief in their ability to engage in physical activity.

Self-Determination Theory

Includes autonomy, competence, and relatedness, encouraging patients to pursue activities aligned with their values and foster supportive social connections.

Transtheoretical Model

Provides a framework for understanding five different stages of change, guiding interventions tailored to each stage, and offering ongoing support to sustain progress.

Transformative Exercise Framework

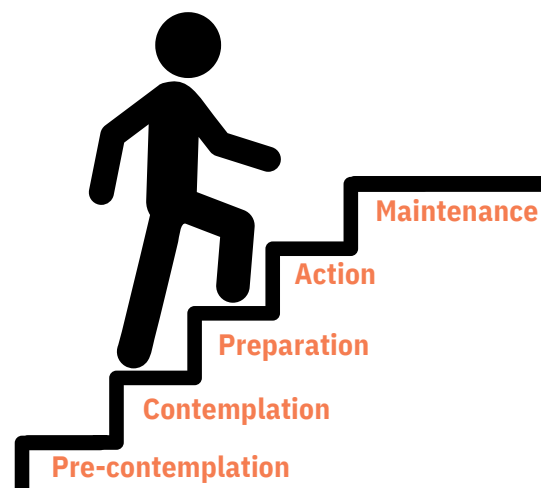
A holistic approach to physical activity that goes beyond the traditional focus on fitness and performance. Enhancing both physical and psychological health.

- The main focus will be on the “Transtheoretical Model” of behavioural change, the stages are as follow:



Think: what stage are you in now?

- 1 **Pre-contemplation:** Unaware of the problem.
- 2 **Contemplation:** Aware of the problem and the desired changes.
- 3 **Preparation:** Intends to take an action.
- 4 **Action:** Practices the desired behaviour.
- 5 **Maintenance:** Works to sustain the behavioural change.



Coaching for PD

1



Many people find that having clear goals increases motivation, providing a sense of hope for the future, particularly in areas that matter most to them.

You will work with your coach to develop exercise goals and a personalized activity plan. This can give you a sense of hope about the future especially about those things that are most important to you.

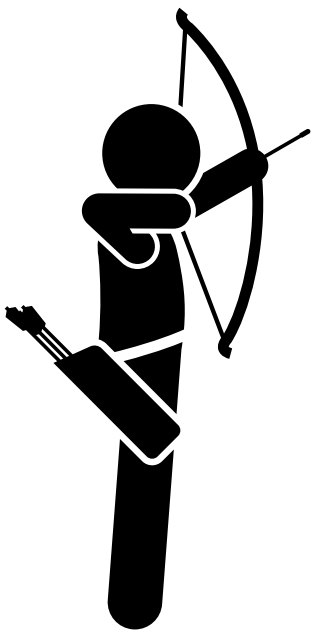


While thinking about the future can be challenging for people with PD, setting short-term goals can be empowering. These goals can focus on learning a new activity or task, or revisiting one that you used to do with ease and are now working towards achieving again.

● SMART GOALS



Your coach will ensure that your goals meet SMART criteria that is designed to provide clear direction and increase the likelihood of success.



- S**pecific
- M**easurable
- A**ttainable
- R**ealistic
- T**ime-based



It is also important that your SMART goals are meaningful to you!



2

Benefits of Exercises for PD

How would you like to go through module 2?



Proceed by reading the pages



Proceed by watching the video

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Benefits of Exercises for PD

2



Physical Activity & Exercise: What are the differences?

PHYSICAL ACTIVITY

Are any activities that get your body moving.

Gardening Walking in the park Taking the stairs



EXERCISE

A form of physical activity that is specifically planned and structured.

Stationary Bike Dumbbell exercises Yoga class



The aim of this program is to encourage people with early to moderate stages of PD, to be active in whatever way that works for the best for them!



Recent research about the benefits of exercise and physical activity for PD:

- **Brain Benefits:**
 - Exercise promotes brain growth factors called “brain fertilizer” which lead to new brain cells, stronger connections between neuronal cells.
 - Improved blood flow and less inflammation in the brain (Neuroprotection).
 - Improved cognitive function.
- **Mobility and posture:**
 - It improves fitness, mobility, posture, and gait, while reducing stiffness in people with PD.
- **Prevention and Progression:**
 - Exercise in the earliest stages can potentially alter the progression of the disease by slowing the degeneration of motor and cognitive functions.



The exercise program has affected me both mentally and physically before I got to know you and was introduced to this program I used to lock myself away at home fear of falling was a big issue. I was therefore not moving. Now my mobility has improved dramatically. I feel as if I have regained big chunk of my life.

-Individual with PD

There is some careful initial evidence to suggest that regular exercise might even help in slowing the progression of the disease. It doesn't really matter what you do, but make sure that you enjoy your exercise and that you work out regularly, preferably on a daily basis!

-Bas Bloem, MD, PhD

A known researcher and neurologist specialized in PD.

Benefits of Exercises for PD

2



What Are the Benefits of Regular Physical Activity and Exercise for PD?

EXERCISE BUILD A STRONGER AND HEALTHIER BRAIN!

Improves balance and reduces falls, which medications and surgeries can't yet fully treat. Also, helps medication work better by helping the brain use dopamine better.

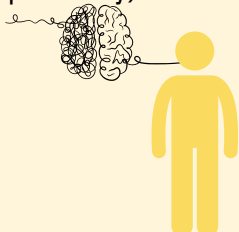


Dopamine: the chemical that decreases in PD.

Impacts a range of motor and non-motor symptoms in PD, including constipation, memory and thinking impairment and sleep disorders.



Encourages the brain to rewire or reorganize and build new communication pathways that lessen or overcome disease symptoms or damage (Neuroplasticity). A way exercise might slow Parkinson's progression.



Manages your stress and mood! Stress can temporarily affect PD symptoms, interfere with sleep and affect food choices. You may not be able to eliminate stress, but you can reduce its impact, and exercise is a great way to do so!



Supports your mental, emotional and spiritual well-being. A crucial but sometimes forgotten aspect of staying healthy. Regular exercise boosts mood, reduces stress, and fosters a sense of purpose and connection, enhancing overall mental and emotional resilience.



Promotes social engagement, especially through group exercise sessions or activities. This provides social support and opportunities for interaction with others, including family and friends, helping to reduce feelings of isolation and loneliness.



Shared PD Experiences

My health is my priority and if exercise would help then I will exercise daily. I really would like to reach that level of doing things by my own and not relying on others; this is all what I want.

I exercise not just because I know I have to, but because I feel better when I do, physically and mentally. I feel good because I know I'm doing something that is good for me and I get a lot of satisfaction from that.

QUOTES SHARED

BY ARAB

INDIVIDUALS

WITH PD

ABOUT THEIR

EXPERIENCES

WITH EXERCISES

& PHYSICAL

ACTIVITY

“في الحركة بركة”
“There is blessing
in movement”

*A popular idiom has been said
between arabs for decades.*

Yoga has helped me with body awareness emotional benefits, makes me feel more happy and a sense of control.

Family has always been a source of support for me to accept my condition. A lot of mornings I would be very tired sitting on my sofa or lying in my bed until my son comes and asks me to go for a walk with him. His encouragement pulls me up and its just about the start that is difficult then I get clicked on; I usually feel much better afterwards.

The exercise that I am doing includes strengthening, twisting, stretching, and balance. It is all the things that I need to make the body functional... It loosens my body and I feel better!



3

Exercise Recommendations

How would you like to go through module 3?



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Proceed by watching the video

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Exercise Recommendations

3



What's the best activity for me?

People with PD experience a number of benefits from engaging in exercises, including improvement in:



Specific kinds of exercises may produce different outcomes.

● An intensive exercise program that includes:

- Aerobic exercises
- Balance exercises
- Stretchings
- Strength training

Has been shown to:

Improve motor function & lower medication doses compared to a no-exercise group over a 2-year experiment.

Engaging in exercise early on in your disease

will help you to develop physical activity habits and routines that may help you to compensate better and have less motor impairments as your disease progresses.

The World Health Organization (WHO)

recommends that individuals should perform at least:

- **150 minutes** per week of **moderate** exercise **OR**
- **75 minutes** per week of **vigorous** exercise (**OR** a combination of moderate and vigorous activity)

KEY POINTS



- **Be** active as part of your routine by finding activities that you can easily fit into your daily life.
- **Move** more and **sit** less!



Activity pyramid



Exercise Recommendations

3



How can I benefit from the Activity Pyramid?

Start your weekly activity plan with the daily activities at the base of the pyramid and then enhance your fitness by moving up in the hierarchy of the pyramid.



**MOVE MORE
SIT LESS!**



Exercise Recommendations

3



Walking



More specifically, the American College of Sports Medicine recommends that an exercise program includes the following four components:



Aerobic Activities



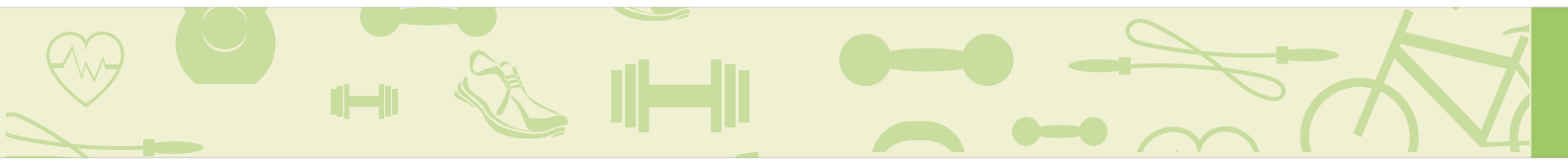
Resistance Training



Flexibility (Stretching)



Neuromotor (Balance & Agility)



Walking



Walking is an easy way to get physically active as it does not need any special equipment or clothing.

You may want to increase the distance you walk within your own house, around the house, around the neighborhood or in an area away from your home.

Your coach can help you design the most appropriate walking plan for you!

Joining a group of friends or family can make walking more enjoyable and motivating, as it allows you to connect with others and explore different places in Qatar.

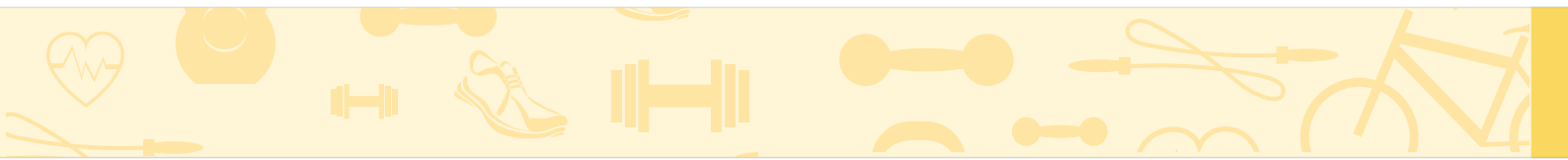


I feel the walking group has motivated me to get out and meet other people.

-Person with PD

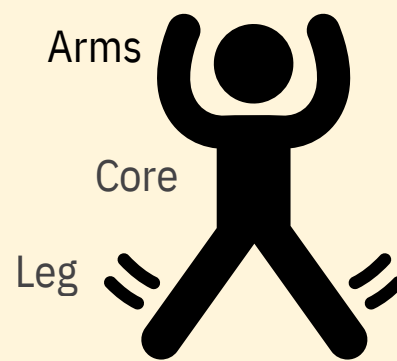
I enjoyed the calmness and peace I had after walking for long distances, it's a thing I would like to do consistently.

-Person with PD



Aerobic Activities

Aerobic exercise, also known as endurance exercise, involves the movement of your large muscles:



You know you are doing an aerobic exercise when your heart beats faster and you breathe harder.

Aerobic exercise can be performed with **light**, **moderate**, or **high intensity**. The level of intensity varies from person to person depending on their fitness level and how hard they have to work to perform the activity.



What is a moderate intensity for one individual may be a light intensity for another.



Aerobic Exercises

● Include exercises that are high repetition, quick movement speeds, or complexity.

● **Evidence in PD research** shows that goal-directed high-intensity exercises may be the most beneficial for producing positive effects and supporting changes in the brain for improved motor and cognitive performance.

Your coach can help you to determine your high intensity level zone based on your heart rate, or rating of perceived exertion (RPE).



Aerobic Activities



Examples of aerobic exercise options and general instructions on how to progress.

Sustained high-intensity training

- Cycling
- Treadmill
- Elliptical



High-intensity interval training (HIIT)

- Stationary bike or Treadmill
- Begin at a comfortable pace and then alternate between high-intensity and slow pace every 2-3 min.



Aerobics class

- High volume dance:
Tango, waltz/foxtrot
- Zumba
- Boxing
- Rowing
- Swimming



Walking (Outdoors, gym track, treadmill)

- Determine a comfortable walking pace and gradually increase your speed.
- Try to maintain a quick pace while taking large steps.
- Try to take steps that are larger than what feels comfortable.
- Be mindful of your arm swing, making sure you are alternating your arm swing appropriately.



- Choose an activity that is enjoyable to you.
- Aim to increase your frequency to **3-5 times a week**.
- Monitor your level of exertion by the Rate of Perceived Exertion scale **(Explained in Module 5)**.



Aerobic Activities



After selecting the exercises and physical activities that resonate with you and suit your lifestyle.



- It is **recommended** that you exercise within **55-85% of your maximum heart rate** for **at least 30 minutes** to get the best aerobic benefits.
- The **PD researchers recommend**, that safely exercising within **75-85%** percent of your maximum heart rate may be even **more beneficial** for people with PD.

Your maximum heart rate zones can be calculated based upon your age and current health status. Ask you coach to work with you to find the ideal target heart rate zone for you and discuss your options for tracking it.

□ In reference to high-intensity interval training (HIIT), people have said:

It's the best exercise I've ever had for my Parkinson's. I feel good when I finish exercising.

-Person with PD

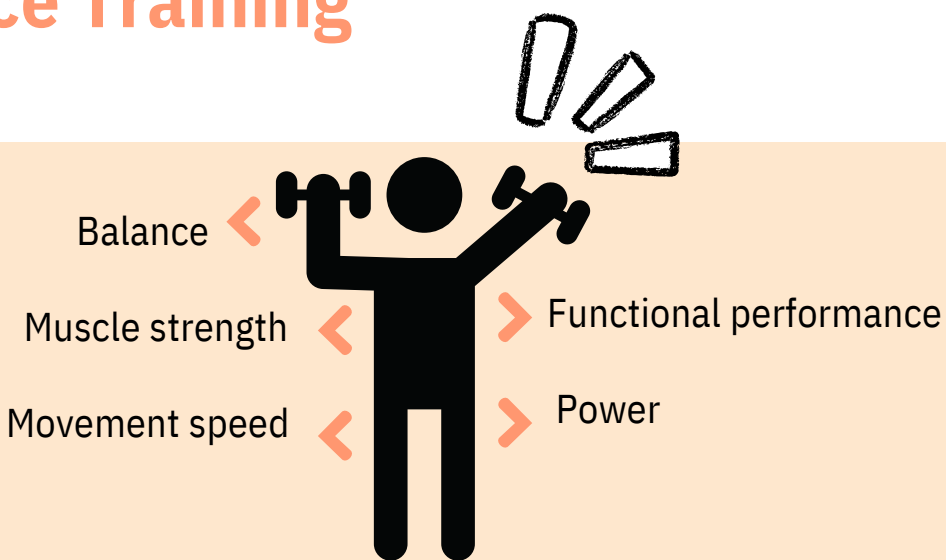
I have learned so much about how important the heart-rate is, I could just be going through the motions but now I know I gotta be getting my heart rate going. I notice I feel better when I do the right things.

-Person with PD



Resistance Training

Structured resistance exercise can benefit you:



Progressive resistance exercise (PRE) has been found to be **more beneficial than** general strength training for PD.



You can use free weights, or your own body weight for exercises.

For example:



It's important to note that your coach will help you to create your own resistance exercise program to make sure it is achievable and beneficial for you!



Resistance (Weights)

□ The recommended dosage for resistance and strengthen exercises:



At least 2 to 3 nonconsecutive days per week



30 to 60 minutes per session



Other aspects of resistance training also need to be gradual.

It's important to mention that training volume, including sets, repetitions, and the number of exercises, should be adjusted progressively to ensure a safe and effective training experience.

□ Other examples of Resistance exercises:

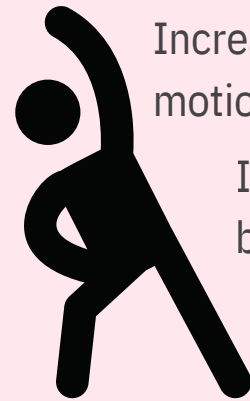




Flexibility (Stretching)

□ The aim of flexibility training is to:

Improve coordination
Decrease rigidity and stiffness



Increase range of motion
Improve balance
Improve body alignment

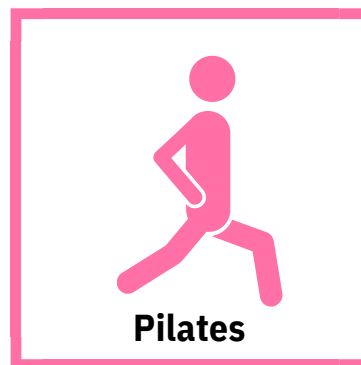


Stretching is recommended to do before and after exercising!

□ Examples of stretching exercise:



Warrior pose



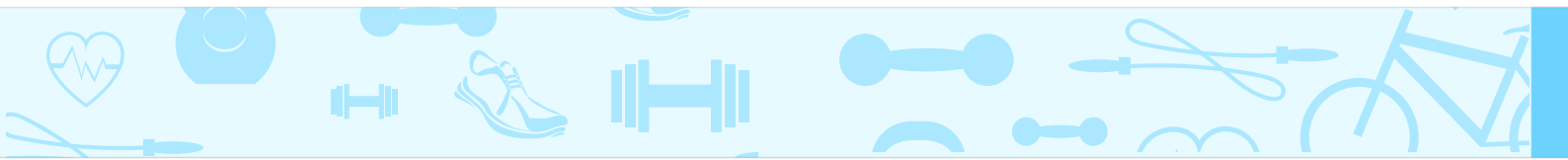
Standing lunge

Yoga allows me freedom to mingle with others while feeling totally accepted!

-Person with PD

I enjoyed the calmness a lot, and also the emotional relief. I actually cried at the end of my first yoga class.

-Person with PD



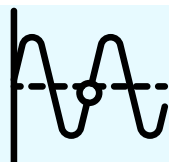
Neuromotor (Balance & Agility)

Task-specific sensory motor agility exercises are particularly beneficial for people with PD in:

1. Driving Neuroplasticity
2. Improving:
 - Mobility
 - Coordination
 - Balance and rigidity
 - Freezing of gait



In addition, it can help to improve



Movement Amplitude



Movement Speed

As well as transitioning from



Sitting-to-Standing



Turning



To get the most benefit, an agility program should be kept up consistently and adjusted as your needs change.

I think exercise makes me stronger, and hopefully, a little more balanced so I don't fall and now I do it because I have been told it is a benefit to Parkinson's.

-Person with PD



Neuromotor (Balance & Agility)

Agility Course



- Agility
- Coordination
- Quick changes in direction and mobility in small spaces

Example of Balance & Agility Exercises

Lunge exercise



- Big steps, stepping for postural correction
- Range of stability
- Quick changes in direction
- Internal representation of body

Tai Chi

(Series of controlled slow movements)



- Range of stability
- Perception of posture and coordination of arms and legs
- Large backward and side steps



Kayaking stroke exercise



- Trunk rotation
- Coordination
- Speed

Pre-Pilates

(System of posture exercises)



- Trunk control
- Rotation and extension
- Functional transitions
- Sequencing actions

Boxing



- Postural corrections
- Fast arm and foot motions
- Backward walking
- Sequencing and timing of movements

High-speed yoga



- Movement and walking speed
- Strength
- Balance
- Mobility



4

Challenges & Strategies

How would you like to go through module 4?



Proceed by reading the pages



Proceed by watching the video

Scan the QR code




Challenges & Strategies


4

■ We have found that many people with PD have similar challenges when they went to start a new program, particularly a new exercise routine.


■ We understand that there are many factors to consider, such as:

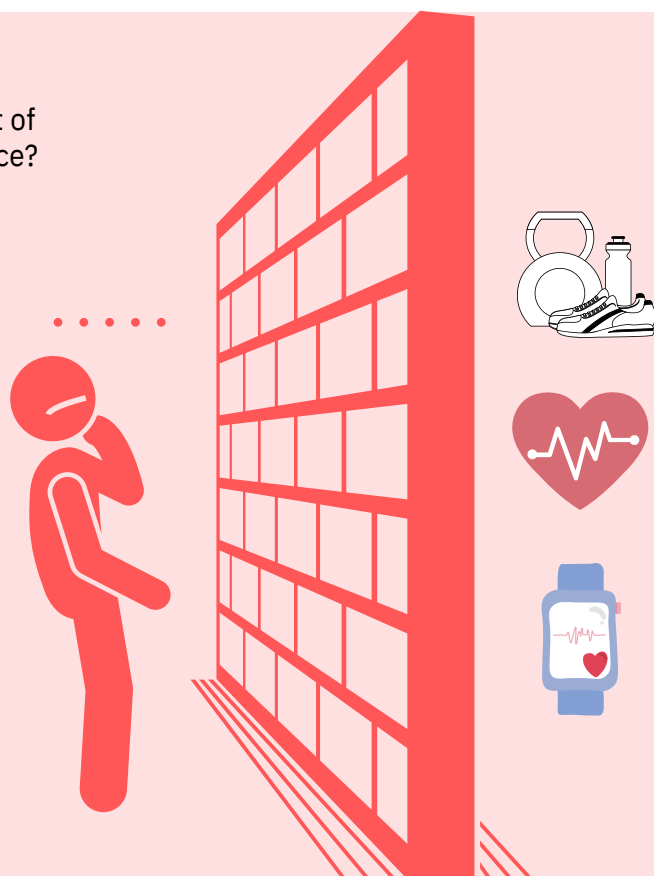
 **SOCIAL**
Is exercise a thing my friends and family would do? Isn't it out of norm in our Arab society/ culture for older people to experience?

 **ENVIRONMENTAL**
Where can I exercise? The weather is hot outside!
I don't have space to exercise at home!

 **BELIEFS**
I have never been much into sport or exercise.
Exercise is too difficult for me.

 **PAST EXPERIENCE**
I have tried doing strengthening exercises but I stopped because I didn't know what to do exactly.

 **AVAILABLE RESOURCES**
i struggled to find sufficient and direct resources specifically dedicated to people with PD in Arabic.



Starting an exercise program can be a rewarding journey!
We've gathered common challenges others have faced and effective strategies to overcome them, helping you get started with confidence

Challenges & Strategies

4

I DON'T HAVE ENOUGH TIME

● **Finding time to exercise is a common challenge for many people.** Living with PD can make scheduling activities feel difficult, but exercise is essential. Think of it as a valuable prescription from your doctor, one that can help improve your health and quality of life.

Timing my exercise with my medications each day helped me to establish an active routine too.

-Individual with PD

For me, it's just easier to do my stretching routine at home in the morning, and then do my weights and go for my walk when I get home from work. Saves me time from commuting to the gym.

-Individual with PD

If exercise could be packaged into a pill, it would be the single most widely prescribed and beneficial medicine in the nation.

Dr. Robert Butler, founding director of the National Institutes on Aging, NIA



Possible Strategies



Schedule exercise into your daily routine like walking to the mosque, parking your car away from the mall's gate or your company's building.



Try setting aside a bit of time, even 10 minutes, every day to do some exercise. Also, use your clock /watch /phone to set an alarm to remind you to exercise.



Consider doing flexibility exercises while listening to the radio or watching television. Commercial breaks are a perfect time to get up, move, and stretch!

Challenges & Strategies

4

I AM NOT MOTIVATED TO EXERCISE

● It's natural for everyone to occasionally struggle with motivation for exercise or other important activities. For people with PD, this can sometimes be influenced by the condition itself, but setting realistic goals and focusing on the potential benefits can help build confidence and motivation to stay active.

■ Understanding the kinds of motivation is a great way to discover how best to motivate yourself.

■ Researchers have found that the best motivation outcomes result from a combination of both intrinsic and extrinsic motivation.

Intrinsic motivation tends to be the most sustainable for lasting outcomes.

You can talk with your coach to identify the best sources of motivation for you!

■ What is the difference between intrinsic and extrinsic motivation?

Intrinsically Motivation

Motivation comes from **within** oneself or **internally**

- Enjoying doing an activity.
- Finding an activity personally interesting or stimulating.
- Enjoying the feeling of strength and fitness.
- Taking pleasure in a healthy lifestyle.

Extrinsically Motivation

Motivated by rewards the come from **outside** oneself

- Tangible rewards & Social praise.
- Winning medals.
- Financial gain.
- Biomarkers such as: weight, heart rate, steps, blood pressure, blood sugar levels, cholesterol, hours of sleep, etc...

Challenges & Strategies

4

Possible Strategies



Consider different activities to keep your physical activity interesting.



Consider making your exercise program part of a set routine.



Keeping a diary/record of your daily activity may help you track and visualize your progress.



Ask your friends and family to encourage you or even exercise with you.



Try to set small achievable targets to be active every day.



Focus on the positive benefits you can achieve from being more active.



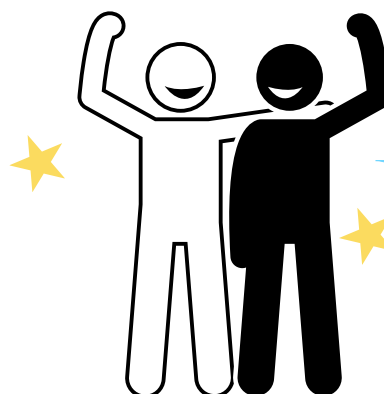
Create a playlist of your favorite upbeat and energizing music to listen to while exercising. If you prefer something different, consider finding a podcast or interview that you can listen to while walking alone or during other solo activities.

Getting started was the hardest part for me. I was stuck in bad habits. For me, the first step was just showing up consistently. I was unmotivated with just the thought of moving, but once I got to the gym and had a workout, I would feel great! So, now I remind myself of how good I feel when I exercise, and that helps me get going.

-Person with PD

I've learned that exercising can be fun! I've just had to find what works for me and what I like.

-Person with PD



I DID IT!

Challenges & Strategies

4

I MIGHT FATIGUE OR GET TIRED WHILE EXERCISING

● **People with PD may sometimes feel tired, even after minimal activity.** It can feel like tasks take longer to complete, and even simple activities can be tiring. While researchers are still studying the exact cause, this fatigue may be partly related to the increased energy demands placed on the body by the disease. Understanding this can help in managing energy levels throughout the day.

I wasn't sure what kinds of exercises I should do. But my coach helped me to identify exercises that were safe and how to take precautions to prevent injury.

-Individual with PD

At the beginning I felt tired exercising, but the more I did it, the more I felt energized with each new day. I also noticed I began to sleep better too.

-Individual with PD

Possible Strategies



Work out when you have the most energy! morning? afternoon? Build your exercise and physical activity program around it.



Try to adopt a set routine for going to bed and waking up, and aim for at least 7-9 hrs of sleep each night.



Medications can impact your ability to exercise, so it's helpful to time your exercises about 1 hour after you take your medication, in consultation with your healthcare provider.



Try varying the amount of exercise that you do when you are tired and when you have more energy.



Remember to eat well and drink water before and after exercise.



Wear appropriate footwear.

Challenges & Strategies

4

**I DON'T FEEL
CONFIDENT ENOUGH
TO EXERCISE ALONE**

● **Many people with PD, even in the early stages, may experience mild challenges with memory, thinking, and planning activities.**

While this can make it harder to stick to an exercise routine, having support from carers, friends, and family can play a key role in the success of the program. If you have someone who can join you during exercise, their presence can provide valuable encouragement and assistance.

■ **Challenges with balance, strength, or unfamiliarity with a new task can affect your confidence in trying something new.**

While some of these challenges are related to the disease:

Staying active can help improve these areas and boost your confidence in performing new tasks and activities.

■ **Family/ friend support:**

For individuals in the early stages of PD, encouragement from family members plays an important role in both adopting and continuing an exercise routine. Having a trusted family member nearby provides a sense of safety and reassurance, making it easier to stay motivated and supported during exercise.

“
The family encouragement was very important for me to take this step and start the exercise program.

-Individual with PD

“
My family has been a great support in helping me accept and manage my disease. Many mornings, when I feel too tired to move, my son encourages me to go for a walk, and once I start, I usually feel much better.

-Individual with PD

Challenges & Strategies

4

Possible Strategies



Ask your coach to help you find exercises that you like to do, get them to practice more difficult ones with you and find out what works for you.



Exercise in a safe place, make sure the room is free of clutter; keep a chair behind you or next to you, in case you lose your balance.



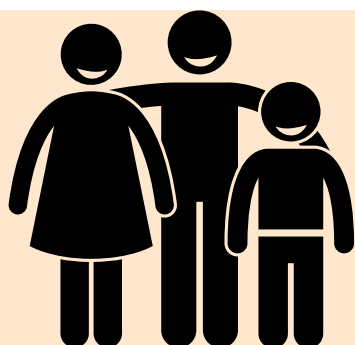
Start off by doing exercises or activities that you feel confident in doing. Gradually take on more challenging tasks or activities as you start to find things easier.



Ask a friend, spouse, or carer to watch you as you do the exercises and to help you if you have problems remembering.
You can ask them to exercise with you!



Join a club or group in a nearby gym.



Don't hesitate to ask for help from your family, or friends, or even healthcare provider!

Challenges & Strategies

4

EXERCISING IS UNCOMMON IN MY SOCIETY/ CULTURE

● In arabic cultures, physical activity is not commonly viewed as the norm, especially for older individuals. However, as awareness grows, many are beginning to recognize the positive impact exercise can have, even for seniors.

■ There may be misconceptions about exercise being unsuitable for older adults, but this is changing as more people learn about the benefits of staying active.

These misconceptions are in countries where knowledge about exercise's role in managing PD symptoms is still developing.

■ Lack of habitual exercise in society, often influenced by sociocultural factors, can contribute to stigmatization.

As the understanding of exercise's importance continues to spread, there is an increasing push to provide more accessible information and resources in Arabic to support those with PD.

I have tried to look for more information in the internet about other exercises and therapies for PD but I could not find much related information in Arabic.

-Person with PD

Possible Strategies



Ask your healthcare provider or coach for education on exercise benefits and reliable resources in your language.



Start with comfortable, manageable activities like walking, gentle stretching, or swimming, which benefit both your physical and mental health. No need to start with intense workouts right away.



Empower yourself and your PD journey to advocate for exercise and awareness in Arab society. By doing so, you can inspire communities where PD patients share experiences and encourage each other to stay active.



Safety & Monitoring

How would you like to go through module 5?



Proceed by reading the pages



Proceed by watching the video

Scan the QR code



Safety & Monitoring

5



Be sure to check with your doctor first if it appropriate for you to start any new exercise routine.

You should always aim to exercise within your personal ability. When exercising, you may feel warm and possibly have an awareness of your heart beating faster.

You should still be able to hold a conversation.

You should not feel dizzy or exhausted.

Do not continue an activity if it causes you to feel sharp pain and be sure to tell your physician.



Starting a new physical activity or exercise program can mean that you may initially feel some muscle aching or tiredness after exercise but this should resolve by itself within few days.

If you are not used to exercising it is best to build up gradually.

If you are concerned, please discuss this with your coach.



Some days you'll be able to do more, and other days you may do less, and **this is normal**

After a particularly active day of exercise I may feel a need for a day to recover so I plan for an easier day the next.

-Person with PD

Safety & Monitoring

5



We recommend that you use Borg's Scale of Perceived Exertion, to help you monitor your activity levels.

1-10 Borg Rating of Perceived Exertion Scale

0	Rest
1	Really Easy
2	Easy
3	Moderate
4	Sort of Hard Hard
5	Hard
6	
7	Really Hard
8	
9	Really, Really, Hard
10	Maximal Exertion

INSTRUCTIONS:

- During your activities, you should aim to achieve moderate to somewhat hard levels (3-6/10 on the BORG scale). Talk to your coach about the level that is right for you.
- Monitoring how hard your body is working can help you adjust the intensity of your activity level.
- You should keep a record of your ratings.

Safety & Monitoring

5



If at any time when you are exercising, you feel severely short of breath or cannot breathe, stop immediately, rest.

If needed, call 911 or ask someone to do so.

For discomfort or a fall without injury, contact your coach.

If shortness of breath persists every time you exercise, discuss it with your coach so they can adjust the exercise intensity or suggest seeing your doctor.



There are many ways or tools that can help you in measuring and monitoring your exercise intensity level.

Your coach will help you determine your Maximum Heart Rate.

Talk Test

1-10 Borg Scale

Heart Rate Monitoring

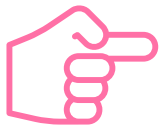
	Talk Test	1-10 Borg Scale	Heart Rate Monitoring
What is it?	Talk or sing to measure effort	Rate your effort on a scale from 1 (lightest) to 10 (hardest)	Measure heart rate, aiming for your personal target range
Low intensity	Can talk and sing	1-2 on scale	<59% of maximum heart rate (MHR)
Moderate intensity	Can talk but not sing	3-6 on scale	60 to 74% of MHR
Vigorous intensity	Cannot talk or sing	7-10 on scale	75 to 85% of MHR
Pros	No equipment needed	No equipment needed	Objective (measurable)
Cons	Subjective (based on your feeling)	Subjective (based on your feeling)	Need equipment (e.g., smartwatch) and target heart rate calculation



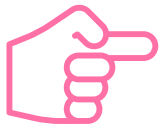
6

Recording your Progress

How would you like to go through module 6?

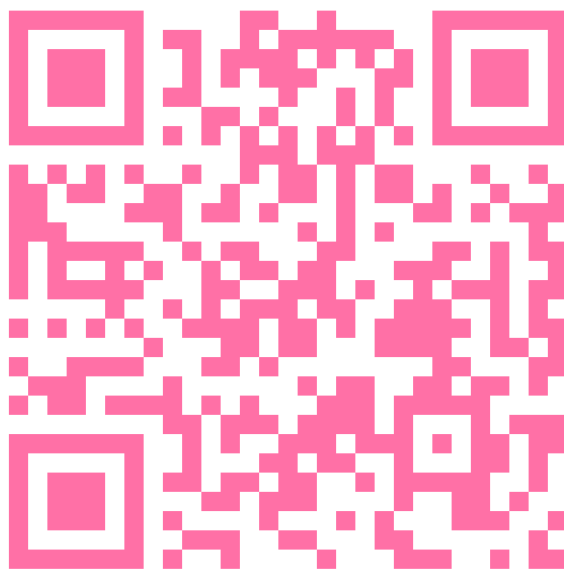


Proceed by reading the pages



Proceed by watching the video

Scan the QR code



Recording your Progress

6



An important part of any physical activity program is tracking your activities and exercises to ensure you're working towards your goals and monitoring exercise intensity.



It is recommended that for general health benefits, people should walk about 10,000 steps per day.

Most inactive people walk less than **5,000 steps a day**, **Before starting your exercise** and activity program, consider measuring how many steps you currently take each day, and **aim to progress gradually**.



Your coach can help you to decide on a daily step count that is realistic and achievable!

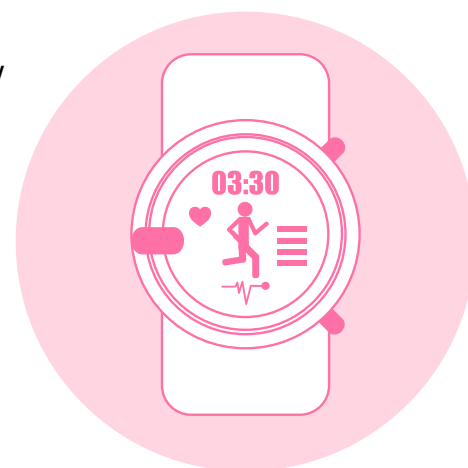
You can use a diary to record walking activity and any other exercise or physical activity.



Activity monitors, such as those worn on your wrist or waist, may also help you to stay motivated to exercise.

Benefits of wearing an activity monitor:

- 1. Count** the number of steps you take each day
- 2. Send** reminders to exercise or to get up when sitting too long
- 3. Track** your exercise routines



Some people prefer low-tech options, such as exercise log journal.

An activity journal provides a personalized and reflective way to track mobility, capturing not just the quantity but also the quality, context, and emotions tied to activities. Unlike monitoring devices, it offers insights into mood, motivation, and challenges while encouraging mindfulness and accountability.

Recording your Progress

6



To help you decide what approach addresses your needs best, we have listed some of the most common methods.

Here are some of the pros and cons of each method.



Calendar

Pros:

- Simple and easy to use.
- Low cost and easy to access.

Cons:

- Not much room for detail.
- Easy to forget.
- Difficult to complete accurately.



Diary

Pros:

- Low cost.
- You choose what you want to record.
- You choose how much detail to use.

Cons:

- Difficult to keep a detailed diary.
- Easy to forget.
- Can be difficult to complete accurately.



Smart phone

Pros:

- Wide range of tracking software/apps.
- Always with you, count your steps.
- Quick review of recent and old activities.

Cons:

- Can significantly shorten battery life
- Need it with you with internet access.
- Expensive if you don't already own one.



Activity monitor

Pros:

- Low effort and can provide instant feedback on your activity levels.
- Additional features such as heart rate monitoring, sleep tracking.

Cons:

- Need to be regularly charged and synced.
- If you forget to wear it, you don't get a record of your activity.

ENGAGE QATAR PD PLATFORM



About the Platform

A dedicated platform created for physical activity coaching intervention to promote engagement in physical activity for people with Parkinson's disease in Qatar.



How to Access the Platform?

You will be provided with all the required details by your coach.

OR

By scanning the following QR code.



References

1. Busse M, Quinn L, DeBono K, et al. A randomized feasibility study of a 12-week community-based exercise program in people with Huntington's disease. *J Neurol Phys Ther.* 2013;37(4):149-158.
2. Busse M, Quinn L, Khalil H, et al. Physical activity self-management and coaching compared to social interaction in Huntington's disease: Results from the ENGAGE-HD randomized, controlled, pilot feasibility trial. *Phys Ther.* 2017;97(5):569-581. doi:10.1093/ptj/pzx031
3. Busse M, Quinn L, DeBono K, et al. Supporting physical activity engagement in people with Huntington's disease (ENGAGE-HD): Study protocol for a randomized controlled feasibility trial. *Trials.* 2014;15(1):487. doi:10.1186/1745-6215-15-487
4. Caciula MC, Horvat M, Tomporowski PD, Nocera J. The effects of exercise frequency on executive function in individuals with Parkinson's disease. *Ment Health Phys Act.* 2016;10:18-24. doi:10.1016/j.mhpa.2016.04.001
5. Colón-Semenza C, Latham NK, Quintiliani LM, Ellis TD. Peer coaching through mHealth targeting physical activity in people with Parkinson disease: Feasibility study. *JMIR Mhealth Uhealth.* 2018;6(2):e42. doi:10.2196/mhealth.8074
6. Combs SA, Diehl MD, Staples WH, et al. Boxing training for patients with Parkinson disease: A case series. *Phys Ther.* 2011;91(1):132-142. doi:10.2522/ptj.20100142
7. Dibble LE, Foreman KB, Addison O, Marcus RL, Lastayo PC. Exercise and medication effects on persons with Parkinson disease across the domains of disability: A randomized clinical trial. *Phys Ther.* 2015;39(2):85-92.
8. Hackney ME, Earhart GM. Effects of dance on movement control in Parkinson's disease: A comparison of Argentine tango and American ballroom. *J Rehabil Med.* 2009;41(6):475-481. doi:10.2340/16501977-0362
9. Hunter H, Lovegrove C, Haas B, Freeman J, Gunn H. Experiences of people with Parkinson's disease and their views on physical activity interventions: A qualitative systematic review. *JBI Database Syst Rev Implement Rep.* 2019;17(4):548-613. doi:10.11124/JBISRIR-2017-003901
10. Khalil H, Bajwa JA. Barriers and facilitators in physical rehabilitation for Parkinson's disease in the Arabian world. *Mov Disord Clin Pract.* 2015;2(3):227-229. doi:10.1002/mdc3.12200
11. Khalil H, Busse M, Quinn L, et al. A pilot study of a minimally supervised home exercise and walking program for people with Parkinson's disease in Jordan. *Neurodegener Dis Manag.* 2017;7(1):73-84. doi:10.2217/nmt-2016-0041

References

12. Khalil H, Chahine L, Siddiqui J, et al. Parkinson's disease in the Middle East, North Africa, and South Asia: Consensus from the International Parkinson and Movement Disorder Society Task Force for the Middle East. *J Parkinsons Dis.* 2020;10(2):729-741. doi:10.3233/JPD-191751
13. Khalil H, Chahine LM, Siddiqui J, Aldaajani Z, Bajwa JA. Parkinson's disease in the MENASA countries. *Lancet Neurol.* 2020;19(4):293-294. doi:10.1016/S1474-4422(20)30026-0
14. Khalil H, Nazzal M, Al-Sheyab N. Parkinson's disease in Jordan: Barriers and motivators to exercise. *Physiother Theory Pract.* 2016;32(7):509-519. doi:10.1080/09593985.2016.1219433
15. Keus SHJ, Hendriks HJM, Bloem BR, et al. KNGF guidelines for physical therapy in patients with Parkinson's disease. *Dutch J Physiother.* 2004;114(3):1-86.
16. King L, Wilhelm J, Chen Y, et al. Effects of group, individual, and home exercise in persons with Parkinson disease: A randomized clinical trial. *J Neurol Phys Ther.* 2015;39(4):204-212. doi:10.1097/NPT.000000000000104
17. King LA, Horak FB. Delaying mobility disability in people with Parkinson disease using a sensorimotor agility exercise program. *Phys Ther.* 2009;89(4):384-393. doi:10.2522/ptj.20080214
18. Long KM. Pre-active PD: A therapist delivered physical activity behavior change program for people with early stage Parkinson's disease [dissertation]. Ann Arbor, MI: ProQuest Dissertations Publishing; 2020. 27739505.
19. Marusiak J, Zeligowska E, Mencil J, et al. Interval training-induced alleviation of rigidity and hypertonia in patients with Parkinson's disease is accompanied by increased basal serum brain-derived neurotrophic factor: A repeated-measures, case series pilot study. *J Rehabil Med.* 2015;47(4):372-375. doi:10.2340/16501977-1946
20. McKay JL, Ting LH, Hackney ME. Balance, body motion, and muscle activity after high-volume short-term dance-based rehabilitation in persons with Parkinson disease: A pilot study. *J Neurol Phys Ther.* 2016;40(4):257-268. doi:10.1097/NPT.000000000000157
21. Ni M, Signorile JF, Mooney K, et al. Comparative effect of power training and high-speed yoga on motor function in older patients with Parkinson disease. *Arch Phys Med Rehabil.* 2016;97(3):345-354.e15. doi:10.1016/j.apmr.2015.10.095

References

22. Petzinger GM, Fisher BE, McEwen S, et al. Exercise-enhanced neuroplasticity targeting motor and cognitive circuitry in Parkinson's disease. *Lancet Neurol*. 2013;12(7):716-726. doi:10.1016/S1474-4422(13)70123-6

23. Prodoehl J, Rafferty MR, David FJ, et al. Two-year exercise program improves physical function in Parkinson's disease: The PRET-PD randomized clinical trial. *Neurorehabil Neural Repair*. 2015;29(2):112-122. doi:10.1177/1545968314539732

24. Quinn L, Macpherson C, Long K, Shah H. Promoting Physical Activity via Telehealth in People With Parkinson Disease: The Path Forward After the COVID-19 Pandemic?. *Phys Ther*. 2020;100(10):1730-1736. doi:10.1093/ptj/pzaa128.

25. Quinn L, Morgan D. From Disease to Health: Physical Therapy Health Promotion Practices for Secondary Prevention in Adult and Pediatric Neurologic Populations. *J Neurol Phys Ther*. 2017;41 Suppl 3(Suppl 3 IV STEP Spec Iss):S46-S54. doi:10.1097/NPT.000000000000166

26. Shih HS, Macpherson CE, King M, et al. Physical Activity Coaching via Telehealth for People With Parkinson Disease: A Cohort Study. *J Neurol Phys Ther*. 2022;46(4):240-250. doi:10.1097/NPT.0000000000000410.

27. Sturkenboom I, Thijssen M, Gons-Van Elsacker J, et al. Guidelines for occupational therapy in Parkinson's disease rehabilitation. http://www.parkinsonnet.info/media/14820095/dutch_ot_guidelines_final-npf__3_.pdf

Resources



Make Your Move: Exercise for Brain Health and Life with Parkinson's

[Make Your Move: Exercise for Brain Health and Life with Parkinson's | Parkinson's Disease \(michaeljfox.org\)](https://www.michaeljfox.org/Make-Your-Move-Exercise-for-Brain-Health-and-Life-with-Parkinsons-Disease)



Parkinson's Foundation: Exercise Recommendations

<https://www.parkinson.org/library/fact-sheets/exercise-recommendations>



Move to exercise:

https://www.youtube.com/channel/UCH7_ed2_mkzXNWPZqVIosw



Parkinson Net Luxemburg:

<https://www.parkinsonnet.lu/de/leben-parkinson/videos#physiotherapie>



Saudi PD Society

<https://saudiparkinson.sa/>

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