

Huntington disease (HD) is a neuro-degenerative disorder characterized by a progressive loss of physical, cognitive and emotional functions. While we await therapies to prevent or delay the onset of HD, research studies have shown that physical, mental and social stimulation can improve quality of life for people affected by HD, as well as delay onset of the disease. This fact sheet focuses on the benefits of physical activity for people affected by Huntington disease.

## How Can Exercise and Activity Improve Physical Symptoms in HD?

- Improves muscle tone and strength
- Improves balance and helps reduce the risk of falls
- Positively affects the quality of sleep
- Reduces the incidence of other health conditions (e.g. hypertension, heart disease)

## How Can Exercise and Activity Improve Cognitive Symptoms in HD?

- Stimulates the growth of new brain cells and prevents age-related decline
- Improves ability to concentrate and feel mentally sharp

## How Can Exercise and Activity Improve Emotional Symptoms in HD?

- Energizes and makes us feel good (releases endorphins in the body)
- Promotes feelings of calm and well-being
- Has profoundly positive effect on depression, anxiety, stress and self-esteem

## What Defines Physical Activity and Exercise?

Physical activity and exercise does not necessarily mean attending a gym, participating in an aerobics class or going for a long jog. There are many ways of achieving positive outcomes from physical activity. To have the greatest impact, an exercise program should be geared toward each person's individual preferences and abilities.

In general, it is suggested to include the following in an exercise program:

- a warm up period
- exercises that develop muscular strength or improve balance and functional skills (e.g. yoga, free weights or pulleys)
- a cardiovascular session (e.g. walking, using an exercise bike or working out in the pool)
- a cool down period

Here are some examples:

### Walking

Walking can be done on a track, around the block or around the mall. Start with 10 minutes a day, 3 days a week. Gradually increase walking speed and pace to the point of sweating but not being out of breath.

### Aquatic Exercise

Begin with exercises such as standing in waist-deep water and kicking one leg at a time out to the side. Follow this up with a few laps around the pool. If involuntary movements make swimming too difficult, use a kick board to support the upper body. A personal flotation device may also be helpful.

### Exercise Bike

Start out with 10 minutes of biking three times a week. Start off slowly, choosing a comfortable resistance, and gradually pick up the pace. Various types of bicycles are available depending on the needs of the person.

## Frequency and Duration of Workouts

The Heart and Stroke Foundation of Canada suggests:

Adults should accumulate at least 150 minutes of moderate to vigorous intensity aerobic physical activity per week. It is also recommended to add muscle and bone-strengthening activities using major muscle groups at least two days per week to enhance balance and prevent falls.

Moderate-intensity aerobic activity makes one breathe harder and the heart beat faster. One should be able to talk but not sing. Examples include walking quickly or riding a bike.

Vigorous-intensity aerobic activity makes the heart rate increase quite a bit. It should be difficult to say more than a few words without needing to catch one's breath.

Muscle-strengthening activities build up muscles. With bone-strengthening activities, muscles push and pull against the bones. This helps make bones stronger. Examples of muscle-strengthening activities include climbing stairs, digging in the garden, lifting weights, push-ups and curl-ups. Examples of bone-strengthening activities include yoga, walking and running.

## Safety Precautions

All fitness pursuits should be discussed with a physician prior to starting exercise. The doctor may refer to a physiotherapist for an additional assessment or consultation.

Knowing how to use the equipment safely and how to perform each exercise correctly is very important. A physiotherapist familiar with HD can offer education and adapt the program and movements as needed. Because the symptoms of HD can include involuntary movements, reduced coordination and problems with balance, not all equipment may be suitable. Use adapted equipment as needed.

Re-assessment of the exercise program on a regular basis by the physician or physiotherapist is really critical for ensuring the exercise routine suits the needs and functional abilities – especially as symptoms of HD change and progress.

## Getting Started with an Exercise Program

HD affects the parts of the brain involved in motivation and initiating activity. This may make it more challenging to begin a new exercise program. To help overcome these barriers, choose exercises that are enjoyable, build it into the daily routine and involve friends and family members when possible.

Steps to take:

1. Identify your preferences for exercise (would you like to try yoga, Tai Chi, dancing, jogging, walking, weight training, cycling, golfing, gardening, swimming?)
2. Write down some specific and achievable goals (e.g. "My goal is to walk 5 nights a week.")
3. Consider safety issues (consultation from your physician, an occupational therapist and/or physiotherapist)
4. Develop a plan that will be easy to follow and maintain (e.g. "After dinner, I will walk the dog for 20 minutes, 5 out of 7 nights this week.")
5. Start slowly and reward yourself for carrying through with the plan