

## Aerobic Exercise: How to Determine a Safe and Effective Level of Effort

**Note: Please read this document carefully before starting the exercise trial. It is best to have someone assist you especially if you have memory or thinking problems.**

The purpose of this section is to help you determine a safe and comfortable exercise intensity which will result in many benefits.

Studies show that regular physical exercise may help to prevent:

- a second stroke
- heart disease and other cardiovascular diseases

Exercise can also:

- help you walk further and longer
- improve your quality of life after stroke

### Instructions before you exercise

1. Review the document “*What you Need to Know Before Starting Each Exercise Session*”.
2. Become familiar with the two methods of measuring exercise intensity (TALK TEST and RPE scale) by reading the documents below.
3. You will need a flat walking surface (inside or outside), or a treadmill, or a stationary cycle or other exercise equipment.
4. If you have someone who can help you on the first session, they would need a stopwatch and a copy of “determining exercise intensity summary sheet”.
5. Always remember to STOP exercise if you feel short of breath, develop chest pain or tightness, or if you become dizzy or lightheaded during the exercise. You should seek medical attention if you experience those or any other symptoms. If those symptoms do not go away when you stop exercise you should seek emergency medical assistance. You should not resume exercise until those underlying problems are addressed. Please review the information in “how to manage angina during exercise” in stroke online and in cardiac college about what to do if you experience angina.

## How to determine exercise intensity for optimal benefit: The Exercise Trial

Exercise intensity refers to the level of effort or exertion required and is determined by your walking speed. The faster you walk the higher the level of effort or exertion. It is also related to the amount of resistance that you are pedaling against or the pedaling speed on a stationary cycle or other exercise equipment.

You will complete this “trial” one time at the beginning of your program and again later when you feel ready to increase the intensity of your exercise. You will use a combination of two methods to ensure that you are exercising at an appropriate intensity for optimal benefit. The TALK TEST is the most important, followed by the rating of perceived exertion (RPE) technique.

### 1. The Rating of Perceived Exertion (RPE) scale

- a) This scale starts at 6 and ends at 20 (these are the lower and upper boundaries of the scale).
- b) A rating of 6 would be the level of effort equivalent to sitting in a chair relaxing.
- c) A rating of 20 indicates maximal effort or exertion. Maximal exertion corresponds to a level that you would not be able to maintain for more than 30 seconds owing to **exhaustion**.
- d) The goal is to exercise at a perceived intensity of 13 to 14 so that you perceive the exercise to be “somewhat hard” but not become “hard”.
- e) You should take into account how you felt overall, including your breathing, and the level of effort to drive your legs, specifically on the stroke affected side. Do not include other sensations such as pain or discomfort.

Rating	How Hard are You Exercising
6	No exertion at all
7	Very, very light
8	
9	Very light
10	
11	Light
12	
13	Somewhat hard
14	
15	Hard
16	
17	Very Hard
18	
19	Extremely hard
20	Maximal exertion

## 2. The TALK TEST

**The priority is that the intensity or level of difficulty, should be just BELOW the level where you are unable to talk comfortably.**

- a) You will first warm up by walking or cycling for about 3 minutes at an intensity you perceive to be 11 on the RPE scale or “Light” effort.
- b) After a 2-minute rest, you will walk or cycle for 3 minutes to an RPE of 13 to 14 (“somewhat hard” but not “hard”).
- c) After 2 ½ minutes of the 3 minute walk or cycle, you will count out loud from 1 to 30 at a regular conversational pace and volume.

**If you can speak comfortably** (first option of the Talk Test on the right), but did not reach an RPE of at least 13 take a 2 minute break and repeat steps “b to c” above but increase the intensity slightly (walking speed/cycle resistance).

**If you cannot speak entirely comfortably** (the 2<sup>nd</sup> or 3<sup>rd</sup> option), take a 2 minute break and repeat steps “b to c” above but decrease the intensity (walking speed/cycle resistance).

**Note:** On the first trial, you may not be able to walk fast enough to reach an RPE of 13-14 if your walking is affected by the stroke. Do not walk at a speed where you feel unstable.

**In this case, the fastest pace that is safe is where you should begin.**

**Talk Test**

Please choose one of the following 3 options that best describe how you felt during the time that you were counting to 30.

“Yes I could speak comfortably”  
 Action: If YES, then after a 2 minute rest, you will walk a little faster or exercise a little harder for 3 minutes.

“Yes I could speak, but not entirely comfortably”  
 Action: If YES, then after a 2 minute rest, you will walk a little slower or exercise at a slightly reduced intensity for 3 minutes

“No I could not speak comfortably”  
 Action: If NO, then after a 2 minute rest, you will walk slower or exercise at a reduced intensity for 3 minutes

### i) Results of the RPE and TALK TEST

- a. When you have established an intensity just below the level where you were unable to talk comfortably and that you perceive to be “somewhat hard” (13 on the RPE scale) but not “hard” (less than 15) then that is your starting exercise intensity.
- b. Try exercising for 7 to 10 minutes at this intensity. **Remember how it feels.**
- c. Once you have completed your exercise it is important that you also complete a cooldown for 3 minutes. The warm up and cool down should be perceived as 11 or “light” on the RPE scale.

# Rating of Perceived Exertion Scale (RPE)

Rating	How Hard are You Exercising
6	No exertion at all
7	Very, very light
8	
9	Very light
10	
11	Light
12	
13	Somewhat hard
14	
15	Hard
16	
17	Very Hard
18	
19	Extremely hard
20	Maximal exertion

**Warmup and cooldown (3minutes):** You should perceive the exercise to be “light”. Slow your walking pace or pedaling speed if it is harder

**Exercise:** You are aiming to walk at a pace or cycle against a resistance that you perceive to be “somewhat hard” but not “hard” and that you can sustain for at least 10 minutes

## **Talk Test**

**Please choose one of the following 3 options that best describe how you felt during the time that you were counting to 30.**

*“Yes I could speak comfortably”*

Action: If YES, then after a 2 minute rest, you will walk a little faster or exercise a little harder for 3 minutes.

*“Yes I could speak, but not entirely comfortably”*

Action: If YES, then after a 2 minute rest, you will walk a little slower or exercise at a slightly reduced intensity for 3 minutes

*“No I could not speak comfortably”*

Action: If NO, then after a 2 minute rest, you will walk slower or exercise at a reduced intensity for 3 minutes

**See the summary sheet (next document in this section) that you can print and take with you on your first exercise session.**