

Chapter 1: Introduction



We are here to support you on this important journey.

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Section 1:

Welcome

To the UW Medicine Center for Weight Loss and Metabolic Surgery

We are looking forward to working with you and your family. You are an important part of the team! To have a successful experience, we need you to take an active role in your care, both before and after surgery.

About Your Notebook

We created the *Guide to Your Weight Loss and Metabolic Surgery* notebook to help you through each step of your surgery. This notebook will help you understand the entire process, starting with your first visit to long-term care after surgery. It includes information about:

- The assessment (*evaluation*) process
- How you can be an active member of your healthcare team
- The types of surgery we offer
- The changes you will need to make to be successful after surgery

Please keep your notebook with you and bring it to:

- All clinic visits
- The hospital on the day of your surgery
- Your follow-up visits

We will give you more handouts as you go through the program.

Why Choose UW Medicine?

We have been accredited by the Metabolic and Bariatric Surgery Quality Improvement Program (MBSAQIP) since 2006. This accreditation shows that we meet national standards for providing safe and high-quality care for weight loss surgery patients.

Thank you for choosing us for your healthcare needs!

Section 2:

About Obesity

For patients having weight loss and metabolic surgery

This section explains what obesity is, how it affects your health, and how surgery can help. It also covers other weight loss options and the health benefits of losing weight.



It is important to learn how losing weight can improve your health.

What is obesity?

Obesity is a chronic (long-term) disease that can get worse over time. According to the CDC (Center for Disease Control and Prevention), 1 in 5 children and 2 in 5 adults in the United States have obesity.

How does obesity affect health?

- Obesity can cause:
 - Type 2 diabetes
 - Heart disease
 - OSA (obstructive sleep apnea)
 - Stroke
 - Joint degeneration
 - Cancers
- Obesity is the 2nd leading cause of preventable death. The 1st cause is smoking.
- About 65% of people with a *BMI* (body mass index) of 27 have at least one health problem caused by obesity. Learn more about BMI on page 4.

What other problems does obesity cause?

Obesity can affect your quality of life and your ability to do daily activities. It can make it difficult to work. People who have obesity often face discrimination and unfair stereotypes. This can harm their well-being and make it harder for them to get the healthcare they need.

Obesity can also affect your finances. People with obesity pay about \$1,800 more on healthcare each year than people with healthy weight. A 2020 report from the Milken Institute shows that obesity costs the U.S. more than \$1.4 trillion each year in healthcare and other expenses.

How will losing weight improve my health?

For people who are overweight, studies show that:

- Losing 7% of your body weight can lower your risk of getting diabetes by 50%.
- Losing 5% to 10% of your body weight can improve your blood pressure, cholesterol, and blood sugar levels.

What is body mass index?

Your *body mass index* (BMI) is a number that shows how much body fat you have. It is based on your height and weight.

To find your BMI, you can use one of the formulas below. There are also many free calculators available online.

- **Using pounds and inches:** Divide your weight in pounds (lbs) by your height in inches (in) squared. Multiply the result by 705. (BMI = lbs/in², x 705)
- **Using kilograms and meters:** Divide your weight in kilograms (kg) by your height in meters (m) squared. (BMI = kg/m²)

The table on the right shows how your BMI relates to your weight category.

Category	BMI
Normal Size	18.9 to 24.9
Overweight	25 to 29.9
Class I, Obesity	30 to 34.9
Class II, Serious Obesity	35 to 39.9
Class III, Severe Obesity	40 and higher

Do I qualify for surgery?

Patients who do **not** qualify for surgery include:

- People who use tobacco or illegal drugs.
- People who have an untreated eating disorder, and mental or emotional issues.

Your insurance plan may have other requirements for covering this surgery.

What are other weight loss options?

Studies show that after 1 year:

- Eating a low-calorie diet can help you lose 5 to 10 pounds, but most people regain the weight they lost.
- Taking weight-loss medicines can help you lose 8% to 10% of your weight. But 95% people regain weight after they stop taking the medicine.

Talk with your care team about which weight loss plan is best for you.

Section 3:

About Weight Loss and Metabolic Surgery

Roux-en-Y gastric bypass, and sleeve gastrectomy

This section explains Roux-en-Y gastric bypass and sleeve gastrectomy, including the procedures, benefits, risks, and recovery. It also covers laparoscopic surgery and the need for lifelong vitamins and healthy habits after surgery.

What is weight loss and metabolic surgery?

Weight loss and metabolic surgery can treat severe obesity when diet, exercise, and medicines have already been tried and have failed.

UW Medicine Center for Weight Loss and Metabolic Surgery offers 2 types of weight loss surgery:

- Roux-en-Y gastric bypass
- Sleeve gastrectomy

Your surgery will be done in the Surgery Pavilion at UWMC - Montlake campus.



Your care team will help determine the best surgery option for you.

About Roux-en-Y Gastric Bypass Surgery

Roux-en-Y (pronounced "roo-en-why") gastric bypass is also called "gastric bypass surgery." It is known as the "gold standard" surgery for obesity treatment. It is very safe for most patients. It also has the best success in helping patients with long-term weight loss.

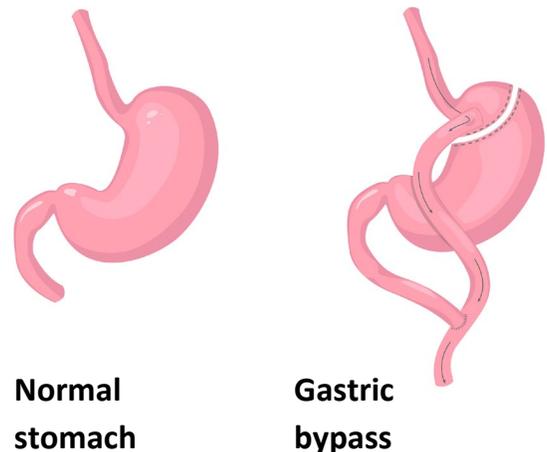
Gastric bypass surgery is both a *gastric restrictive* and *malabsorptive*:

- *Gastric restrictive* surgery reduces the size of your stomach.
- *Malabsorptive* surgery bypasses (skips) part of your small intestine.

What happens during gastric bypass surgery?

Your surgeon will divide your stomach into 2 sections: a small section and a large section.

- The small section, called the pouch, is connected to your small intestine. This pouch becomes your new smaller stomach. This limits the amount of food you can eat.
- The large section of your stomach is called the remnant stomach. It will stay in place, but food will not be digested there anymore.



What should I know about gastric bypass surgery?

- You will only be able to eat small portions of food.
- You must avoid high-sugar and high-fat foods because of the risk of dumping syndrome. (Read more about dumping syndrome in the Nutrition Chapter).
- This surgery bypasses (skips) the part of the intestine that absorbs vitamins and minerals, so you will need to take supplements for the rest of your life.
- Most weight loss happens within 12 to 18 months after surgery.
- Gastric bypass surgery is rarely reversed (it is usually permanent).

What are the benefits of gastric bypass surgery?

In addition to a better quality of life after surgery, gastric surgery can improve your health.

- Compared to other weight loss surgeries, gastric bypass results in:
 - Faster improvement in blood sugar control for people with diabetes or insulin resistance
 - Quicker decrease in symptoms of gastric reflux
 - Greater average weight loss
- For patients with diabetes:
 - 85% had improvements in their symptoms
 - 15% to 25% had their diabetes in remission
- Symptoms ended in 50% to 80% of patients with high blood pressure.
- Symptoms ended in 80% of patients with sleep apnea.
- Symptoms ended in 90% of patients with acid reflux or heartburn.

What are the risks of gastric bypass surgery?

All surgeries have some risks. Your risks with gastric bypass surgery will depend on your age and what other health problems you have.

In the first 30 days after this surgery:

- Death occurs in 0.3% to 1% of patients (less than 1 out of 100)
- These problems may happen, and if so you will need treatment:
 - Intestinal leak
 - Blood clot
 - Bleeding
 - Bowel obstruction (blockage)

Later Problems

Some problems can happen years after surgery, including:

- Bowel obstruction (blocked intestine)
- Stomach ulcers (painful sores in the intestines) caused by poor nutrition, alcohol, or NSAIDs (nonsteroidal anti-inflammatory drugs, such as ibuprofen)
- Vitamin deficiencies
- Reactive hypoglycemia (low blood sugar)
- Internal hernia

About Sleeve Gastrectomy

In sleeve gastrectomy surgery, 85% to 90% of the stomach is removed by stapling and dividing it vertically. The stomach that is left is in the shape of a slim banana or a sleeve. Removing a large part of the stomach reduces the amount of food you can eat. It may also affect the hormone called ghrelin that controls appetite.

What should I know about sleeve gastrectomy surgery?

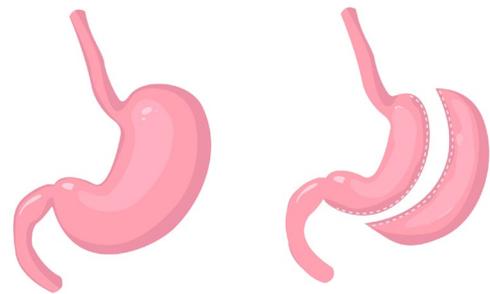
As with gastric bypass surgery:

- You must eat less to lose weight. Expected weight loss with a sleeve gastrectomy may be less than with a gastric bypass.
- This procedure cannot be reversed.

What are the benefits of sleeve gastrectomy surgery?

In addition to having a better quality of life after surgery:

- In patients with diabetes:
 - 60% had improvements in their symptoms
 - Symptoms ended for 20% to 30% of patients with diabetes
- In patients with high blood pressure, 50% to 80% had their symptoms improve.
- For patients with sleep apnea, 60% to 80% had their symptoms improve.



**Normal
stomach**

**Gastric
sleeve**

What are the risks of sleeve gastrectomy surgery?

All surgeries have risks. Your risks with sleeve gastrectomy surgery will depend on your age and what other health problems you have.

In the first 30 days after this surgery:

- Death occurs in 0.1% to 0.5% of patients (less than 1 out of 100)
- These problems may occur and need more treatment:
 - Intestinal leak
 - Blood clot
 - Bleeding
 - Stomach stricture (narrowing)

Later Problems

Some problems can happen years after surgery, including:

- Increased acid reflux or heartburn
- Trouble swallowing food
- Need for another surgery: 0.3% to 1% of patients (1 out of 100)
- Reactive hypoglycemia (low blood sugar)

What is laparoscopic surgery?

Laparoscopic surgery uses a device called a laparoscope. A laparoscope has a camera that helps the surgeon guide small instruments into the belly through narrow tubes or ports. The surgeons' hands do not enter the body.

In laparoscopic surgery, 5 or more small incisions (cuts) are made. In open surgery, 1 large incision is usually made.

Compared to open surgery, laparoscopic surgery patients have:

- Fewer infections, hernias, and other wound problems
- Less pain after the first week
- Shorter hospital stays and quicker recovery
- Quick return of bowel function
- Fewer heart and lung problems



A doctor doing laparoscopic surgery

Which surgery is right for me?

Gastric Bypass	Sleeve Gastrectomy
<ul style="list-style-type: none">• Bypass is better for severe diabetes, heartburn, and gastroesophageal reflux disease (GERD).• May have a slightly higher surgical risk.• More stomach problems when eating high- sugar foods. This can help you avoid these foods.	<ul style="list-style-type: none">• May increase reflux and heartburn in some people.• Less effect on diabetes than bypass.• Long-term results beyond 10 years are still being studied.

Review

- Gastric bypass and sleeve gastrectomy surgeries are usually permanent.
- These surgeries are **tools** to help you eat right. They do **NOT** cause weight loss or prevent weight regain by themselves.
- Patients have the best results after surgery if they also have:
 - Regular follow-up
 - Regular exercise
- Weight loss varies for each surgery. Of the 2 options, sleeve gastrectomy leads to less weight loss.

After any weight loss and metabolic surgery:

- You will need to take vitamins and mineral supplements for the rest of your life.
- Alcohol dependency is a risk after gastric bypass. We strongly advise against drinking **any** alcohol after surgery.
- Do not take any NSAIDS (nonsteroidal anti-inflammatory drugs, such as ibuprofen)
- Do not **ever** smoke, vape, or use any nicotine products
- If you can become pregnant, it is important to know:
 - You have a greater chance for unplanned pregnancy.
 - You have a greater risk for problems in pregnancy in the first year after surgery.
 - You should **not** become pregnant for 2 years after surgery. Ask your care team if you have any questions about this.

Section 4:

Your Healthcare Team

When you have weight loss and metabolic surgery

This section introduces your UW Medicine healthcare team for weight loss and metabolic surgery. The team includes surgeons, dietitians, social workers, and other specialists who will support your surgery and recovery. Regular follow-ups are key to long-term success.

We want your surgery and recovery to be successful. Your team at UW Medicine Center for Weight Loss and Metabolic Surgery will do everything we can to help you succeed. **But it is up to you to:**

- Follow your care plan
- Come to all your clinic visits

Let us know right away when you have any problems.

Patients who have regular follow-up visits have the best success after surgery. Please schedule a visit with us if you start to gain weight, have nausea and vomiting, or have any other problems. We will help you get back on track. We want the best for you!

Who provides care at the center?

Here are some of the providers who will support you before and after your weight loss and metabolic surgery.

- **Bariatric Surgeon:** This doctor specializes in treating obesity. You will see your surgeon:
 - At your first and final clinic visits before surgery
 - At the hospital before surgery
 - During your hospital stay after surgery
 - At your follow-up visits right after surgery
- **Nurse Practitioner and Physician Assistant:** Our nurse practitioner and Physician Assistant (PA) help provide your care before and after surgery. They work closely with the other members of your care team.

You may meet your nurse practitioner and PA at your first clinic visit. After surgery, they will see you at many of your follow-up visits and yearly checkups.



We are here to support you throughout your weight loss journey.

- **Surgical Residents, Fellows, and Medical Students:** These doctors and students are trained by your surgeons. They will help provide your care.
- **Registered Dietitian:** A registered dietitian promotes healthy eating and long-term lifestyle changes. Working with your dietitian will help you reach and maintain your desired weight.

Your dietitian will:

- Meet with you before surgery to talk about your meal plans
 - Help you prepare for surgery and for the changes you will need to make
 - Meet with you after surgery to help you get started on your new life
 - Create a food plan that is right for you
 - Help you avoid problems with eating and food
- **Social Worker:** Your social worker will meet with you to learn about your social situation, support system, eating behaviors, mental health issues, and substance use history. Your social worker will use this information to help you make the lifestyle changes that are needed before surgery.
 - **Registered Nurse:** Your registered nurse (RN) will help you prepare for surgery, talk with you about what to expect after surgery, and help you identify the lifestyle changes you will need to make to ensure that your surgery is a long-term success.
 - **Patient Care Coordinator:** Our Patient Care Coordinator (PCC) schedules your clinic visits, including your pre-anesthesia visit. The PCC also checks your insurance benefits and authorizes and schedules surgeries.
 - **Patient Services Specialist:** Our Patient Services Specialist (PSS) schedules patients for the bariatric seminar, new patient visits, and follow-up visits after surgery.

Section 5:

Getting Started

Finding out if weight loss and metabolic surgery is right for you

This section explains the steps to take before surgery, including tests and assessments to make sure the surgery is safe for you. It also covers what to expect during your first clinic visit and how we help you prepare for surgery.



Your First Clinic Visit

During your first visit, you will talk with your care team about your medical history and have a physical exam. We will talk with you about surgery and answer your questions. We will also schedule tests that will help us know if surgery is right for you.

Your safety is our top priority! Tests help us know if surgery is safe for you.

Tests and Assessments

Before we can do your surgery, we need to know more about your health by doing some tests. These tests will help us know if having surgery is safe for you. Here are some of the tests and assessments we will schedule for you:

- **Blood Tests:** After you enroll in our program, our surgeon will send a letter to your primary care provider (PCP). The letter will include a list of the blood tests (labs) you need to have. Your PCP will order the labs and work with you to correct problems with your blood levels, if needed.
- **Dietary Assessment:** You will meet with our dietitian to talk about the diet changes you will need to make after surgery. You will learn about healthy eating and how to maintain a healthy weight.
- **Social Work Assessment:** You will meet with a social worker for a *psychosocial* (mental health) assessment. The social worker will ask you questions about your life so that we can help you prepare for the surgery. This visit takes about 60 to 90 minutes.
- **Swallowing and Heart Burn Testing (pH/Manometry):** These tests measure how well your swallowing muscles and *esophagus* (throat) work. If you *have acid reflux* (heartburn), it will also show how severe it is.
- **Upper GI (Barium Swallow):** For this test, we will ask you to swallow a substance called barium sulfate. We will take X-rays of your esophagus and stomach. This test helps us find the cause of swallowing problems.

- **Esophagogastroduodenoscopy (EGD):** During an EGD, we use a flexible tube with a small light and camera. The tube goes through your mouth and throat and into your stomach. The light helps your doctor see the inside of your stomach. We will then take a small biopsy (tissue sample) of your stomach lining. We will test this sample to see if you have an *H pylori infection*. This is a bacterial infection that causes stomach inflammation (gastritis) and other stomach problems.
- **Sleep Study (Sleep Apnea Testing):** If you have sleep apnea, your throat relaxes during sleep and blocks your throat. This causes you to stop breathing for a few seconds at a time. Sleep apnea can be very serious and is linked to a higher risk of death. If you do not know if you have sleep apnea, we will refer you for a sleep study. This study checks to see if you have apnea, and how severe it is.

If you have sleep apnea, you must follow your treatment plan before and after surgery. This means using your sleep apnea device for at least 4 hours a night, at least 70% of nights.

- **Medicine Consult:** Your surgeon may want you to meet with a UW Medical Center internal medicine specialist. This provider will make sure that it is safe for you to have this surgery.
- **Physical Therapy and Occupational Therapy:** We may test your physical abilities before surgery to make sure it's safe for you to be active. If you plan to have surgery, you must exercise for 150 minutes every week.

Test Review

When we have received the results of all your tests, we will schedule your test review.

- First, you will meet with a surgeon to review all your test results. This surgeon will tell you if weight loss and metabolic surgery is a good option for you.
- Second, you will meet with a dietitian. You will learn more about the very low-calorie diet you will need to follow before surgery.
- Third, you will meet with a nurse who will explain what you need to do to prepare for surgery.

Insurance and Scheduling

If you decide to proceed with surgery, our Patient Care Coordinator (PCC) will get authorization from your health insurance company. Once your surgery is authorized, the PCC will call you to schedule a surgery date.

Section 6:

Getting Active

Exercising for weight loss success

This chapter explains the exercise you must do to qualify for surgery. It outlines an exercise plan and includes an exercise log for keeping track of your activity.



There are many fun ways to add exercise to your day!

Why is exercise so important?

Your body needs exercise both before and after surgery to stay strong and healthy. Being active also helps with weight loss.

To reach your weight loss goal after surgery, it is important to do regular aerobic exercise. *Aerobic* exercise is any activity that makes you breathe harder and gets your heart beating faster, like swimming or brisk walking.

Before surgery, you must:

- Keep track of your activity in an exercise log.
- Bring your log to every clinic visit and review it with your care team.
- Do aerobic exercise at a *moderate intensity* for at least 10 minutes at a time, for a total of at least 30 minutes a day, 5 days a week.
 - Use the “Target Heart Rate” or “Rate of Perceived Exertion” tools to measure your exercise *intensity*. This will help you know if your activity counts towards your exercise goal (see pages 18, 19, and 20).
 - Talk with your provider before you start exercising to make sure your target heart rate is safe for you. **If you take beta-blocker medicine or have certain health conditions, you may need to adjust your exercise intensity.** (See page 19 for a list of beta-blocker medicines that can affect your heart rate.)

How can I stay safe while exercising?

Follow these steps every time you exercise:

- Warm up for 5 minutes before doing your aerobic exercise. Walk slowly, move your arms and legs, and do some light stretching.
- Slowly increase the amount of time you do aerobic exercise. Add 1 to 2 minutes each week to your total time.
- Start with your current number of daily steps and try to take 100 more each day.

- Increase the intensity (difficulty) of your workout to reach your Target Heart Rate goal. Stay at that level for at least 15 minutes.
 - At first, you may only be able to do this for a few minutes, but keep working toward going longer and increasing your intensity.
 - As you get stronger, you will need to work harder to reach your Target Heart Rate.
- Near the end of your workout, slow down for 5 minutes to let your body cool down.

Warning Signs When You Exercise

Stop exercising right away if you have any of these symptoms. Call for help if needed.

- Chest pains and/or pain that spreads to your arm while exercising.
- Sweating that continues after you stop exercising.
- Pain that keeps getting worse. It is normal to feel some aches and soreness, but ongoing or increasing pain can lead to an injury.
- Headaches that keep coming back.
- Feeling lightheaded during or after exercise.
- Numbness, tingling, or weakness in an arm or leg.
- Shortness of breath after you stop exercising.
- Nausea and vomiting.

How to Enjoy Your Exercise

Exercise can be fun and can improve your mood! Exercise with a friend or find an activity you enjoy doing. You can try:

- Marching briskly in place while sitting or standing
- Walking briskly (if you have joint problems or balance issues, use walking poles)
- Dance classes
- Elliptical trainer
- Exercise classes at your local gym
- Exercise videos on cable, internet, DVD, or YouTube
- Therabands and physical therapy exercises that raise your heart rate
- Arm bikes

If you have arthritis or joint pain, try:

- Water aerobics
- Bicycling
- Swimming
- Seated exercises like “Sit and Be Fit” on public television or YouTube

Do my daily activities count as exercise?

Your daily activities do not count toward your aerobic exercise goals. They do not make you breathe hard or burn many calories unless you do them at a quick pace for a long time (see “Target Heart Rate” below).

But it will help with your fitness goals if you take **at least** 5,000 steps every day when doing your regular activities. Here are some activities that will help you increase your steps:

- Walking your dog
- Walking from your car to the store (try parking farther away!)
- Walking to the mailbox
- Walking around stores or the mall
- Doing a few squats in the kitchen while you cook
- Mowing the lawn
- Playing with your children or pets

Target Heart Rate

Your target heart rate helps you see how your body handles **moderate intensity** exercise. It also helps you know if you are working at a level that improves your fitness (makes you stronger). Try to reach and stay in your target heart rate zone during each workout.

- Free apps for Android and iPhone can help you calculate your target heart rate and check how fast your heart is beating. If you do not have a smartphone, see “Finding Your Target Heart Rate” below.
- Some watches and fitness trackers, like Fitbit or Apple Watch, can also show you your heart rate.
- If your physical therapist gives you a different target heart rate, use that number as your goal.

Finding Your Target Heart Rate

Steps	What to Do	Your Number	What It Means
1. Find your base number	Subtract your age from 220 <i>Example: 220 - 50 = 170</i>	Your Base Number:	This is your maximum heart rate. Use this number to find your answers to steps #2 and #3.
2. Find your moderate-intensity range	Multiply the answer to #1 by .65 <i>Example: 170 x .65 = 110</i>	Your Moderate-Intensity Target Heart Rate	This is your target heart rate for moderate- intensity exercise.
3. Find your high-intensity range	Multiply the answer to #1 by .85 <i>Example: 170 x .85 = 145</i>	Your High-Intensity Target Heart Rate	This is your target heart rate for high-intensity exercise.

How to Check Your Heart Rate

Use your fingers (not your thumb, which has its own pulse) to find your pulse on the inner part of your wrist just below your thumb. You can also gently find the pulse in your neck, using two fingers under your jaw. Do **not** press hard.

Count the number of beats for 30 seconds and multiply by 2. (Or you can count the number of beats for a full minute instead.)

Example: $40 \times 2 = 80$ bpm (beats per minute)

This is your heart rate, or the number of times your heart is beating in 1 minute.

What if I am taking beta-blockers?

If you are taking any type of beta-blockers, you must use the “Rate of Perceived Exertion” scale (see below) instead of the Target Heart Rate method to set your exercise goals.

Here are some beta-blocker medicines. The names in parentheses are common brand names:

<ul style="list-style-type: none">• Atenolol (Tenormin)• Bisoprolol (Zebeta)• Carvedilol (Coreg)• Metoprolol (Lopressor, Toprol-XL)	<ul style="list-style-type: none">• Nadolol (Corgard)• Nebivolol (Bystolic)• Propranolol (Inderal LA, InnoPran XL)
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Check your pulse in your wrist with two fingers.



Check your pulse in your neck very gently.

Rate of Perceived Exertion

The Rate of Perceived Exertion is another way to measure your exercise tolerance. This scale will help you know if you are working at a safe level for your current ability.

- Rate how hard it is to do a certain exercise on a scale of 0 to 10, with 10 being the greatest effort.
- Your goal is to stay at a level of exercise that you rate **between 6 and 7**. At this level, you are breathing hard, are still able to talk, but find it hard to sing.

