

The background of the entire page is a repeating pattern of light gray line-art icons. These icons represent various food items (like strawberries, burgers, fries, pizza, and smoothies), health symbols (like hearts and checkmarks), and shopping-related items (like shopping carts and grocery bags).

FUTURE WELL™ KIDS

MODULE 1 RESOURCE GUIDE

EXERCISE FOR HEALTH

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BACKGROUND

An increasing risk to human health is the development of **noncommunicable diseases (NCDs)**, which are diseases that are not contagious or transmitted from person to person through contact. These diseases are typically chronic conditions that can be caused by lifestyle choices such as nutrition and exercise, but can also be influenced by genetic, physiological, and environmental factors. In the developed world, **type 2 diabetes, high blood pressure, and heart disease** are currently among the most common NCDs. Annually, NCDs cause nearly forty-one million deaths¹ globally.

The World Health Organization recommends 60 minutes of daily moderate to vigorous activity to reduce the risk of developing NCDs. The 60 minutes do not need to be done all at once, but it helps to do at least 30 minutes of an exercise at one time². Moderate activity is anything that raises your heart rate to above 60% of maximum heart rate based on age and gets your blood moving throughout your body. It can help your mood, increase your energy levels, and lower your blood pressure. Vigorous activity raises your heart rate even higher to a level that is most beneficial for your body! For active children, exercise should include **aerobic activities** like swimming or cycling, **muscle-strengthening activities** like weightlifting, and **bone-strengthening activities** like running³.

MODULE SUMMARY

In *Exercise for Health*, students learn about what happens to our bodies when we exercise, why exercising is good for us, and the risks associated with *not* exercising, including the development of noncommunicable diseases (NCDs), such as high blood pressure, heart disease, and type 2 diabetes. The module begins with students considering the role exercise plays in their current lives and the importance they place on exercise in general. Students learn about the basic functions of our cardiovascular system and the critical role exercise plays in maintaining cardiovascular health. Students also learn how exercise helps reduce the risk of certain noncommunicable diseases.

¹ <https://www.who.int/news-room/fact-sheets/detail/noncommunicable-diseases>

² Source: World Health Organization. *Physical activity and young people*. https://www.who.int/dietphysicalactivity/factsheet_young_people/en/

³ https://health.gov/paguidelines/second-edition/pdf/Physical_Activity_Guidelines_2nd_edition.pdf#page=46

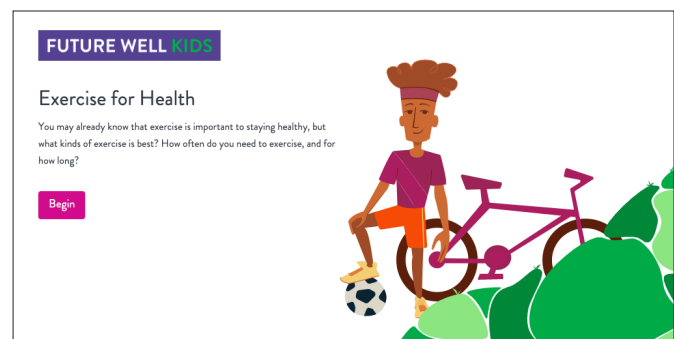
USING THE MINI MODULES

This section provides strategies for incorporating the self-paced modules into instruction and tips for facilitating discussion before, during, and after each module screen. It takes approximately 15–20 minutes of seat time for a student to work through a module; the “Section-by-Section Educator Tips” provide suggestions for extending the use of the module as an instructional tool in a typical class session.

EXERCISE FOR HEALTH

MODULE OVERVIEW

You may already know that exercise is important to staying healthy, but what kinds of exercise are best? How often do you need to exercise, and for how long?
Students will learn about noncommunicable diseases and how routine exercise can help reduce their risk of developing certain noncommunicable diseases.



KEY LEARNING OBJECTIVES

Students will be able to:

- Differentiate between light, moderate, and vigorous exercise
- Describe noncommunicable diseases including type 2 diabetes, high blood pressure, and heart disease
- Select appropriate, routine exercises that reduce the risk of developing noncommunicable diseases

SETTING THE STAGE

Engage students before the module with one or more of these questions:

- What’s your favourite activity to do outside of school?
- Do you ever exercise? What do you do? How does exercise make you feel?
- Do you think it’s important to exercise? Why or why not?

SCREEN-BY-SCREEN EDUCATOR TIPS

- **Prepare**
 - **Set-up:** The module begins with students learning that regular exercise can help reduce the risk of developing certain noncommunicable diseases. Ask students if they have ever heard of noncommunicable diseases. Do they know what the term means? What are some examples?

- **How Much Do You Exercise:** Students are asked to think about their daily routines and how much time they are active each day. Ask students what they are typically doing during various blocks of the day. Have them highlight the times when they are most physically active.
- **Pretest:** The pretest consists of three questions. Students have one opportunity to answer each question correctly. Feedback is provided for both correct and incorrect answers. If using the module in a classroom setting, consider having students vote on answers or call on different students for each question. The correct answer is visible once an answer is submitted.
- **Confidence Ranking:** Students are asked to rank how strongly they agree or disagree with the following statement: “I know how important exercise is to staying healthy.” Note how many students agree and disagree with this statement. They will be asked to assess their confidence again at the end of this module.

● **Learn**

- **Exercise and Your Body:** Students are introduced to the concept of noncommunicable diseases (NCDs) and how exercise can reduce the risk of developing NCDs by strengthening the different systems in the body. Review with students the functions of different major organs or bodily systems. For example, bones help people stand upright while the heart pumps blood.
- **Best Exercise for Me:** Students discover the differences between light, moderate, and vigorous exercise. Consider having the class demonstrate an example of each type of exercise. For light exercise, have the class stand up and stretch toward the ceiling. For moderate exercise, have students take a short walk around the classroom. For vigorous exercise, have students run in place. At the end of each exercise, ask students how they feel (i.e., relaxed, tired, energised, etc.).
- **What Happens if You Don’t Exercise?:** Students are introduced to three noncommunicable diseases: type 2 diabetes, high blood pressure, and heart disease. Ask students if they know anything else about these diseases. Some students may have personal experience with noncommunicable diseases, possibly in their family. You may explain to concerned students that these diseases affect up to one-third⁴ of Americans, and that there are medicines that can help patients control and manage these conditions.



⁴ https://www.cdc.gov/dhdsp/data_statistics/fact_sheets/fs_bloodpressure.htm

- **Fitting Exercise into Your Daily Routine:** Students examine four students’ daily routines. As the class reviews the students’ routines, ask them to think about which student they identify with most. Ask: Whose routine is most similar to your own? What do you do during a typical day?
- **Finding a Routine:** Students are challenged to recommend an exercise routine that fictional Rena can pursue. Encourage students to turn to a peer close to them and discuss what types of exercise might be best for a quiet girl who prefers to spend time alone before choosing their answer. Ask each pair of students if they can think of other activities that Rena might enjoy. For example, Rena might also enjoy taking walks in the park or walking in the garden.

● **Reflect 1**

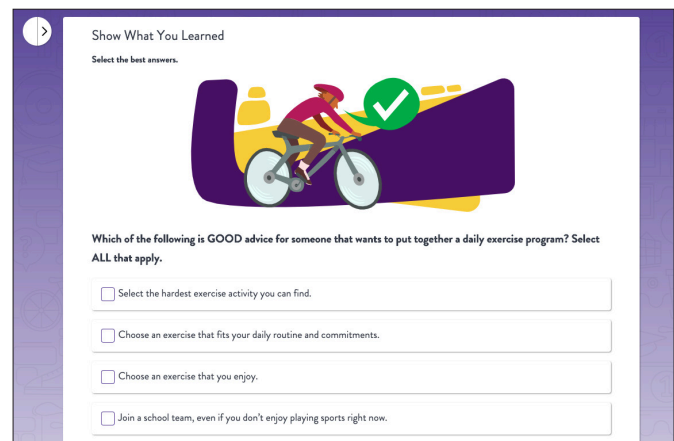
- Students are asked to rank how strongly they agree or disagree with the following statement: I know how important exercise is to staying healthy. Did more students agree with the statement after completing the module than before? If students still disagree at the end, ask them what they still need to know in order to agree with the statement.

● **Challenge**

- There are five post-test questions for this module. Students are encouraged to review the information in each section, if needed, before beginning the post-test.

- Students will encounter a variety of question types, including multiple-choice, classification, matching, and true/false.

- For each question, students have two opportunities to answer correctly. Full credit is given for correct answers on the first try. The total number of available points in this module’s post-test is 9. If students answer incorrectly, they are given an opportunity to try again or skip and continue to the next question. No additional points are given to students who either do not retry the question or retry the question and still answer incorrectly. Partial credit is given for students who correctly answer a portion of a multi-part question or who give the correct answer on a second try.



● **Reflect 2**

- Students are asked to rank how strongly they agree or disagree with the following statement: After completing this module, I am more likely to try to exercise for at least 60 minutes each

day. Encourage students to commit to exercise each day. Ask students who cannot exercise for 60 minutes whether they can exercise for 30 minutes each day.

EXTENDING THE MODULE

Once students complete the module, consider one or more of the following follow-up activities:

- Have students write out what exercise activities they plan to do during the next week. Encourage students to find 60 minutes of exercise activities each day. After students have written their plan, have students sign the plan to commit to following it.
- There are apps and other technologies that can help students track their physical activity each day. Invite students to research tools that can help them track their exercise activity.
- Heart rate is a way doctors measure the level of exertion during exercise. Have students measure their own heart rate, either by counting their pulse with a stopwatch or with a heart rate monitor. If measuring heart rate with a stopwatch, students can find their pulse either on their wrist or on their neck. Their heart rate is equal to the number of beats they count in fifteen seconds multiplied by four. Then, have students research the recommended target heart rate for their age group on the Internet.

NATIONAL STANDARDS STUDENTS AGED 10–13

[NCAA Guidelines for Wellbeing 2017](#)

- Wellbeing Guidelines:
 - Statement of Learning 12: The student is a confident and competent participant in physical activity and is motivated to be physically active.
- Social, Personal and Health Standards:
 - Module: Physical Health
 - Topics: Physical Exercise
- English Standards:
 - Strand: Reading
 - Element: Communicating as a listener, speaker, reader, writer
 - 3. Use a wide range of reading comprehension strategies appropriate to texts, including digital texts: to retrieve information; to link to previous knowledge, follow a process or argument, summarize, link main ideas; to monitor their own understanding; to question, analyze, synthesize and evaluate.

KEY TERMS

Aerobic Activity

activity that requires rhythmic movement of a person's muscles for a sustained period, such as swimming or bicycling

Bone-strengthening Activity

activity that produces forceful impacts on a person's bones, such as running or jumping

Heart Disease

a disease in which the blood vessels that bring blood to the heart are narrowed or blocked

High Blood Pressure

a disease in which the force with which blood pushes against the blood vessel walls is abnormally high

Moderate Activity

activity that raises the body's heart rate and gets blood moving throughout the body at a rate that allows the person to continue talking without being short of breath, or 50–60% of the resting heart rate

Muscle-strengthening Activity

activity that requires a person to use his/her muscles to do more work than normal, such as climbing or lifting weights

Noncommunicable Disease

a disease that is not transmitted directly from person to person, such as through infectious agents

Type 2 Diabetes

a disease in which the body's normal response to blood sugar through insulin is impaired

Vigorous Activity

activity that raises a person's heart rate to a level most beneficial for the body and at which a person demonstrates rapid breathing and can only speak short phrases without becoming short of breath, or 75–80% of the resting heart rate