

PURPOSE

To expand students' knowledge of hormones and their relation to the brain, and the important role of nutrition, exercise and sleep in supporting a healthy body.

LEARNING OBJECTIVES

By the end of the lesson students will be able to:

1. Understand the importance of healthy hormones for a healthy body.
2. Understand the importance of nutrition, exercise and sleep in maintaining healthy hormones and a healthy body.

MATERIALS & RESOURCES

- **Lesson 5 teenMEN powerpoint**
- **Entry Ticket Activity**
- **Healthy Habits Restaurant Menu**
- **Health Checklist**

VOCABULARY

- **Hormones:** Chemical signals that travel in the bloodstream, directing the activity of every system in the body. The body has many different hormones, produced in different parts of the body.
- **Exercise:** Physical activity to improve health and fitness.
- **Nutrition:** Eating foods that nourish the body, necessary for health and growth:
 - **Proteins:** build and maintain cells, help make hormones.
 - **Carbohydrates & fats:** provide energy, balance hormones.
 - **Vitamins & minerals:** build and maintain cells, balance hormones.
 - **Water:** carries nutrients, clears waste.
- **Habit:** Something you do so often that it becomes natural to you.
- **Hygiene:** Habits that help keep you clean and healthy.

PREPARATION

- ☐ Print and cut out the **Entry Ticket Activity**, one “ticket” for each student.
- ☐ Print the **Health Habits Restaurant Menu**, one for each group of students.
- ☐ Print a **Health Checklist** for each student.
- ☐ Print the **What is Your Favorite Worksheet** for each student if class time permits.

Step 1 (5 minutes): Entry Ticket Activity

As students enter the class, give one ticket to each student to fill out.

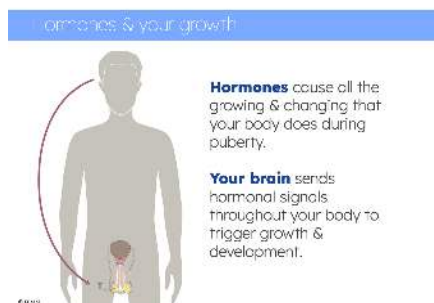


Give students a couple of minutes to answer the questions and then have volunteers share their responses with the class. Discuss.

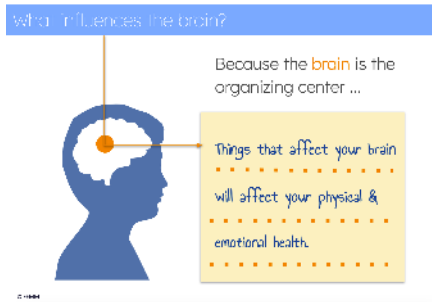
Step 2 (10 minutes): Three Pillars of Health: Nutrition

Do you remember what controls the activity of every system in the body?

Yes, hormones! Hormones are directed by your brain!

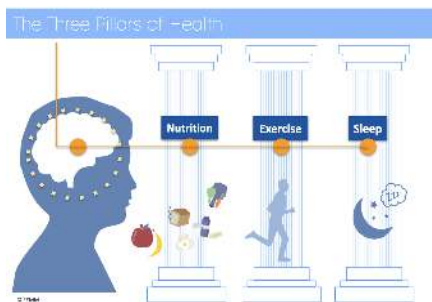


All of our growth in puberty starts with the brain. The brain acts like the control center for everything that is happening and changing in the body.

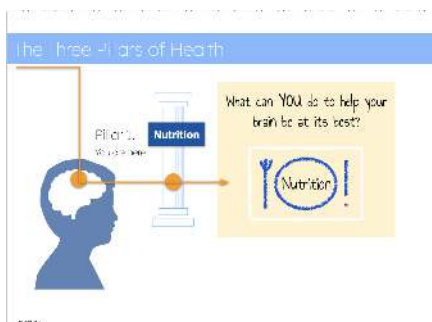


Because the brain is the organizing center for all this activity, things that affect your brain will also affect your physical and emotional health. Everything you do, whether it's eating junk food or healthy food, playing video games or playing a sport, has an impact on your brain.

Today we're going to learn about the three pillars of health: nutrition, exercise and sleep and how they fuel your brain and your body.



They are called the three “pillars” because they are the foundation for your health. The first pillar we'll learn about is nutrition.



Nutrition is the nourishment that your body needs to get from the food you eat.



Good nutrition supports your brain and your body. The different types of nutrients we need to get from food are:

- **Proteins:** build and maintain cells, help make hormones.
- **Carbohydrates & fats:** provide energy, balance hormones.
- **Vitamins & minerals:** build and maintain cells, balance hormones.
- **Water:** carries nutrients, energizes muscle, clears waste.

When we eat, our body breaks down the food and uses the different nutrients in that food to fuel our energy, hormones and health. Sometimes, when a body does not have enough nutrients, disease can result.

Back in the day when sailors went on long sea voyages, they weren't getting enough Vitamin C because they were basically only eating crackers and salted meat. This lack of vitamins and nutrients causes a disease called scurvy, which makes you weak, gives you pain in your legs and causes your teeth to fall out. On future sea voyages, they were able to fix this by packing lots of citrus fruits on board.

Every meal you eat should contain some protein, carbohydrates, good fats and vitamins and minerals.

There are lots of foods that fit into each of the different categories.



Here are a few examples:

- **Proteins:** nuts, eggs, beans, fish, meat
- **Carbohydrates:** whole wheat bread, pasta, rice, quinoa
- **Fats:** nuts, olive oil, butter, milk, cheese, yogurt (nuts and dairy products contain a lot of healthy fats our body needs.)
- **Vitamins & minerals:** fruits and vegetables!

The menu options are endless! But don't forget to drink water! Water is involved in almost every process in the human body.

Step 4 (10 minutes): Healthy Habits Restaurant Menu



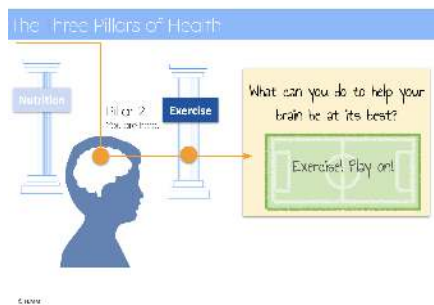
Divide students into small groups. Give each group the **Healthy Habits Restaurant Menu**. Explain that **Healthy Habits Restaurant** has asked for their help with their dinner menu. As you can see from their sample breakfast menu on the slide, you need to:

1. Come up with a meal that contains the four food groups: protein, carbohydrates, vitamins & minerals, and good fats.

2. Write a description of the meal to make it sound as delectable as possible!
3. List the parts of the meal in the different nutrient categories, so that customers know what nutrients they're getting from the meal.
4. Present your menu to the class. Groups can choose to present their menu acting out their menu as the restaurant owner, chef, waiter, etc.

Step 4 (10 minutes): Exercise + Sleep + Health Checklist Challenge

The second pillar of health is exercise.

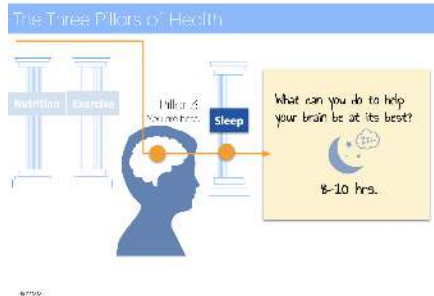


Exercise is really important for your brain and body. You've probably heard that exercise is good for your muscles and your lungs. It is! But it's also so much more! **Did you know that** exercise also increases your energy, improves your mood, and reduces anxiety? How? Exercise releases endorphins, dopamine, and adrenaline. These are names of **hormones** that make you feel happier, more confident, and less stressed!

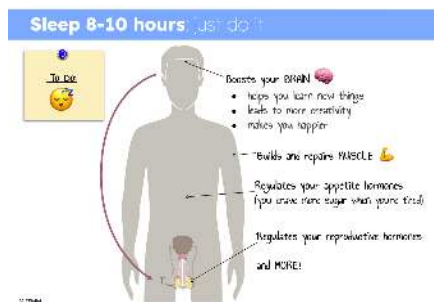


Finding an exercise you like to do is important at every age, whether it's hiking, biking, swimming, badminton, pickleball, or basketball! Guys who are physically active tend to have better grades in school, because exercise improves your concentration and memory.

The third pillar of health is sleep. Maybe you try to stay up as late as possible....



But **do you know** how much *happens* for your brain and your body when you sleep?!
Your body does most of its growth during sleep.



That's because most of your hormones are produced while you sleep. Your body needs 8-10 hours of sleep each night. Making the choice to go to bed on time is one of **the most important things** you can do for yourself and your health. You can help yourself to have a good sleep by putting your phone or screen away an hour before bed.

CONCLUSION

Hand out the **Health Checklist Challenge** to each student.



This week, we're going to do the **Health Checklist Challenge**. The challenge is to make a note of your daily habits for one week. *What did I eat today? Did I exercise? How many hours of sleep did I get last night? What was my mood today?* Keeping our brains and our bodies as healthy as possible through good nutrition, an adequate amount of exercise and sleep can help us to grow and be as healthy as we can be.

REFERENCES

Centers for Disease Control and Prevention (2022). Physical Activity Facts. CDC Healthy Schools.

<https://www.cdc.gov/healthyschools/physicalactivity/facts.htm#:~:text=Regular%20physical%20activity%20can%20help,developing%20health%20conditions%20such%20as%3A&text=Heart%20disease.>

Centers for Disease Control and Prevention (2022). Sleep and Health. CDC Healthy Schools. <https://www.cdc.gov/healthyschools/sleep.htm>

Centers for Disease Control and Prevention (2022). Personal Hygiene. Water, Sanitation, and Environmentally-Related Hygiene.

<https://www.cdc.gov/hygiene/personal-hygiene/index.html>

Dewald-Kaufmann, J.F., Oort, F.J., & Meijer, A.M. (2014). The effects of sleep extension and sleep hygiene advice on sleep and depressive symptoms in adolescents: A randomized controlled trial. *Journal of Child Psychology and Psychiatry*, 55, 273–283. <https://doi.org/10.1111/jcpp.12157>