

Keeping Your

BRAIN HEALTHY



Module 4

• NIDA •

MODULE 4: KEEPING YOUR BRAIN HEALTHY

Introduction

Students learned about the brain and all the amazing things it can do during the previous mission. In this lesson, students focus on what they can do to keep their brains healthy. Through brainstorming and discussion, students discover what habits they can put into practice to protect their brains.

Learning Objectives

- ★ Students learn how they can keep their brain healthy.
- ★ Students work on establishing healthy habits.

Relationship to the National Science Education Standards

The activities in this lesson align with two standards identified in the NSES: unifying concepts and processes and science in personal and social perspectives.

Unifying Concepts and Processes

Levels K-4	How Mission is Aligned
Systems, order, and organization	This mission introduces students to the idea that the brain is one system that is part of a larger system—the human body—and that both systems work together to enable people to function.

Science in Personal and Social Perspectives

Levels K-4	How Mission is Aligned
Personal health	This mission reinforces the concept that following good health practices, such as eating properly, exercising, and getting enough sleep, are ways to keep your brain as well as your body healthy.



Background

The primary grades are an excellent time to introduce students to ways of keeping their bodies strong and healthy. At this age, children are almost ready to take responsibility for their health and can understand the importance of eating three meals a day, eating nutritious foods, getting exercise each day, getting enough sleep each night, and wearing helmets and other protective gear when biking, riding a scooter, and roller-blading. What students may not yet be aware of is how these practices work to protect their brain as well as their body. For example, eating healthy foods provides fuel so children can concentrate at school and think more clearly. Exercising gives people a fit body, as well as releases brain chemicals that make people feel good. Finally, wearing a helmet while biking and doing other sports protects our precious brain.

During today's mission, students will compile a class list of healthy habits and then keep track of what they actually do during the course of a week. By the end of the mission, students will have an understanding of what they need to do to improve their habits to keep both their bodies and brains healthy and fit.

The American Academy of Pediatrics has established guidelines for how much sleep growing children need each night, what is considered a healthy diet, and how much exercise children should get each day. Recommendations for children 5 to 7 years of age are:

- 9 to 10 hours of sleep each night.
- At least 30 minutes of physical activity each day.
- About 1,500 calories (this varies with the age and weight of the child) each day of foods from each of the food groups:
 - 25 percent of total calories from proteins;
 - 30 percent from fat, primarily mono- and poly-unsaturated fats; and
 - 45 percent from carbohydrates, with emphasis on whole-grain foods, fruits, and vegetables.



Materials

- ✓ Newsprint
- ✓ Markers
- ✓ Videotape and VCR
- ✓ Class chart

Preparation

- ★ Preview the videotape and lesson before doing this activity. Make any necessary adjustments according to the needs and interests of your students.
- ★ Develop a class chart to use throughout the activity. Refer to the chart on page 9 of the Teacher's Guide.
- ★ Make copies of the black-and-white trading cards found at the back of the Module 4 Teacher's Guide so that each student has a copy of each card.

Procedure

1. Begin the mission by asking students what practices people should adopt to stay healthy. Suggest that students focus on activities they think have something to do with the brain. Look for ideas like the following:
 - a. Eat 3 meals a day. Make sure you eat food from each of the food groups at every meal.
 - b. Exercise at least 30 minutes each day.
 - c. Get 9-10 hours of sleep each night.
 - d. Always wear a helmet when you ride your bike or scooter. When you go roller-blading, wear knee pads and wrist pads, along with a helmet.
 - e. Never smoke cigarettes.
2. Make sure the class list includes the items above. Other items students may mention that are important but have less to do with the brain include the following:
 - a. Brush your teeth at least twice a day.
 - b. Take a shower or bath at least 3 days a week.



3. Show the students the Module 4 video. Have them watch while Corty explains the ways to keep your brain healthy.
4. Make a class chart of healthy habits like the sample shown at the back of this Teacher's Guide. The sheet includes such items as eating three meals a day, eating healthy foods, getting enough sleep each night, and getting some exercise each day. Each day over the course of a week, ask students how many engaged in healthy activities. Make tally marks in each category. Encourage students to notice trends in behavior. For example, did more students get enough sleep at the end of the week than at the beginning? Were more students eating healthy foods?
5. At the end of the week, make graphs in the following categories: Diet, Sleep, Exercise, and Safety. On the vertical axis, list the number of students. On the horizontal axis, list Day 1, Day 2, through to Day 7. Make a graph in each category of the number of students who engaged in healthy activities. What conclusions can students draw from the results shown on the graph?
6. Congratulate the students. They have completed the fourth mission of the NIDA *Brain Power!* Program.

Discussion Questions

- ? What trends did students observe by the end of the week? Were students engaging in more healthy activities in every category? Almost every category? In what areas did students improve the most? In what areas do students still need to work to develop more healthy habits?
- ? Discuss how engaging in healthy habits specifically helps the brain. For example, how does good nutrition help the brain? What about sleep and exercise?



Extensions

The activities listed below provide a link to other areas of the curriculum.



Language arts



Math



Drama



Art



Science



Social Studies



Reading

	<p>Draw pictures of different foods in each category and try to think of interesting foods. For example, for the fruit group, draw mango and kiwi. For the bread, cereal, rice, and pasta group, consider putting in barley, couscous, and bagels.</p>
	<p>Encourage each student to work with an adult at home to develop a health log for 1 week. The log should include specific information about what the student eats each day, what he or she does for exercise, and what time he or she goes to sleep at night and wakes up each morning. At the end of the week, have each student bring his/her health log in and share it with the class. How are the logs different? How are they similar? What can students learn from reading the logs?</p>
	<p>Bring in food labels from several common foods, such as cereal, crackers, cookies, and juice. As a class, discuss what information they include. What can students learn about the ingredients in the food? What can they learn about the nutrients the food contains?</p>
	<p>Bring in a map and have each student point out where the food is from and why it is commonly eaten in that part of the world. If possible, have an international food festival, with students and their parents bringing in foods that students researched and discussed.</p>
	<p>Have each child learn about a particular dance or exercise he or she can share with the class. Each of the students can teach the rest of the class one move from the dance or exercise. They can do this at home for more exercise.</p>



Assessment

As students work on the activities in the module, look for the following:

- Do students understand why it is important to engage in healthy habits?
- Do students understand how the habits help the brain stay healthy?
- Were students able to work with their classmates to develop the class graphs?
- Were students able to interpret the graphs?
- Did students participate in class discussions?

Notes:



Resources for Teachers

National Institute on Drug Abuse (NIDA)

www.drugabuse.gov

301-443-1124

This Web site contains information about drug abuse and a section designed specifically for parents, teachers, and students. Publications and other materials are available free of charge.

National Clearinghouse for Alcohol and Drug Information (NCADI)

www.health.org

1-800-729-6686

NCADI is the world's largest resource for information and materials concerning substance abuse. Many free publications are available here.

Eisenhower National Clearinghouse (ENC)

www.enc.org

This Web site provides useful information and products to improve mathematics and science teaching and learning.



Resources for Students

Maas, J. *Remmy and the Brain Train: Traveling Through the Land of Good Sleep*. Blue Ridge Summit, PA: Maas Presentations, LLC, 2001.

This is a story for young children that explains the importance of getting a good night's sleep each night.

McGinty, A. *Staying Healthy: Sleep and Rest (The Library of Healthy Living)*. New York, NY: Franklin Watts, Incorporated, 1999.

This book, written for young children, is a comprehensive overview of the importance of sleep.

McGinty, A. *Staying Healthy: Eating Right (The Library of Healthy Living)*. New York, NY: Franklin Watts, Incorporated, 1999.

This book, written for young children, is a comprehensive overview of the importance of eating right.

Albee, S. *Watch Out for Banana Peels and Other Sesame Street Safety Tips*. New York, NY: Random House Children's Books, 2000.

In this fun book, Officer Grover and Safety Deputy Elmo share important safety tips.



Sample Class Chart

Use the chart below as a guide in developing the chart you use with your class.

Guide to Healthy Habits

Day	Eating three meals a day	Eating healthy foods	Exercising 30 minutes each day	Going to bed early each night	Wearing safety gear when necessary
Day 1					
Day 2					
Day 3					
Day 4					
Day 5					
Day 6					
Day 7					



Introductory Story for Module 4

The kids are getting ready to go bike riding. They are strapping on their helmets and other safety gear.

Beth asks, "Max, where's your helmet and safety gear?"

"I'm a good bike rider. I'm not going to fall," Max explains.

Juan responds, "Well, we're all good riders, but sometimes things happen that you don't expect. And you don't want to hit the pavement without protective gear. You could really get hurt."

Corty appears. "No one is going bike riding without safety gear. And anyway, I've got a mission for you. I want you to find five ways to keep your brain healthy. And I'll give you a hint: Wearing a helmet is number one."

Juan says, "Great, now we can go bike riding!"

"Better think about that, Juan! Bike riding is a clue to one of the other ways to keep your brain healthy," says Beth.

"Could another one be exercise? Does exercise help your brain?" asks Beth.

"We already learned that our brains are part of our bodies—right in our heads—so maybe it does," replies Julia.

"Okay. So protecting our heads is one way to keep our brains healthy. And the second way is exercise," says Beth.

"All this thinking is making me tired," sighs Max.

Beth says, "Maybe you didn't get enough sleep last night."

Juan jumps in, "That's it! The third way to keep your brain healthy is to make sure you get enough sleep! Okay, so two more."



"Let's figure this out later. I'm hungry," complains Max.

"My mom says that eating right is a good way to stay healthy," says Julia.

Beth says, "That's it, Julia! That's the fourth way to keep your brain healthy."

Julia confirms, "Protect your head, exercise, get enough sleep, and eat right."

"But what's number five?" asks Juan.

"What about brushing your teeth or taking baths? My mom says that's good for me," says Julia.

"You're right, Julia. They're both good things for you, but they don't help your brain. What is the fifth way?" asks Beth.

Corty suddenly appears. "The fifth way to keep your brain healthy is something you may not know much about yet: Don't do things like smoking or drinking alcohol. Has anyone told you about that?"

Beth says, "My mom says smoking is bad."

"And my dad says kids shouldn't drink alcohol. But I didn't know it could hurt your brain," says Juan.

Corty replies, "Well, it sure can. And we're going to find out more about that next time!"



Taking Care of Your Brain

In Module 4, your child learned about basic health practices. He or she learned that:

- Children should get 9 to 10 hours of sleep each night.
- Children should participate in at least 30 minutes of physical activity each day.
- Children should eat about 1,500 calories each day of foods from each of the food groups.

What your child may not have realized, however, is that following these basic rules is also a good way to keep the brain healthy. An important addition to this list is always wearing helmets while bike riding or roller-blading.

Try to reinforce these healthy habits at home. Discuss with your child why they are so important, and encourage your child to take responsibility for his or her body and brain.

This activity aligns with the standards "unifying concepts and processes" and "science in personal and social perspectives" from the National Science Education Standards, which reinforce the importance of following common health practices.

Science at Home

With your child, go over his or her routine, including diet, exercise, and sleep. Discuss what you can do to make improvements, and then try to implement at least one of those suggestions. Some suggestions for healthy changes are:

- Having fruit for a snack instead of chips;
- Going outside and riding a bike or playing with friends, instead of sitting in front of the television; and
- Going to bed at a specific time each night.

After your child improves one habit, try to help him or her improve another one.



What Does Your Child Think?

Suggest that your child draw a picture of two healthy things he or she does each day. The picture could show your child riding a bike with a helmet and eating a healthy snack.

Additional Resources

National Institute on Drug Abuse (NIDA) — www.drugabuse.gov
301-443-1124

This Web site contains information about drug abuse and a section designed specifically for parents, teachers, and students. Publications and other materials are available free of charge.

National Clearinghouse for Alcohol and Drug Information (NCADI) — www.health.org
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McGinty, A. *Staying Healthy: Sleep and Rest (The Library of Healthy Living)*. New York, NY: Franklin Watts, Incorporated, 1999. This book, written for young children, is a comprehensive overview of the importance of sleep.

McGinty, A. *Staying Healthy: Eating Right (The Library of Healthy Living)*. New York, NY: Franklin Watts, Incorporated, 1999. This book, written for young children, is a comprehensive overview of the importance of eating right.



El cuidado del cerebro

En el módulo 4, su hijo aprendió sobre prácticas de salud básicas. Aprendió que:

- Los niños deben dormir entre 9 y 10 horas por noche.
- Los niños deben realizar por lo menos 30 minutos de actividad física por día.
- Los niños deben ingerir aproximadamente 1.500 calorías por día de alimentos provenientes de cada uno de los grupos alimenticios.

Sin embargo, es posible que su hijo no se haya dado cuenta de que cumplir con estas reglas básicas también es una buena manera de mantener saludable al cerebro. Una adición importante a esta lista es usar siempre un casco al andar en bicicleta o patinar.

Trate de reforzar estos hábitos saludables en el hogar. Platique con su hijo acerca de la razón por la cual son tan importantes y aliéntelo a ser responsable de su cuerpo y su cerebro.

Esta actividad se ajusta a los estándares de "la unificación de conceptos y procedimientos" y de "la ciencia desde la perspectiva personal y social" de los Estándares Nacionales de Educación Científica (*National Science Education Standards*), que refuerzan la importancia de seguir las prácticas de salud comunes.

La ciencia en el hogar

Repase con su hijo su rutina diaria incluyendo, la dieta, los ejercicios y el sueño. Comente lo que se puede hacer para mejorarla, y luego trate de poner en práctica por lo menos una de esas sugerencias. Algunas sugerencias para cambios saludables son:

- Comer frutas en vez de papas fritas como refrigerio;
- Salir a andar en bicicleta o jugar con los amigos, en lugar de sentarse frente al televisor; y
- Recostarse a dormir a la misma hora todas las noches.

Una vez que su hijo haya mejorado un hábito, trate de ayudarlo a mejorar otro.



¿Qué piensa su hijo?

Sugíerale a su hijo que dibuje dos cosas saludables que haga todos los días. Un dibujo podría mostrar a su hijo andando en bicicleta con un casco y otro comiendo un refrigerio saludable.

Recursos adicionales

National Institute on Drug Abuse (NIDA) — www.drugabuse.gov
301-443-1124

Este sitio Web contiene información acerca del abuso de drogas y una sección destinada específicamente a padres, maestros y estudiantes.

National Clearinghouse for Alcohol and Drug Information (NCADI) — www.health.org
1-800-729-6686

El NCADI es el recurso mundial más grande para información y materiales relacionados con el abuso de sustancias. Aquí se pueden obtener muchas publicaciones gratuitas.

Albee, S. *Watch Out for Banana Peels and Other Sesame Street Safety Tips*. New York, NY: Random House Children's Books, 2000. En este libro divertido, el Oficial Grover y el Jefe de Seguridad Elmo comparten consejos importantes de seguridad.

McGinty, A. *Staying Healthy: Sleep and Rest (The Library of Healthy Living)*. New York, NY: Franklin Watts, Incorporated, 1999. Este libro, escrito para niños pequeños, es un compendio integral sobre la importancia del sueño.

McGinty, A. *Staying Healthy: Eating Right (The Library of Healthy Living)*. New York, NY: Franklin Watts, Incorporated, 1999. Este libro, escrito para niños pequeños, es un compendio integral sobre la importancia de comer bien.



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Eating Healthy

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Fats,
Oils, &
Sweets



Meat,
Poultry, Fish,
Dry Beans,
Eggs, & Nuts



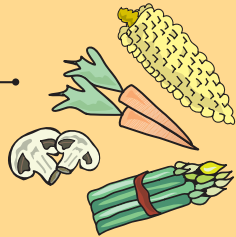
Milk,
Yogurt,
& Cheese



Fruit



Vegetables



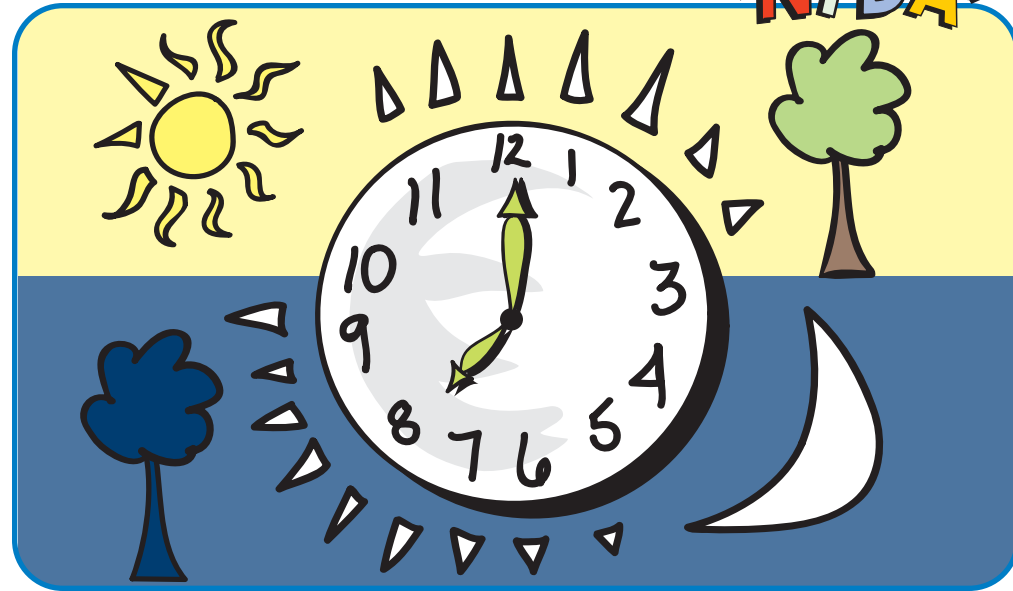
Bread,
Cereal, Rice,
& Pasta



What you eat is a very important part of staying healthy. You should eat nutritious foods from each of the food groups. This will help keep your brain and body healthy.

Sleep

NIDA



Sleeping is an important part of staying healthy. Little kids need 10 hours of sleep every night. If you go to sleep at 8:00 p.m. every night and get out of bed in the morning at 6:00 a.m., you would be getting enough sleep to keep yourself healthy.

Brain Power!



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Brain Power!



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Exercise

N/DA



Children should exercise for at least 30 minutes each day. You can do several fun activities to get your daily exercise.

- ✓ Do some jumping jacks
- ✓ Draw a hopscotch court on the sidewalk with some chalk and play
- ✓ Throw a ball with your friends
- ✓ Play a game of kickball
- ✓ Ride your bike

Safety

N/DA

Match the objects on the left with something to make them safer and healthier.



There are many ways to keep yourself safe. Some of the items above are unsafe or not as safe as they could be. Help each one become safer by matching it with the right equipment.

Brain Power



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Keep Your Brain Healthy



Word Bank

exercise

vegetables

five

helmet

toothbrush

three

bath

ten

brain

bad

Playing soccer and basketball is good _____.

I eat _____ meals a day.

I sleep for _____ hours each night.

There are _____ food groups.

Always wear a _____ when you ride your bike or scooter.

Use your _____ twice a day to keep your teeth clean.

Take a _____ to keep your body clean.

Eating healthy and exercising help my _____.

Too much sugar is _____ for me.

Carrots, celery, and cucumbers are all _____.

Eating Healthy

•N/DA•

Fats,
Oils, &
Sweets



Meat,
Poultry,
Fish,
Dry Beans,
Eggs, & Nuts



Milk,
Yogurt,
& Cheese



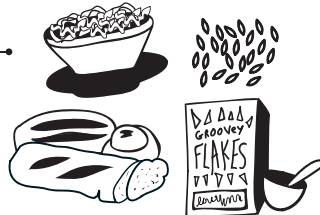
Fruit



Vegetables



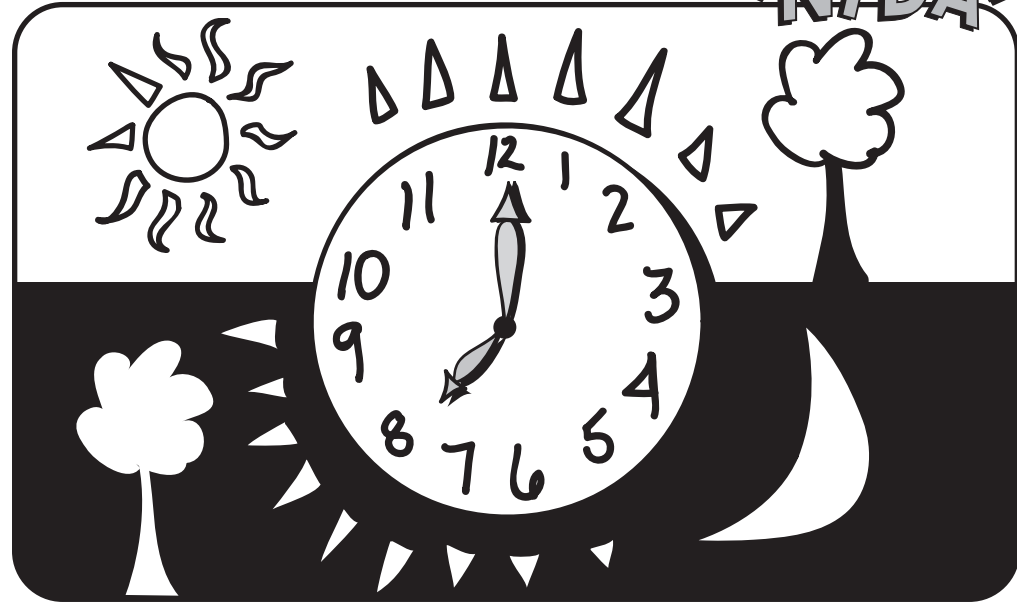
Bread,
Cereal, Rice,
& Pasta



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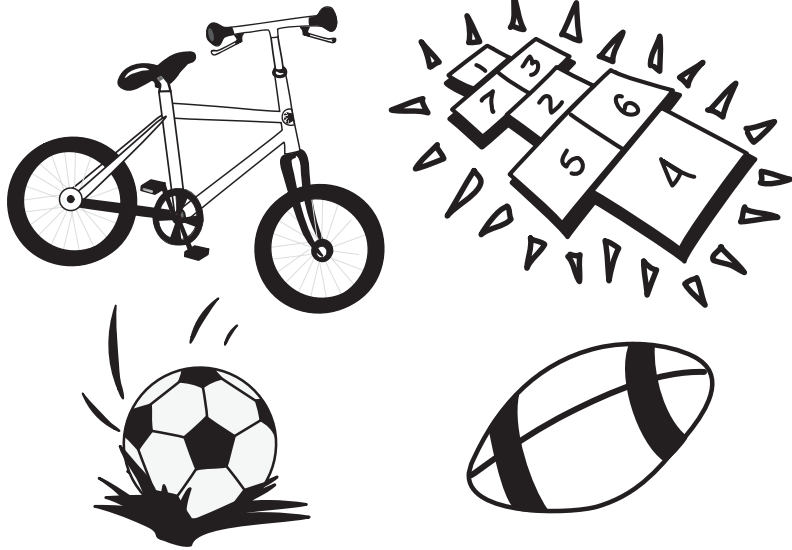
•N/DA•



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Exercise

N/DA



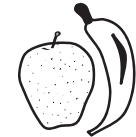
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There are many ways to keep yourself safe. Some of the items above are unsafe or not as safe as they could be. Help each one become safer by matching it with the right equipment.

Keep Your Brain Healthy

◊ N/DA ◊

Word Bank

exercise

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bad

Playing soccer and basketball is good _____.

I eat _____ meals a day.

I sleep for _____ hours each night.

There are _____ food groups.

Always wear a _____ when you ride your bike or scooter.

Use your _____ twice a day to keep your teeth clean.

Take a _____ to keep your body clean.

Eating healthy and exercising help my _____.

Too much sugar is _____ for me.

Carrots, celery, and cucumbers are all _____.

THUMBS UP

(My Bonnie Lies Over The Ocean)

When I eat too much candy,
It just isn't good for me.
When I eat too much candy,
My body won't stay healthy.

Thumbs down,
Thumbs down.

To things that are not good for me.

Thumbs down,
Thumbs down.

Yes, I want to stay healthy!

If I get a brain pain,
My momma might give me a pill.
If I get a brain pain,
Perhaps a nap might fit the bill.

Thumbs up,
Thumbs up.

To all the things that are good for me.

Thumbs up,
Thumbs up.

Yes, I want to stay healthy!

If I drink too many sodas,
My teeth won't stay nice and strong.
If I drink too many sodas,
My teeth just might be gone.

Thumbs down,
Thumbs down.

To things that are not good for me.

Thumbs down,
Thumbs down.

Yes, I want to stay healthy!

When I go to the doctor,
She sometimes gives me a shot.
And even though I'm not happy,
It helps my body a lot.

Thumbs up,
Thumbs up.

To all things that are good for me.

Thumbs up,
Thumbs up.

Yes, I want to stay healthy!



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