

Making Neuroscience Fun

A Brain Awareness Program for All Ages



Brain Health: It's SPECTacular

Story General Information

Importance of SPECTacular Brain Health in Adolescence (🧠 A Brain Health Story) (5th Grade – 10-11 yrs.)

This story describes the importance of focusing on all aspects of brain health as hormones enter the picture.

- Adolescence marks a major change in the way that your brain works. Hormones cause changes in behavior because they cause changes in both the structure and function of your brain.
- It is important to learn how hormones affect your SPEC health and to remember all the ways we have to cope with changes in our SPEC health during adolescence.
- Understanding the importance that SPEC plays in keeping your brain healthy is especially important during this transitional time in life. By helping your brain to stay healthy, it also helps you to stay happy and healthy.

The facilitator begins by introducing themselves, neuroscience, and the program, Brain Health: It's SPECTacular. Brain Health is about maintaining a happy, healthy brain to feel good. The beginning letters of SPECTacular (SPEC) each represent a component of Brain Health the children have learned about in previous stories. The facilitator reviews each component (Social, Physical, Emotional, and Cognitive) and its importance to staying healthy and happy. This summative story reviews the major concepts covered in the previous fifth grade stories while focusing on the changes the children will experience as they enter the new life stage of adolescence.

Whether it is exciting or scary, changes are all around. From the physical environment to people, to the inside and outside of the body, having a healthy and happy brain helps facing and managing changes easier. As fifth graders, these children are on the cusp of big and significant changes in their lives. The facilitator explains some of those changes to the children. The more information they have, the better prepared they can be.

They discuss how the physical world the children know is changing. The school they attend, the access they have, the responsibilities they carry, and the activities they are interested in all shifts. Preparing for these changes can make transitions easier.

Some of these changes are due to outside circumstances. Some of these changes are due to the brain and body developing. But most of these changes are out of their control. If change is difficult for someone, learning how to COPE and implementing methods to alleviate stress is key.

The facilitator explains some of the physical changes going on in the body during adolescence. Inside the brain, the hypothalamus is beginning to release *hormones*. These chemicals change the body and the brain. Because the brain is changing, behaviors change too. Hormones affect someone's SPEC Health. These changes all occur to prepare the brain for adulthood and can last until the mid 20's. Understanding SPEC Health helps to navigate the effects on the brain during this period of change.

Everyone's brain is different; therefore, everyone's experiences with hormones are different. The timing of release, the kind released, and the amount of hormones released all differ. How people respond to hormones

is unique too! The facilitator helps the children review each component of SPEC Health with an emphasis on changes due to adolescence.

Socially, hormones can change someone's "sense of self," self-esteem, and feeling of self-worth. The facilitator stresses the importance of being aware of these potential changes, making smart choices when it comes to friendships, and relying on trustworthy people (support system) for guidance and support. By being around people and doing things that make someone happy, a high level of Social Health is maintained.

Physically, hormones affect appetite and energy levels. The brain and body are doing lots of growing and they need lots of energy. Adolescents are often tired and hungry. Eating foods with high levels of nutrients is beneficial to the brain. Getting lots of sleep and having a regular routine improves energy levels. The more sleep, the more energy available to do all the activities on the to-do list. The facilitator also shares with the children they should not be alarmed if they experience achy bodies. Growth spurts or growing pains are common and can be alleviated through movement.

Emotionally, hormones affect how someone "sees" their world, which affects motivation of behaviors. During this period of time, it can be a challenge to identify triggers for feelings. Emotions also tend to come in extreme waves and sometimes for what feels like no reason. The facilitator shares a relatable scenario with the children about an extreme reaction to a classmate clicking their pen. Accepting that these emotions occur, trying to identify triggers or eliminate them, and finding COPEing mechanisms to lessen the intensity of emotions or control the response are important to maintaining Emotional Health during adolescence.

Cognitively, hormones affect the way someone thinks. Hormones can change perspective and decision-making skills. The facilitator and children discuss how perspective changes everything someone thinks about (who they like, what they like to do, what scares them, and what they like to eat, etc.). A change in decision-making skills can lead to more risky behaviors. Weighing pros and cons is helpful but, it is important to remember that protecting oneself should be the first factor in making a decision. Confidence in decision-making is driven by good choices, which elevates Cognitive Health.

Finally, the facilitator and children review how hormones affect each area of SPEC Health. Awareness of changes occurring, understanding the impact of hormones on the brain and body, and implementing strategies for coping and decision-making help make the adolescent brain happy and healthy. A happy, healthy brain is a SPECTacular brain!

Story Objectives:

- Students will identify some changes they will experience during adolescents (physical and environmental).
- Students will identify and define the *hypothalamus*.
- Students will define *hormones*.
- Students will define *adolescence*.
- Students will explain the importance of understanding *hormones*, changes, and how to cope to maintain good SPEC health.
- Students will describe how peoples' experience with *hormones* are similar and different (time, kind, & amount).
- Students will explain how *hormones* affect their Social Health and ways to build self-worth and self-esteem.
- Students will describe how *hormones* affect their Physical Health and the importance of eating right, prioritizing sleep, and moving their body.
- Students will explain how *hormones* affect their Emotional Health and cause extreme emotions and behaviors.
- Students will describe how *hormones* affect their Cognitive Health by changing their perspective and their ability to make decisions.

- Students will identify several different coping mechanisms to help navigate the changes caused by *hormones* and maintain a healthy brain and body.