

Brain Health: It's SPECtacular

# My Brain Keeps Me Alive (♠ A Brain Facts Story) (2<sup>nd</sup> Grade – 7-8 yrs)

This story talks about all the things that your brain does that helps you to stay alive.

- There are lots of behaviors that you have to automatically do to stay alive. (breathing, pumping blood to your body, regulation of body temperature, digestion).
- Your brain gets information about what you need to stay alive and then it tells your body what to do. (eating, drinking, sleeping, going to the bathroom - you learn when and where to do these behaviors)
- These behaviors are so important that your brain rewards you for getting the things it needs by making you feel happy.

## **♥SLIDE #1 - INTRODUCTION:**

Good Morning (Afternoon)!

My name is \_\_\_\_\_ and I (describe who you are and give your relation to neuroscience – ex. you are a Neuroscientist, you study neuroscience, you have a friend that is a neuroscientist or you have recently been learning a lot about neuroscience).

Neuroscience, that's a really big word! But, a neuroscientist is a person who knows a lot about the brain.

I am here today to talk to you about how you can help to make your brain healthy – feeling good. It is REALLY easy and anyone can do it.

I love to talk about Brain Health because it's SPECtacular!!! SPECtacular means "GREAT". When your brain is SPECtacular, you are a happy and healthy person.

This is a Brain Facts story. We have to know and understand some things about the brain if we are going to understand how to keep our brain healthy.

# **♥SLIDE #2 – MY BRAIN KEEPS ME ALIVE**

Today's story is going to help you to understand why your brain is so important.

There are so many things that our brain does to help us stay alive.

Because our brain does so much to help keep us alive, we have to work to keep our brain healthy.

This is what is known as a **symbiotic** relationship. You help your brain and your brain helps you.

# **♥SLIDE #3 – AUTOMATIC BEHAVIORS**

Some of the things that your brain does to help you stay alive – it does automatically.

This means that your brain takes care of some things without you having to think about it.

When you wake up in the morning, do you have to tell your heart to pump blood to your muscles so you can get out of bed? No, your brain takes care of that for you.

When you breathe, do you have to tell your lungs to breathe so you can get the oxygen that your body needs to survive? No, your brain takes care of that for you.

## **♥SLIDE #4 - YOUR BODY HELPS YOUR BRAIN**

But, the brain does need help from other parts of your body. Your brain does not work alone to keep you alive.

Your brain does not pump the blood all by itself, it needs your heart to do the work.

Your heart gets information from your brain about WHERE blood is needed.

If you just woke up in the morning and need to get out of bed, heart pumps blood to go to your muscles, so you can move.

But, if you just ate breakfast and now have to digest your food then your heart pumps blood to your stomach.

#### **♥SLIDE #5 – WORK TOGETHER - AUTOMATICALLY**

Your heart gets information from your brain about HOW MUCH blood is needed.

If you just need to walk to the kitchen to get a glass of water, then your muscles need some blood to make your arms and legs move.

But, if you were going for a walk in the woods and a bear started chasing you, then you would need a lot of blood to go to your muscles so you could run away - fast.

You definitely need your brain and your heart to be working together – automatically - without you having to think about it. Thinking slows you down. This would not be good if a bear was chasing you!

# **♥SLIDE #6 – YOUR BRAIN AND HEART TALK**

Your heart sends the blood to where it is needed and it sends the right amount so that you can do what you need to do to stay alive.

Your brain figures out where and how much blood is needed to do what you need to do.

It is your brain then tells your heart to pump the blood.

# **♥SLIDE #7 – YOUR BRAIN AND LUNGS TALK**

Your brain does not magically get the oxygen out of the air, it needs your lungs to help to get the oxygen out of the air we breathe.

In order to get the oxygen that the body needs, we must breathe.

Now, you may be thinking to yourself...I do not need my brain to breathe...I can breathe whenever I want to. Well, you are kind of right.

But, your brain knows HOW MUCH and WHEN you need to breathe.

# **♥SLIDE #8 - BRAIN MAKES YOU BREATHE**

**QUESTION:** How long can you hold your breath?

For most people can hold their breath from 30 seconds up to 2 - 3 minutes.

The longest time breath held voluntarily (male) is **24 min 37.36 sec**, achieved by Budimir Šobat (Croatia), in Sisak, Croatia, on 27 March 2021.

https://www.guinnessworldrecords.com/world-records/longest-time-breath-held-voluntarily-(male)

Did you ever think about why you cannot hold your breath for that long? It is because oxygen is so important to keep you alive that even though you may want to hold your breath longer, your brain makes you breathe.

## **♥SLIDE #9 – AUTOMATIC – NO THINKING**

The things that your brain does automatically for you are things that you have to do all the time to stay alive.

These are things like breathing, pumping blood to your body and getting energy from your food.

If you had to think about doing these things all the time, then your brain would be using too much energy.

Thinking takes LOTS of energy.

# **♥SLIDE # 10- BRAIN NEEDS HELP**

Some of the things that your brain does to help you stay alive, it cannot do automatically.

These are things like eating, drinking, sleeping, and going to the bathroom. All animals need to do these behaviors to stay alive.

These are behaviors that your brain helps you to do, but your brain cannot do these things alone. Plus, there is definitely thinking that goes on with these behaviors.

# **♥SLIDE #11- EATING**

Let's look at eating behaviors.

Your brain gets lots of signals from your stomach and even from the fat cells in your body.

These signals tell the brain when your body needs food. The hungrier you are, the more signals go to your brain.

Now, your brain has a problem...your brain knows you need food...but your brain can't get food all by itself. Your brain needs your body to get food, so your brain makes you think about getting food.

#### **♥SLIDE #12 – LOCATION MATTERS**

Depending on where you are there are different ways to get food. So, you first need to ask yourself...Where are you?

You have learned about how to get food in different places.

If you are at school, you may have to go to the school cafeteria, you wait in line, get your food, then go sit down to eat it.

At home, you need to ask someone to help you get the food – which is usually in the kitchen. When you get the food, then you can sit down and eat it.

## **♥SLIDE #13 – GETTING FOOD TO EAT**

In order to get food, your stomach has to first tell your brain that you are hungry. Then, your brain tells your body to move - based on what you have learned about getting food.

# **♥SLIDE #14 - EATING**

What happens next is really – COOL.

Eating food when you are hungry makes you happy. This is your brain at work again.

Your brain makes you happy, so that you will do the same behaviors again the next time you are hungry.

After you have eaten, then your stomach tells your brain that you are full. Your brain then tells your body to stop eating.

If you eat slowly, then your stomach and your brain have a chance to "talk" and you will eat the right amount of food that your body needs.

#### **♥SLIDE #15 - EATING**

Eating when you are hungry makes you happy.

This is your brain making sure you get the food you need – when you need it.

Eating when you are full – well, that can actually make you feel a little sick.

This is your brain making sure you do not eat too much food.

# **♥SLIDE #16 - BRAIN TAKES CARE OF YOU**

Your brain does the same kind of thing when you need water, or when you need sleep, or even when you need to go to the bathroom.

Your brain gets signals from your body telling the brain what is needed. Your brain then makes you think of what you need to do to get what your body needs.

Your brain helps by using things you have learned to tell your body to move and do the behaviors you need to do to stay alive.

So, when you are sitting in a classroom and you "feel" like you need to pee – you have learned that you need to go into a bathroom to do this.

You know that you do not just sit there and pee....OMG – that wouldn't be a good thing.

# **♥SLIDE #17 – YOUR BRAIN KEEPS YOU ALIVE**

So, your brain does KEEP YOU ALIVE!

Your brain helps to keep you alive in 2 ways.

- 1. Your brain does things for you automatically, which means you do not even have to think about it.
- 2. There are also things that you need to do to stay alive, that your brain needs to think about and then your brain tells your body what to do.

Your brain and your body work together – symbiotically – to help to keep you alive.

## **♥SLIDE #18 – CONCLUSION**

Thank you all for letting me talk to you about why your brain is so important in helping you to stay alive.

I have enjoyed spending time with you today talking about the brain. I hope that you have had some fun and learned something about your brain.

REMEMBER, your brain does some things that we need to do to stay alive automatically for us – like pumping blood to our muscles so we can move, breathe, and digest our food. These are things we don't even have to think about. There are other behaviors that we do to stay alive that we need to think about. So, your brain also gets signals from your body and then tells your body to do other behaviors to stay alive – like getting and eating food, drinking water and sleeping. If you understand how important your brain is to keeping you alive, then you will understand why helping your brain stay healthy is SPECtacular.

THANK YOU SO MUCH FOR ALL OF YOUR HELP!!! Brain Health is not just SPECtacular...it is FUN!!!