

Brain Health: It's SPECtacular

Do Drugs Make You Happy? (An Emotional Health Story) (5th Grade – 10-11 yrs)

While we all want to be happy, this story describes how sometimes things that are not good for us – like recreational drugs – can change our ability to feel happy.

- Our brain is designed to let you feel happiness whenever you do a behavior that helps you (or your species) get something you need to survive. The reward system is the part of the brain that allows you to feel happy.
- Recreational drugs activate the reward system, better, stronger and faster than any natural reinforcer like food or water.
- Recreational drugs, definitely make you happy, but they change your brain. When your brain changes, normal reinforcers do not make you as happy as the drugs. Your brain becomes addicted.

SLIDE #1 - INTRODUCTION:

Good	Morning	(Afternoon))!
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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 story is about Emotional Health – which is the E in SPECtacular. Emotional Health helps your brain stay healthy when you understanding about how you "feel" – your emotions.

There are lots of emotions. Being happy, sad, surprised, disgusted or mad. These are all emotions.

Understanding that we have emotions and how we control our emotions is very important to making our brain healthy.

When you understand your emotions and learn how to control your emotions, that makes your brain healthy.

So, let's see how you can keep your brain healthy.

SLIDE #2 - DO DRUGS MAKE ME HAPPY?

The title of this story is, "Do drugs make you happy?".

You may be surprised to hear that the answer to that question is "YES". Drugs can make you happy. Of course, they can!!! If they did not make you happy, then why do you think people would take them?!?

But, (yes...there is a but) drugs only make you happy when you first start taking them. The more you take them the less they make you happy and the more drug you have to take to try to get happy.

Plus (yes...there is a plus too) drugs change the way other things make you feel. Things like eating food when you are hungry, hanging out with your friends, even playing video games may no longer make you happy.

Also, (yes...there is an also too) when you take drugs they will change your brain which is why things that normally make you happy don't make you happy anymore. Your brain gets "confused" and it only wants drugs.

Drugs can make you happy – at first – but, drugs change your brain – especially the part of your brain that makes you happy.

So, let's see what is going on here and what we can do to protect the "happy place" in our brain.

SLIDE #3 – WHAT IS HAPPY?

Happiness is an emotion that most of us like to feel.

QUESTION: What are some of the things that make you happy?

There are so many things that make 5th graders happy. Things like playing video games or just watching videos, dogs, fishing, riding bikes, dancing, reading and yes...even science.

(Other examples from 5th graders...sports, French culture, food, African culture, history, Fortnite, helping little kids, being tall, art, stuffed animals, VR games, longboarding, and Pokémon)

What most people do not know is that being happy is something that your brain likes you to feel too.

Inside of your brain is a place that is turned on when you are happy – sort of like turning on a light switch. This is a place that is also known as the "reward" center or pathway…it is actually called the dopaminergic mesolimbic system…but, that is way too long of a name. We can call it the "happy place" in your brain.

Your happy place is designed to help your brain to get things that it needs. Let me explain.

SLIDE #4 – SURVIVAL NEEDS

There are certain things that your brain and your body need to survive.

You need food to give you energy and nutrients.

You need shelter to protect you from the heat and cold – and from animals that might want to eat you.

You need water – because about 50-60% of your body is made of water (usgs.gov)!

When your brain gets the things that you need to survive, it turns on your happy place and you feel happy.

One of the reasons you feel happy is so that the next time you get hungry, thirsty or cold, then you will do what you need to do to get food, water or shelter. This will make you feel happy again. And, we all love to feel happy.

SLIDE #5 – STRESS

Ok, so that makes it easy to understand that you are happy when you eat when you are hungry. But, why do some people get happy playing video games, talking to their friends or hugging their dog?

The answer...stress relief. Too much stress is NOT good for your body or your brain – so when you are doing things that you like to do – like playing video games, talking to your friend or hugging a cute little puppy – your brain turns on your happy place. This takes away your stress – just like eating food takes away your hunger.

You and your brain feel happy – so the next time you are stressed out you will know to do something that you like to do to relieve the stress.

SLIDE #6 – HOW IT WORKS

Your brain turns on your happy place when you do a behavior that helps you get something that you **NEED**.

That is a very important thing to remember about your happy place, it turns on when you get something that your body (and brain) needs to live.

The other thing to remember about your happy place, is once you get what you need (food when you are hungry) then your happy place gets turned off.

SLIDE #7 – HOW YOUR HAPPY PLACE WORKS - HUNGER

Another thing to remember about the happy place in your brain is that it only works right – (turns on and off) when you actually NEED something. Let me explain.

When you are hungry, you NEED food. When you get the food, your happy place is turned on. This makes you happy because your body got what it needed – food.

When your body "tells" your brain that you are no longer hungry because you have eaten enough food, then your brain turns off the happy place. You no longer need food right now.

Your brain "knows" that you need food to keep your body (and your brain) healthy. This is why you have a "happy place".

When you need to do behaviors to get something that your brain and your body NEED, your "happy place" helps you to learn what you need to do. It makes you happy – because who doesn't like to be happy.

You were hungry and needed food, so your happy place was turned on when did the behavior that you needed to do to get the food.

Then your happy place was turned off when you were no longer hungry, because you didn't need any more food. And, there are other behaviors that you need to do.

Your happy place was working right. Now, the next time you are hungry you will know that eating food will make you happy.

SLIDE #8 - HOW YOUR HAPPY PLACE WORKS - STRESS

Ok...so how does your "happy place" work when you are stressed and you NEED stress relieving behaviors – like playing video games, talking to friend or hugging a puppy? The same way.

Remember, stress just like hunger can be bad for your body and your brain. So, you NEED something to relieve the stress. So, your happy place turns on when you do the behavior that gets you what you need. And, your happy place turns off when you get what you need.

You were stressed and needed stress relief, so your happy place was turned on when did the behavior that you needed to do to relieve your stress – playing video games, talking with a friend or hugging a dog.

Then your happy place was turned off when you were no longer stressed, because you didn't need any more stress relief. And, there are other behaviors that you need to do.

Your happy place was working right. Now, the next time you are stressed you will know that doing a behavior that will relieve your stress will make you happy.

SLIDE #9 – NEED OR WANT

What happens when you eat food, but you are not hungry or you play a video game but you are not stressed?

You may feel happy because you got something that you like, but you did not **need** the food or the stress relief – you just wanted it.

Your happy place now is not working right. Your brain did not **need** anything, you just wanted it. So...your happy place may have turned on...but, now it does not necessarily turn off.

Our happy place only works right (meaning it turns on AND off) when we NEED something.

SLIDE #10 – NEED OR WANT

I want you to ask yourself, when you need something and when do you want something?

When you are hungry you NEED food to make you happy. You are happy because you are doing a behavior - eating – that gets your body (and brain) the energy and nutrients you need to survive. Your happy place then shuts off when you are no longer hungry.

When you WANT a toy that your friend has, getting the toy may make you happy. This means that your happy place will turn on, but because you don't NEED the toy to survive – your happy place doesn't shut off. Your brain gets confused and all you know is that your friend is mad at you and that makes you sad.

Your happy place works – meaning it turns on and off - when you get something that you need. Your happy place doesn't work – meaning it turns on...but it won't turn off – when you get something that you want.

SLIDE #11 – DRUGS

OK...back to our question about whether or not drugs make you happy. Of course, I already told you drugs make you happy.

Now, you know that when your brain is happy it is because your "happy place" is turned on.

What I did not tell you was if this is your brain when your happy place is turned on by things like food when you are hungry, water when you are thirsty and playing video games when you are stressed...then THIS is your brain when your happy place is turned on by drugs.

YUP...drugs make you REALLY happy.

The reason drugs make you so happy is that they act directly to turn on your happy place.

They are act faster, stronger and longer than any other thing that turns on your happy place (like food when you are hungry, water when you are thirsty or playing video games when you are stressed out).

SLIDE #12 – PROBLEM

So, you may be saying – drugs make me REALLY happy, so why not take them?

Well, when you take the drugs there is not really a need for them. Remember the need and the want issue?

You do not NEED the drug. So, when your happy place gets turned on – it doesn't shut off.

But, the drug makes your brain REALLY happy. Your brain likes being that happy and now your brain makes you think that you NEED the drug – but, your brain just WANTS the drug.

Some people may say that they are taking drugs because they NEED to relieve stress, but because of the STRONG effect that drugs have on your brain's happy place – your brain is so confused and even more stressed. And, it can't shut off.

Plus, the drug starts to change the way that the brain's happy place works. Your brain gets even more confused and stressed...your brain WANTS to be happy again...it makes you take the drug again – only because of the changes, you need to take more of the drug to "feel" happy. That causes more changes to happen to your brain's happy place.

What is going on?!?!?

SLIDE #13 – ADDICTION

What can then happen is that your brain is so consumed with wanting the drug that it does not care anymore about getting other things that you need to survive.

Remember the food, water and shelter that you need to survive? Your brain does not care about you getting food or water or taking care of yourself.

Your brain just wants the drug – it craves the drug - and your brain will do anything to get the drug. When this happens, we say that the brain is addicted.

SLIDE #14 – ADDICTION IS A BRAIN DISEASE

Addiction is a brain disease.

It is a disease that affects the happy place in your brain.

Your happy place is such an important place in your brain not only because being happy is nice, but this is the place in your brain that usually makes sure you are getting all the things that you need to survive.

People who have an addiction "crave" what they are addicted to – which means they want it even when they know it could hurt them.

There are lots of different drugs that have the potential to become addicting – nicotine, cocaine, opiates, alcohol and marijuana.

SLIDE #15 – ADDICTED BRAIN

Because everyone's brain is different, some people can get addicted just taking a drug a couple of times. Other people can take the drug multiple times before they become addicted.

The problem is that you do not know what kind of a brain you have and so you do not know how drugs will affect your brain.

So, you may know people who drink alcohol – but, they are not addicted to alcohol - yet. When using an addictive drug – you are taking a risk – at some point, you will become addicted to the drug.

SLIDE #16 – ADDICTION

One of the other things that we know is that addiction is a disease that we do not know how to cure – at least right now. Scientists are working hard to figure out how to cure addiction.

But for right now, once you are addicted, you are always addicted.

We know that people with addiction can work really hard to change their behaviors and not use the drug – but, they will always **want** to use the drug. This is why so many addicts **relapse** – they make a mistake and take the drug again.

Because of the potential for relapsing into taking the drug, people who are addicted to a drug need help.

It is important to understand that a person who has an addiction is not a bad person. They made a bad choice in deciding to take the drug.

SLIDE #17 – BUT...THERE IS SOME GOOD NEWS

So, taking drugs can change how your brain's happy place works and causes addiction – which is a brain disease.

The drugs make you REALLY happy when you take the drugs, but because you do not need the drug - your happy place does not shut off and that confuses your brain and makes it more stressed.

You don't take care of body anymore, getting the things that your body needs does not make you as happy as taking the drugs. Your brain just WANTS drugs.

Luckily, there is some good news for you and your brain...the happy place in your brain can be fixed.

If you stop taking the drug your brain's happy place can start to work again. So, you will be able to feel happy about normal things – like eating when you are hungry – and your happy place will be able to shut off because you now sense when your body needs something – like food.

When you stop taking the drugs, your brain changes and your happy place gets fixed...BUT, the addiction – the brain disease – is still there.

You are still addicted to drugs because remember that taking the drug turned on the "craving – the wanting" the drug, so at least for now – that will still remain.

You can do things to help your brain deal with the craving.

Scientists are also busily working on trying to fix the part of the brain that makes the brain crave the drug. When that happens, then we will be able to cure addiction.

SLIDE #18 – MODERATION IS KEY

So, the bottom line is that drugs do make you happy – but at the cost of hurting the part of the brain that controls your happiness.

Being happy is an emotion that we all like to feel.

There are lots of things that make us happy – the problem with drugs is that they make us TOO HAPPY.

As will lots of other things, too much of a good thing is not necessarily good.

We all know that water is good for us, but if we drink too much water it can literally make cells in our body and our brain explode.

Exercise is good for us, but if we exercise too much and do not give our bodies time to rest – then the exercise will start to breakdown our body.

Video games can relieve stress that we are feeling, but if all we do is play video games – then we could become addicted to video games and playing them could hurt our brain's happy place.

Moderation and balance are very important for your brain health. Being happy is important, but being TOO HAPPY can change your brain in a bad way.

That is why Brain Health is SPECtacular.

Taking care of your Emotional Health is important, but so is taking care of your Social, Physical and Cognitive Health.

SLIDE #19 – CONCLUSION

Thank you all for letting me talk to you about the brain's happy place and drugs.

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, drugs may make you happy – but, they will end up changing the part of the brain that makes you happy. You will then spend all of your time trying to get and take drugs. The more of the drug that you take, the more drug your brain will crave. Eventually, you will give yourself a brain disease – addiction – and your brain's happy place will not work right anymore.

Your brain's happy place is important because it makes you feel happy and because it makes sure that you are getting all the things that your body and brain **need** to stay healthy. Understanding the difference between needing something and wanting something is also important. You do not NEED drugs – and the disease that drugs can give you – ADDICTION – is something that we cannot cure...YET.

So, take care of your brain – especially when your brain is not working correctly. The best way to take care of your brain is NOT to use drugs. This way your brain's happy place can stay healthy and you can be happy. 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!!!