

# But Why: A Podcast for Curious Kids

## Why do we like being scared?

October 20, 2023

**Jane** 00:20

This is But Why: A Podcast for Curious Kids, from Vermont Public. I'm Jane Lindholm. On this show, we take questions from curious kids just like you, and we find interesting people to answer them. Here in the US, where we are based, lots of kids (and some adults) are gearing up for an annual event that involves dressing up, eating a lot of sweets and sometimes getting a little scared. I'm talking about Halloween!

**Jane** 00:48

Now, the dressing up and the eating sweets parts I can totally get behind. But watching scary movies or going to visit a haunted house? I don't generally like to be scared, but I live with two kids who do. What about you? Do you love that little shiver of excitement, the hair standing up in the back of your neck as you peer into the darkness of a haunted house, knowing something might be just around the corner? Or that moment in a scary movie that makes you jump and scream? Or maybe the feeling right at the top of a roller coaster when you're about to launch down at breakneck speed? If you like being scared, on purpose, for fun, you're not alone. And in fact, research shows it might be a good idea to do things that are a little bit scary, but not too dangerous. Today, we're going to find out why with someone who researches fear.

**Marc Andersen** 01:45

I'm Marc Andersen.

**Jane** 01:47

Marc Andersen is an assistant professor at Aarhus University in Denmark, where he's the co director of the Recreational Fear Lab. What's that? Well, here's how Marc says one of his kids would describe his job.

**Marc Andersen** 02:00

My kid would probably tell other kids that her dad does research on play, and on fear.

**Jane** 02:07

Researching play and fear? That sounds cool.

**Marc Andersen** 02:11

At the recreational Fear Lab, they run scientific studies to test those theories.

**Marc Andersen** 02:11

At the Recreational Fear Lab, we do research on why it is that humans enjoy being scared. And we also do research on, you could say, the effects of fun fear. Why do humans engage with fear out of pure enjoyment? It's sort of a weird puzzle for a lot of researchers. Might it be healthy for you, for instance? Might it be something that helps you feel as if you can more easily deal with scary stuff in your life going forward? That kind of stuff.

**Marc Andersen** 02:14

Sometimes we find people out in the world that are doing something that scare them. And then we ask them questions. Sometimes we measure their heart rate or their how much they sweat on their skin, or the way their eyes move. And then we look at what those experiences do to them. One study we did was in a haunted attraction, where a lot of participants agreed to let us measure their heart rates while they had to go through this haunted attraction. And then we asked them when they got out of the attraction about how scared they were, and how much they enjoyed being in the haunted attraction. And from that study, we discovered that there was this sweet spot of fear that the people that enjoyed themselves the most in the haunt were actually people that were not extremely scared. And they were not not scared either. They were sort of moderately scared. That's where we saw the highest enjoyment ratings from our participants. You know, humans don't enjoy being in situations that are very, very, very different from the ones that they are usually in. But they do like being in situations that are a little bit different. And that probably has to do with those situations being the best situations for learning and for stimulating our curiosity.

**Jane** 04:30

Before we get too deep into the theories of why we like to be scared, let's get some basic facts about fear. Camryn in Florida is among the kids who want to know why people have fears in the first place.

**Sammy** 04:43

My name is Sammy, I'm seven years old. I live in Winhall, Vermont. And my question is, why do you get scared? (Space space space. RAWR. AGHH!!)

**Samantha** 05:01

My name is Samantha. I'm eight years old. And I live in Cabot Vermont. And my question is, why do people get scared?

**Lewis** 05:11

My name is Lewis. I'm seven years old. I'm from Kansas City. My question is, why are people scared?

**Lucy** 05:19

My name is Lucy. I'm eight years old from Portland, Oregon. And my question is, why are we afraid of stuff? Thank you. Bye.

**Maya** 05:28

Hi, my name is Maya. I live in New Jersey, I am seven years old. And my question is, um, how do we know to be scared of something?

**Marc Andersen** 05:39

That's a great question. So fear is actually one of the emotions that science understands the best. And it's the most researched of all of our emotions. In a sense, we share this emotion with most, if not all, other sort of sophisticated animals. And the reason I say probably is that we can't know for sure if the way a dog feels fear is the same as a human, of course, but we do know that, that at least to some degree, the behavior that mammals exhibit seems very similar when they when they get in a threatening situation. But the reason that most evolutionary psychologists would think that humans have this weird emotion is to keep us away from dangerous stuff. If we see a roaring tiger that is coming down to chase us, then it's very good for human survival to have a feeling such as fear, because it will, of course, allow us to react very quickly to a predator and shy away from whatever stimuli it is that is creating this emotion in us. So the short answer is that humans can feel this feeling because it has helped humans for millions and millions of years, to survive by motivating them to keep away from dangerous stuff.

**Jane** 07:19

Fear can be something that happens in your brain. But it's also often something you feel in your body.

**Marc Andersen** 07:25

Yes, so we know that there is a series of fairly sort of stable effects on the body when we experience fear. Probably the most well known is that our heart begins to beat faster. So it carries more oxygen around our bloodstream. Our pupils dilate as well. So we get ready to take in more light. Oftentimes, we we sweat more as well. And many researchers believe that the reason the body is doing that is that is that the body is preparing to act. So when we when we feel this increase in our heart, heart rate, it's actually because our body is getting ready to run, or maybe fight. So that's how we get afraid, you can say,

**Eloise** 08:20

Hi, my name is Eloise, I'm eight years old, I live in Montreal. And my question is, why do you blink your eyes when you're scared?

**Marc Andersen** 08:29

It's true that you can also see a higher blink frequency, especially if something's very close to you. And then it's sort of a knee jerk reaction.

**Mete** 08:40

Hi, my name is Mete. I am from [unintelligible]. I am six and a half years old and my question is: why do goosebumps only be activated when you're, when you're shivering or you are scared?

**Jane** 09:01

Marc says scientists don't fully understand chills or goosebumps. But one theory is that when you start to realize things are going to go very bad, or you might need to defend yourself, getting goosebumps raises the hair follicles all over your body. And back when humans were covered with more hair than we have now, all our hair standing on end might have made us look bigger, which could have helped us against a predator. Like maybe you've seen a domestic cat puff up all its hair when it's defending itself.

But there's more work that needs to be done on that theory. Maybe you'll be the one to investigate and find answers.

**Bruno** 09:36

Hello, my name is Bruno. I'm from Boston, Massachusetts. I'm six years old. My question is why do you scream when you're scared?

**Marc Andersen** 09:44

Oh, that's really good question. I never thought about that. One option could be that it is to call for other humans. We know that humans are one of the most social animals that have ever walked the face of the earth. And so humans use communicative signals a lot. So that might be one option that it is simply to signal help to nearby humans.

**Jane** 10:11

And signal to other humans it does! A different group of researchers has found that when we hear someone else scream, the fear center of our brain, our amygdala, gets activated. So we're not only letting others hear us when we scream, we're actually passing on our fear to anyone who can hear it, which could be good or bad.

**Jane** 10:31

Coming up, why are we so afraid of things we can't see? And is fear...good?

**Jane** 10:37

This is But Why: A Podcast for Curious Kids. I'm Jane Lindholm. We're talking today about fear with Marc Andersen. He co leads the Recreational Fear Lab at Aarhus University in Denmark. We've been talking about how fear is an evolutionary response to potential danger. But the things that caused ancient humans fear weren't scary movies or roller coasters, or the things that Rowan wants to know about

**Rowan** 10:37

I'm five years old. And I live in South Dakota. And my question is, why is the closet and under the bed scary?

**BREAK** 10:37

BREAK

**Marc Andersen** 11:15

My own child also is afraid of what is underneath the bed. Sometimes. My youngest daughter, Eva, who's seven. The reason is probably that those types of situations where that kind of fear can arise often has the combination of darkness and some kind of scary expectations that the person in the bed is carrying around with them. Our sensory system tries a lot to make predictions about what is what it is that is around us in our environment. And when it's dark, it's very difficult for the brain to to make a prediction about what it will encounter. And oftentimes, stuff underneath the bed is covered in darkness, and the closet similarly. If, then, you get the idea that there might be something sinister or dangerous or

scary in your closet or underneath your your bed, the brain doesn't really have a good way of checking that you are wrong. When there's darkness, the cure for that for that kind of stuff is actually to look to look under the bed. And you know, educate your brain and and show it that that it can discard this hypothesis about the monster under the bed.

**Marc Andersen** 11:45

So are you telling all of us that it is okay to tell our adults, "I need to turn on the light and check under my bed." Or "I need you to go into my closet; then I can go to sleep." But it's okay to say to your adult, "I need you to check on this for me."

**Marc Andersen** 12:59

I think it would be better if the child did it themselves. I usually tell my kids that when they see the monster, they have to take a picture because we are going to become so rich when they are the first kid to discover a monster under the bed. And that typically takes the edge off. That it's actually a good thing to discover a monster under your bed because you'll be the first one to ever done so.

**Jane** 13:27

we've talked a little bit about fear and what it is and how our body responds. But a couple of kids have some pretty insightful questions about what fear might do for us.

**Youxia** 13:39

Why do people get scared?

**Ben** 13:43

Hello, my name is Ben. I'm from, I'm 10 years old, and I'm from Springfield, Illinois. My question is: why do we get scared? And how does getting scared help us?

**Marc Andersen** 13:57

That's a really good question. And there are many answers to that question. On the one hand, if you get so scared that you manage to escape the neighbor's dog that is attacking you, then of course fear is a good thing. It's very unpleasant, but in some cases fear can save your life. But if we look at only what the experience of fear does to humans, then there are also a few different answers. We know from some research, that if children get too frightened by horror movies, for instance, then they can develop anxiety-like behavior where they have nightmares; they have trouble sleeping; they avoid certain places in their life. But in some of the newer research, researchers are starting to ask if there are also benefits to fear. And we think there are, actually. We think that it's a bad idea to avoid things that make you scared altogether. The key is that you have to find something that is scary, but that is also fun at the same time, and that is something that children are actually quite good at. Just think of Halloween. That's a, you know, a time of year where a lot of children enjoy the scare, enjoy scaring others, enjoy being scared. So it has to do with how scary something is. And it is...there's a lot of studies that indicate that sort of a moderate amount of fear, or a mild to a moderate amount of fear, can be very beneficial to children and adults.

**Jane** 16:01

We don't always like things that are good for us. So why do some people like getting afraid?

**Tal** 16:06

My name is Tal. I'm from Pittsburgh, Pennsylvania. I'm six. And I want to know why people like getting scared. Like scary stories, movies.

**Marc Andersen** 16:21

So the reason we think that humans also like these moderate scares, is that it is situations that we can learn from. And we know that humans become very interested and curious about things that their brain is ready to learn, you could say. So when you see a horror movie that you think is manageable, you got scared, but you didn't get that scared. Then those are the movies that we typically find people enjoy the most. And we think that has to do with people's ability to learn from the movie. Sometimes they can learn you know how to cope with a very scary situation, like, what should I do when a loud noise comes? Well, maybe I can hold my ears. They might learn how it feels to be scary, they might learn how a chill, chilling, you know, how a chill running down your spine feels. There's a lot of things that children and adults don't really get to experience a lot. So we don't get to practice it a lot. And fear is one of them. And that's why it can be really fun and interesting to try to feel fear in situations where you still think that you can manage it. And we see sort of the same thing, you know, in theme parks, where you might think that it's really scary to go up in the big roller coaster. But oftentimes, you can find a roller coaster that you think is scary, but also quite fun. And those are often the best ones and the ones where we learn the most about how our body responds to things that we're not used to.

**Jane** 18:06

What if, like me, you are a person who hates scary movies and hates scary rides, and doesn't ever want to feel afraid on purpose? Are we okay, or should we be pushing ourselves to make or to do a little bit more of that controlled fear?

**Marc Andersen** 18:21

I don't think you should be pushing yourself. But I think those people, and I meet those people a lot that ask me that question, I think they underestimate or they forget that they are actually also interested in things that are scary. Those people might like to see, you know, a Disney movie, for instance. Disney movies can be quite scary. They might like, you know, if they're adults, they might like thrillers. They are not horror movies, but they are also sometimes somewhat scary. So it's more about people maybe having different levels or sort of different...there's some people have gone further in this domain than others. But I think the instinct, or the appetite for fear is something that all humans have. But the level of that fear might be very different from person to person.

**Owen** 19:17

Hi, my name is Owen. I'm nine years old. I live in my Hawaii. And my question is, how can I help my friend when my friend is afraid?

**Jane** 19:29

First of all, it's very kind to want to help a friend who's afraid, Owen. And there are lots of ways to do that. One way is to not put your friend in a situation that's too scary for them. Like, if you know your

friend doesn't enjoy when someone runs up behind them and says "BOO!" try not to do that to that friend. Or if they're afraid of a dark closet, maybe you could be the one to check on it for them or to hold their hand and help them check for themselves. And Marc says, for people who are afraid of something, just being around someone they trust can help.

**Marc Andersen 20:00**

You can simply stay close to someone that you love or some friend or something like that. And just being in the proximity of another human can also sometimes help you to deal with your fear. And you can maybe sometimes have a conversation about why you are scared. And that person can offer a different perspective that might calm you down.

**Jane 20:21**

It's also worth saying that if your friend is really scared of something, you or they should tell an adult, especially if the thing they're afraid of seems scary or dangerous to you, too, or if they're really not able to control their fear.

**Jane 20:36**

Now, remember, when Marc said, there's a certain level of fear that's fun, and a certain level or type of fear that isn't, if you can stay in that fun fear range, he says, it can actually be kind of helpful.

**Marc Andersen 20:50**

It seems that people who engage or people who sort of like Halloween or, you know, like watching horror movies, they seem to to learn stuff from those movies, not necessarily about state of affairs in the world, but about themselves. A lot, it seems as if people are quite interested in, in feeling emotions, feeling this emotion of fear in a way that is manageable, you could say. It's not very nice to feel fear, if you're being, you know, hunted by the neighbor's dog or something like that. Then it's very, very unpleasant to feel fear. But if you are in a situation where you pick the movie that you want to see, and, you know, maybe you are hanging out with friends and stuff like that, then the unpleasant sensation that a horror movie can create is at the same time accompanied by a very enjoyable feeling of sort of exploring what it is that this, you know, stimulus or movie is doing to your body. So that's one of the answers, at least we think.

**Jane 22:07**

And remember how Marc says he studies fear and play? It turns out a little dose of fear is often an important part of play.

**Marc Andersen 22:16**

We are looking into the mental and physical benefits of recreational fear, meaning that we are looking to see if children that expose themselves to fear or that play with fear a lot, tend to become less anxious than children who do not engage a lot in recreational fear.

**Jane 22:39**

And that doesn't have to mean watching a scary movie.

**Marc Andersen 22:41**

Engaging in risky play is very important for children. And risky plays this type of play where children might feel a little bit scared, or a little bit nervous. For instance, if you climb really high up a tree, or, you know, drive down a hill on your bike a little bit too fast, maybe then you then you might get this sensation of fear. And there are studies that show that children who do that a lot, they also tend to become less scared than other children or less anxious than other children. So I think it's, it's just it's important to, to realize that recreational fear is not only something we do at Halloween, or do when we watch horror movies. There are many, many instances or many, many domains of our life where, in particular in children's life, where we can do something that's a little bit scary. But doing those kinds of or engaging in those forms of play we think is actually also something that we can be quite good for children because it allows them to practice what it feels like to be scared, and that, in turn, can help alleviate or sort of resist stressful situations later on.

**Jane 24:03**

Now, I don't want you to say to yourself or to your adults, "Hey, But Why says I should go do something dangerous!" That's not what we're saying at all, or what Marc is saying. But it's okay to feel a little uncomfortable or slightly scared if you're doing something with adult supervision or some safety precautions, like swinging on a swing set high enough that your stomach kind of lurches, but you know you can still hold on. Or watching a movie that's just a little bit scary, but still made for people your age. Too much fear can make you anxious, and doing things that are too risky can be dangerous. It's part of the job of the adults in your life to let you know where that line is and to keep you safe. So ask them to help you figure it out and how to help you be just a little bit scared. And maybe the next time you're worried about what's under the bed, challenge yourself to bend down and take a look.

**Jane 24:58**

That'll do it for today. thanks to Marc Andersen, co director of the recreational fear lab at Aarhus University in Denmark for helping us understand fear. But Why is produced by Melody Bodette And me, Jane Lindholm. Our engagement producer is Kianna Haskin. Our theme music is by Luke Reynolds. We make the show at Vermont Public and it's distributed by PRX. We'll be back in two weeks with an all new episode. Until then, stay curious!