Tracey Peake: Hello, and welcome to NC State's Audio Abstract. I'm your host, Tracey Peake. Fall is here, and the holiday that kicks it off is just around the corner, Halloween. But trick-or-treating in the second year of a pandemic can be a tricky proposition. I'm speaking today with Ellen Shumaker, Extension Associate and Director of Outreach for Safe Plates here at NC State, about tips for keeping everyone safe and healthy while enjoying Halloween and the fall season's other tasty treats. [00:00:30] Welcome, Ellen.

Ellen Shumaker: Hi, Tracey.

Tracey Peake: I am very glad to have you here today. Halloween is one of my favorite holidays. So let's start with Halloween and some basic tips for making sure that the treat your kids are getting are safe. Are there any obvious, do not eat this, signs to look for when you're going through the goody bag?

Ellen Shumaker: Yeah. When you're going through the goody bag, the first thing that you want to check for is to make sure that no foods or packaged foods have obviously been tampered with. That's the first big thing [00:01:00] that you want to watch out for. Something else to keep in mind is if your kids have allergies, you want to make sure that you're carefully looking at each label.

 A couple of other things to think about, especially with home baked goods that might be handed out and packaged. Home baked goods are considered low risk, especially when you're thinking about something like brownies or cookies, but just make sure that they're fully baked and that there's not something like cream in the middle of them.

Tracey Peake: Okay. And that's because sugar content kind of keeps us safe [00:01:30] from bacterial growth. Is that true?

Ellen Shumaker: The sugar content is something that kind of acts as ... it can help prevent bacterial growth. And so as long as a baked good is fully cooked, something like sugar or brownies, there's a pretty low risk of something growing in it.

Tracey Peake: Okay. And that brings me to my other question about the packaged foods. You'll get some kids who will hoard ... the rare child. But who will hoard the Halloween candy. So how long does this stuff [00:02:00] stay fresh in packaging? Let's say you get some mini Snickers or little M&Ms, and they keep them. And they're trying to bring them out at Christmas or beyond. Are these okay?

Ellen Shumaker: Yeah. So when you're thinking about candies that come in the package, they stay fresh, or good for a long time. Because with thinking about that, that's more of a quality issue rather than a safety issue.

Tracey Peake: Okay. Well, what about non-traditional treats for fall? Like you go to a fair, and you get cotton candy and you get [00:02:30] candy apples, and you bring those home. Do those keep?

Ellen Shumaker: It depends on the food specifically. And so with your example of cotton candy, if it's sealed, then it'll stay for a little while, maybe up to a couple of weeks. But that's something, if it's open air, then you should be consuming it pretty quickly. And especially, thinking about something like a candy apple. Caramel apples were actually implicated in a listeria outbreak back [00:03:00] in 2015. And so when you think about a caramel apple, we were surprised when this initially happened because apples have pretty low pH and caramel has high sugar.

 So as you just pointed out, caramel should act to prevent bacterial growth. But in something like the caramel apple, when folks inserted the stick into it, that created an interface where bacteria, in this case, listeria, could grow. And they grew [00:03:30] because these apples were stored at room temperature. Now, listeria can grow slowly at refrigerated temperatures, but with something like candy apples, I would recommend eating them quickly or holding them at refrigerated temperatures.

Tracey Peake: Okay. Well, that's good to know. That's kind of scary that you could just inject listeria into your caramel apple via a stick. But okay, good to know. And we know that the virus that causes COVID-19, does not survive long on packaging. So if you're in the grocery store, [00:04:00] you're pretty safe buying stuff, we've established that.

 Is there anything about transmission via packaging we should be aware of? Should we ... this would be hard to do of course. But should we make kids wait before handling candy? Or wipe it down? Or not worry about it too much?

Ellen Shumaker: So the virus that causes COVID is primarily transmitted from person to person. And the data has shown that there's a much [00:04:30] lower risk of contracting the virus as a result of packaging or touching surfaces. And so in the scenario that you just described, it would require the virus to be on the surface of the package. The person would have to touch the package, get the virus on their hands, and then touch their face. Then the virus would have to bind to the correct receptor to cause infection.

 And so in this scenario of trick-or-treating, I think the highest risk of contracting COVID is just being [00:05:00] in contact, close contact with other people.

Tracey Peake: And as a part of Halloween, and just fall celebrations generally ... because we're really rolling into the time when we all gather together and eat. A lot of communities are doing stuff like trunk-or-treating and they might have food trucks or they might have community potlucks.

 What are some general food safety tips for these kinds of gatherings, where everybody brings [00:05:30] their own food?

Ellen Shumaker: With potlucks, there are several things that we try to remind people of. Make sure, especially if it's a potluck that's going on for quite a while, that you're keeping hot foods hot. So something like a slow cooker could be a great strategy for this. Make sure that you're keeping cold foods cold. And if perishable foods are kept out for longer than four hours, you want to make sure that you're discarding them.

 And then, of course, the strategy that we always remind people of is to make sure that you're washing your hands [00:06:00] before you're handling ingredients, before you're eating, yourself.

Tracey Peake: So don't leave your deviled eggs and potato salad out in the sun.

Ellen Shumaker: Exactly.

Tracey Peake: And related to that, so fire pits are a thing this time of year. And I know kids like to make s'mores or maybe cook hot dogs over the fire pits. What are some things to look out for there? Is it possible ... me personally, I'm always kind of icked out by the whole marshmallow on a stick thing. But are there any [00:06:30] legitimate food safety concerns we need to be aware of here?

Ellen Shumaker: With thinking about cooking out on fire pits, I would remind people, again, to make sure you're washing your hands before you're getting the marshmallows out of the package and crafting your s'more. I would also remind people to just make sure that you're keeping foods in the package as long as possible so that you're not dropping them on the ground, letting pets get at them. Making sure that they're not coming into contact with dirt or something that could potentially contaminate them.

Tracey Peake: And finally, this is something I always like to ask researchers about. And if there's a coolest thing you know, or a favorite fun fact ... are there any odd or little known fun facts about candy or fall foods or food safety you'd like to share?

Ellen Shumaker: Yeah. So [00:07:30] I was thinking about this, and I thought I would share this specifically because of Halloween coming around the corner. And so I will start by that this theory has been questioned. So I'm not sure if this is ... this is just a theory, but it's kind of fun. And so basically, there's this suggestion that it was a grain fungus contained in rye bread that might have caused the Salem Witch Trials. And so I'll talk a little bit more about this.

 [00:08:00] There's a fungus that's a type of mycotoxin, and they're toxic chemical substances. And that can be a really serious food safety issue. And if after ingesting a bread that might contain this mycotoxin, that can actually lead to convulsive disorders with violent muscle spasms, vomiting, delusions, hallucinations, a lot of things that sounds a lot like what happened with the Salem Witch Trials. And as I said, we may not ever really know what truly happened there. And [00:08:30] there has been speculation that this might not be the case, but, kind of a fun theory to think about.

Tracey Peake: It is kind of fun to think about. So tell me a little bit about ... what is this mycotoxin?

Ellen Shumaker: This fungus really thrives in swampy wet environments. And so they actually think that where these young women lived, who were accused of being witches, they lived in meadows that were [00:09:00] known for being very swampy. And so they think that that fungus could have been introduced into their rye.

Tracey Peake: Okay. And then they ate the bread and ... is it demonic possession, or just a really bad fungus?

Ellen Shumaker: It's unclear.

Tracey Peake: The world may never know. It is unclear. Well, thank you so much for being here today, Ellen. I really appreciate it.

Ellen Shumaker: Thank you so much for having me.

Tracey Peake: We've been speaking today with Ellen Shumaker, Extension Associate and the Director of Outreach for Safe Plates here at NC state. [00:09:30] This has been Audio Abstract. I'm your host, Tracey Peake. Thank you so much for listening.