

Let's Talk Learning Disabilities

EPISODE 17

Welcome to Let's Talk Learning Disabilities with Laurie Peterson and Abbey Weinstein. Laurie & Abbey spend their days talking about dyslexia, dysgraphia, dyscalculia, and ADHD. They talk to parents of struggling students and adults who have had a lifetime of academic challenges. They want to share those stories, along with their own insights with you. So, *let's talk learning disabilities*.

Laurie: Welcome to episode 17. My name is Laurie

Abbey: And I'm Abbey

Laurie: We're excited. You guys are here today. We are going to talk about a math disability that I feel like has become more and more common. Um, especially over the last couple of years. So I call it dyscalculia.

Abbey: And I call it dyscalculia.

Laurie: And honestly, we're not really sure. Who's right. I'm not sure who, who, who created this or who, um,

Abbey: who coined the term.

Laurie: Yeah. So we're gonna, I think you can say it however you want.

Abbey: Absolutely.

Laurie: We hear all kinds of things when people call in because nobody else knows how to say it either.

Abbey: But it's like tomato or tomato. It doesn't matter how you say it.

Laurie: We know what you mean.

Abbey: Right.

Laurie: Okay. Regardless, it's a math disability. And the first thing we want to talk about is really what is it, which it's a math disability dis, which first of all, it's not related to dyslexia or dysgraphia outside of the fact that it starts with the same three letters. And I think it's important, understand the dis is really just when you look up the definition of that, The prefix. Right. And when you look up the definition of that prefix, it just means 'difficulty with' right? So dyslexia is difficulty with language or with words with reading, dysgraphia is graphia is writing, so difficulty with writing. So. 'Calculia' or 'calcula' difficulty with math. So that's really the only way those three things are related is just the name are related concepts. Exactly. So difficulty. Um, so we're going to kind of run through some of the symptoms. Like what do you see typically at each age? Because the symptoms of somebody in kindergarten. A little bit different than the symptoms of someone in college. Okay. So Abby, what are some of the symptoms, if you're like looking at your preschool kindergarten, first grade student, and you're seeing some struggles, what are some things you should look at? If, if you have some concerns about this?

Abbey: I would say one of the first symptoms or characteristics you might see as difficulty recognizing numbers, difficulty counting. Just counting forward, sequencing counting one to 10, one to 21 to 30, um, difficulty understanding that those numbers are those symbols represent amounts. So being able to count groups of items and actually count each item singularly, like one-to-one correspondence putting your finger on each item, as you say, one number or one digit.

Laurie: And also too, correlating that this group of five. Is the number five just to go together. Yeah, that's right. That's right. What other preschool? Kind of early, early elementary, right?

Abbey: Early elementary. So learning to count is a big one. Recognizing those numbers, being able to do number patterns. So filling in a missing number in

a, in a number pattern, um, also understanding a lot of the basic math language or those linguistic concepts that go with math. Like how many altogether? Or how many less? Learning more than less than larger, smaller, greater understanding. A lot of those concepts also difficulty in those early elementary grades with understanding some of the basic calculation concepts like adding numbers together and subtracting numbers is very difficult.

Laurie: What we see too, is that we have kids that know how to use the tallies or use their fingers. But I don't know that they really understand what they're doing. Right. They know that if they count five on this hand and two on this hand and they keep counting, they get seven, the answer seven, but do they really understand that they're taking these two groups and merging them into one? Or pulling one away from the other. So, being able to match the concept with what's on the paper, right.

Abbey: Or they can use, they can count and add groups of items with manipulatives, like some counting blocks or some counting barrels. But then they have no idea how to transfer that knowledge to paper and pencil tasks. So when they see the number on paper and they see five plus two, they can't transfer that knowledge and understand that it's the same as when they were counting those objects, those two groups together.

Laurie: Right. And again, making those connections. Place value is another one, I think, cause we really start teaching place value, I mean first grade when you really start talking about, and you have a lot of experience with this, cause you did teach first grade, right? So understanding the tens place and that 10 or that 10 ones make up a 10 and there's, so you had given an example of kind of how you taught that...

Abbey: So place value. We actually used to teach it when we were doing calendar concepts, talking about counting the days of school and how each day. We would use a straw and put a straw in a baggie for each day. And once you had a group of five, we created a bundle and that's how we kind of taught tally marks and making tallies. And you'd move that bundle. Once you had two bundles of five and you had 10 straws. Or two bundles, then you would move it to a bag from the ones to a bag that said tens on it. So once you have tens, you move it to this place, right? And then once you had 10 groups of tens, you moved it to them, one hundreds place.

Laurie: But it's so hands-on like, it's just, it's like learning when you don't really realize you're learning.

Abbey: Very hands-on actually, and it's a great way to teach even just basic number concepts. That one item, matches one number. So showing one of them is one or two items goes with the number two. And you say to you, you count to two, you count to three. When you see three items, because that difficulty with counting, um, also can rear its ugly head when you're counting backwards, which when we get into teaching subtraction, we often are trying to teach kids to count backwards. Um, or to count when we're adding, we're counting up or counting forward, which is difficult. For individuals with dyscalculia, but counting backwards is even more difficult. And that's a very important concept that we use when we're doing different math calculations, like adding, subtracting, even when we get into older grades and start doing multiplication.

Laurie: One of the things I've seen with some of our younger kids too, is that when they go to add five plus three, they make tallies for the five and tallies for the three and count every single one. Instead of starting at five, understand, you can start at five and count on three. That's just one of those that they just, they don't get it. So they count them all. And that kind of is always that hint that, okay, there's something conceptually they're not getting here. Right? Right.

Abbey: They also struggle with some visual discrimination between looking at different shapes. They, even young kids in kindergarten and early elementary grades. They often have a problem, even learning to identify basic shapes, um, and then discriminating between the circle and the rectangle and the square and the triangle and knowing, because we teach them about how many sides are on the shape to help them. So you might see individuals that struggle with that. Um, and have a lot of those other symptoms we've struggled with, or that we've mentioned might be, um, dyscalculic.

Laurie: So, okay. So we, so say somebody slips through the elementary, that early elementary, and they've gotten into kind of that fourth, fifth, sixth grade, we're kind of in the middle school, but really all the way then I think through adulthood, the symptoms tend to look pretty similar because they might start at fourth grade. And they never go away.

Abbey: Right. So all of those math concepts all build upon each other and they, they S they S cycle upward. Um, and so if you're struggling with any of those foundational skills, then you do tend to have a lot of difficulties in the upper grades with those skills that have built on to those skills before.

Laurie: Right? Like if you don't understand, really understand the concept of addition then multiplication, which is just repeated addition. That's going to be hard for you, but then along the lines of outside of just those kinds of concepts, some of the things we see are, um, understanding the value of a coin. And being able to count, change, um, make change, but then count coins and add up the values, um, and understand, but that's all place value, right? Because when you get to a hundred pennies and now you've got a dollar, so it kind of see those are connected.

Abbey: I mean, just today I was working with a student and I asked him a question that if you were going to buy something that costs 50 cents. How many quarters would you need to buy it? And he couldn't remember the value of a quarter. And then even once he was told the value of a quarter was 25, he couldn't in his head. No, he can't count by 25's. He can't know that 25 and 25 is 50, which, um, by, you know, fifth grade, most kiddos have learned to count by 2's, 3's, 5's, 10's and 25's.

Laurie: How much do you think. In today's world, right? I mean, you pay for everything with Venmo or with, you know, you never really touch money like we did when we were growing up? Cause we're a little bit older. Um, you know, we learned money, but then we used it. We used all the time. And so it was much more applicable. Now it's a little bit more abstract. So I think it's a really, it's challenging to teach kids money. Same with time. How many places do actually have an analog clock or, you know, a good old fashioned analog clock. Ya know?

Cause we're used to looking at digital thoughts nowadays on their phones or on tablets. Absolutely.

Laurie: So I think, you know, as you've got small kids, it's important to change those clocks over to that. I think it's, it's a, it's a, it's a skill that also then teaches fractions and place value and all of that because so

many seconds make a minute. It's all math. It's not just an old as hell time, but there's so many other math skills underneath there.

Abbey: But time, you know, you talk about difficulty reading the analog clock and individuals with dyscalculia. They do struggle with time concepts. So not just reading the answers. Clock and knowing, telling time to the hour telling time to the quarter hour, half hour, they struggle with time conception really, um, or their perception of time is off. So they struggle with understanding. When we say something's going to happen in five minutes versus five hours, they can't grasp the concept of five minutes, being something very short and happening really soon and quickly versus five hours being a very long time. So they do struggle with that conception of time. Um, what about their symptoms?

Laurie: I was going to say like left and right, which is a common characteristic with dyslexia. Sure, which is probably a common characteristic with other things as well, but definitely understanding the difference we left and right. Um, again, something we, we learned early on and then I think it just becomes an assumption that kids know. And so, so many times kids don't even stop to ask, you know, and I know we've had kids that you watch them do the L's with their fingers and try to figure out what, which way did they go in kind of thing. Um, but I think that's one that, that gets overlooked a little bit, but.

Abbey: It really does, and as adults, they struggle with directions like north, south, east west, or, you know, you can't tell them, go north on this road and then go east on this road. They really do struggle with directions.

Laurie: Right, which leads to like being able to read a map, right? Read a chart, read a graph. That was also something they struggle with as well as just that mental map. Being able to work that math out in their head without seeing it on paper. So, you know, and as you get into adulthood, we're expected to be able to do more of that. Right. We will just assume you can do some of that, figure this stuff in your head.

Abbey: And really, individuals with dyscalculia also struggle with memorizing those mass facts. So it doesn't come naturally and easily for them to look at, you know, five and six and know that it's 11 or to look at three and two and

know that it's five. So then that also. Causes difficulty memorizing multiplication facts, which we use into adulthood. We're oftentimes needing to be able to know how to multiply certain numbers. And so multiple or memorizing math facts is a huge symptom of dyscalculia that affects all ages.

Laurie: Yeah. And as you get older and you're working an algebra problem, that you may completely understand all the steps, but if it takes you longer to find each of those individual, you know, calculations. You're going to get lost because you're having to stop and think about and count on your fingers. And when really we're working on some much bigger concepts.

Abbey: Absolutely, but same with like long division. I see a lot of students struggle with long division. They don't attempt it. They skip over it or they mess up. With the very first step, they know the steps, they remember the procedures to perform, but they're struggling with those basic operations.

Laurie: What is 10 divided by two right now?

Abbey: Exactly. And they don't know the multiplication aspect of it, and they don't know the repeated edition version. And that's what a lot of us do. If you don't have something memorized, you use repeated addition, but if you struggle. That repeated addition, then you do struggle with all those higher level problems.

Laurie: I feel like we've seen some kids that have tried to use the repeated addition on like a nine times seven, but then their math, they can't add their, their addition gets off. So they have the right idea. But because again, back to the whole difficulty with those math and difficulty with the concepts they end up with with the wrong answer, because they did nine plus nine plus nine equals nine and somewhere along the way they got off of their counting. So it's like good try, like, okay, good. That at least I know they understand the concept. Yeah. But, so what are some things outside of like not math related?

Abbey: So there are some, well, before we get into math, other math related symptoms, I did want to mention math anxiety because that really covers all ages individuals with dyscalculia. They have a high level of math anxiety, and so. They're scared of math. They're stressed out about math. They're very

anxious. So that almost a stifling, when you do try to take the time to slow down and teach a strategy like using repeated addition or counting on a number line or using manipulatives to count, there is a high level of math anxiety. And so they do tend to shut down when they're confronted with math, which of course. It affects them throughout their whole schooling career, all of their performance.

Laurie: If every time you see math, you think, oh, I suck at this, you're probably going to suck at it. I mean, it's hard to overcome that feeling and you've, you've had the anxiety you've performed poorly. So now every time, even though it might be something you completely can do some of it's math in front of you, you shut down and we see that all the time too, where it's like, I know they can do this. Yes. But it doesn't matter because they've already made up their mind that they can't do it. So trying to get them over that hump, that's huge.

Abbey: It is huge. And, and doing it independently, being confronted with some independent work is different than if you say, try this again, look at this, you know, this is telling you to do this and then do this. And they're like, oh, okay. If you break it down, into steps, and you give them some one-on-one redirection you're right. They oftentimes can do some of those basic calculations, but the anxiety is stifling and it affects them. But some other symptoms that are not necessarily strictly math related or related to math curriculum, remembering numbers, things that have numbers like phone numbers, remembering dates, remembering your address, areas codes, with phone numbers, zip codes, um, scores of games. Um, that's those are confusing. Also directions we mentioned confusing left from, right. That is something that can affect you. That is not necessarily math related,

Laurie: Just trying to get to someone's house. And Siri's telling you to turn left, turn left, which way is left, right.

Abbey: Even now with the. Technology. And we all use Google maps and we don't have to be able to read a map or interpret a map or even know a compass, but still Google maps or Siri is going to tell you to turn left and which way that is, you know, Preston road. And you have to know which way is left when you're headed in a direction.

Laurie: What about like, like motor sequences, like learning. Dance, right? Like that's got some math underneath it, but it's not really a math thing, but I think people with, with dyscalculia, they struggle with that stuff.

Abbey: They do, remembering math steps, motor sequences, those yoga flow types of things, where you have to remember each step or, you know, a lot of karate and TaeKwonDo or multi-steps where you have to remember sequences of steps and hand movements, and that is difficult.

Laurie: So what are some other reasons that somebody might, I mean, we're saying that, you know, all of these are signs and symptoms of discalcula, but I mean, what are some other things that could be related to if it's not that?

Abbey: Well, I think. Just because you're struggling in math does not necessarily mean that you have dyscalculia. I think that again, if you have there's any reason why you have gaps in your foundational skills, you're going to struggle in future math classes and with future math concepts. So if you didn't pay a lot of attention when they were teaching addition, when you were in first grade, Or kindergarten or second grade, or you were, you were lacking attention and focus and concentration, or you were missing a lot of school at that time because you had a sickness or an illness or a family member that was sick, or you moved around to a lot of different schools and the schools all use the curriculums that you are used to teach math now are very complicated and they vary from district to district and especially state to state. So if you've moved around a lot and been in a lot of different schools, then you have some confusion and some gaps in your skills. And like we said, those foundational skills are used throughout all levels of math.

Laurie: I always explained math as being like a 14 story building. Right. And so we have. Students that come to us or adults that they're, you know, they're struggling with that 12th or 13th story. And so they keep getting tutoring, they keep getting help and they keep, you know, they're just barely getting by when really the issue is at the first or second floor. If you've got a foundational issue in your 14, 15 story building, you know, doing a little bit of extra work on the 14th floor is going to put a bandaid on it. It's going to help you get through, but it's not addressing where the issue is. The issue is way down. And so you've got to go back. And so I can't tell you how many times we have that conversation and, you know, I'll tell students, like I realized

that going back and doing, you know, first, second grade math sounds ridiculous right now, but if we can get you to understand those concepts, the difference that it will make moving forward for you, you know, things will start to click. And so sometimes it's about taking. That concept in algebra or geometry and tracing, it's tracing it back all the way to where did this start and how did we get here and making sure that all of those back skills are strong and that you understand them.

Abbey: That's such a good analogy with the building. Because then your building is not stable, right?

Laurie: You're never going to put the band-aids on it and all the patchwork you want, but it's still not going to be strong until you fix it.

Abbey: And oftentimes in school, you know, we're, they're constantly teaching the grade level curriculum. And especially in public schools, the kids have to be tested using those state tests. And it's testing them on those essential knowledge and skills that the state is requiring them to master. So a lot of times the intervention, when a student is struggling is reteaching those grade levels, skills and the curriculum concept. But like you said, if you, they need to really be tracing it back to where those gaps are, where they started from. And so that's why remediation and, and getting that tutoring. Yeah. Fill in those gaps and reteach those foundational skills. Those lower level skills is so crucial. Math is such so many. It's, it's really all about a lot of patterns. And I feel like my example that I always use is, you know, a squared plus B squared equals C squared, and I made up understand what any of that means, but if you give me enough problems, I can repeat that pattern and I could probably get a hundred on the homework, but when it shows up again, two weeks on the test, I don't remember that, you know, but if I understood why a squared plus B squared equals C squared, then everytime it shows up I can do it. And so that's what we really talk about is, is going back by filling in those gaps. You're going to start to understand the why's and then you won't have to cram for a math test. It will just make sense.

Abbey: Just like fractions. We see just, uh, Numerous amounts of visuals that struggle with fractions, kids and adults alike struggle tremendously with fractions. But I think part of it is that they never had really good instruction in the principles of fractions, the underlying concept behind it.

Before you can be taught to add and subtract a fraction, you need to understand what it is.

Laurie: And how it relates to decimals and percentages because they're all related. So much sense when you understand it. I had to go back and teach. Um, what am I. In the past was I taught a couple of years of middle school math, and it was really the best thing I ever did because I never really was a fan of math until I did that. And once all that stuff started to make sense, I'm like, oh, this is so easy. Like, why was this so hard?

Abbey: Because you had to teach it, you had to understand it in a way. Yeah, well enough to be able to teach it. And I unfortunately only taught really first grade. So I like to say, um, I mastered the first grade level math and maybe second and third..

Laurie: But you can build on it

Abbey: And I can build on it. I do have a good foundation, but there's technology now. Also, we all use calculators and we oftentimes don't in our real world careers and, and just in real world everyday life, we're not asked to do algebra. We're not asked to do long division. We're not asked to add and subtract fractions.

Laurie: But here's what I think is super important for everybody

Abbey: Unless baker or chef, you do use a lot of fractions.

Laurie: You do, yes. What I think is so important understand about math is that, you know, my attitude when I was in high school was, I'm never going to use this. This is stupid. I'm never going to use this and you know what you're right. But I, but what I, how I explain it to kids now, because of course in my old age, I see, I have the wisdom that I didn't have when I was 16. Going, you know, so like, okay, let's just say you're a, um, I was a swimmer, so let's just pretend like I'm a swimmer. I go to the gym to work out. And when I go to the gym and workout, I do leg presses and I do barbell curls and I do bench presses, but I don't ever use those movements, out in the real world, I don't walk around bench pressing anything. And when I get in the pool to swim,

I'm not curling my legs, I'm swimming, but that workout made all of those muscles stronger. So I could be a better swimmer. Math algebra I feel like is, is where your brain is your brain gym. It's where you go to stretch your brain and build those muscles so that when you go to a history or English or whatever, whatever class you like. Your, your brain is had that workout. So if you kind of reframe how you look at those classes, that yes, you're outside of being a math teacher, you're never going to use a lot of those formulas, but if you look at it as this is just a workout for my brain, like this is going to make me better at everything else that I do. Um, it helps. Still, I don't really like to work out, so there's that, but.

Abbey: But it truly is a workout for your brain. You have so many, so many different problem solving skills that you don't use in many other areas and that you do have to use in math. So I think it does probably. Yeah. Really strengthen those muscles inside your brain processes.

Laurie: Okay. So how do we help these kids that are struggling or adults? How do we help them kind of get over this hump of the math anxiety and hating math, and I'm terrible at math and I don't have the rights. All right.

Abbey: Well, I think, you know, like we said, working on really filling in those gaps and reteaching a lot of foundational skills. There are different tutors that specialize in math. There are, believe it or not people out there that love math. Um, I know people that mastered or majored in math, in college and yeah. They love math. There's a lot of really interesting people out there that love math and that they so going to a good, well knowledgeable trained math tutor, or even, um, a great program that assesses, individually assesses where the gaps are. For example, like Sylvan learning center. They do a really good job of assessing where your skills are, what skills you have, what skills you don't have, and then teaching you to that level. Exactly where you are, no matter how old you are, of course, they're going to make it age appropriate. Right? They're not going to teach you using counting bears. How to count if you're. 10th grade, or you're 15 years old. They're going to try to make it more age appropriate, but they're going to assess where your, where your gaps are and fill in those gaps and reteach those foundational skills. And there are games that you can do online, um, to practice, to reinforce a lot of those skills. Also just basically memorize your basic facts.

Laurie: That's right. Memorizing basic facts. Um, we talk a lot about touch, match math. I love touch math. It is something I used when I used to teach. Can you explain what touch math is?

Abbey: So touch math and, and touch math. If you want to research it on your own, I would just Google touch math curriculum. There is research behind it and essentially what it is giving there are dots along each number. Each number has that many dots on the number. So the number one has one dot at the top of the number one, the number two has two dots on it. The number three has three dots and so on and so forth. And what you do is you learn how to count the dots, which kind of goes back to learning that one-to-one correspondence, understanding that this number represents this many things this many objects, but what's cool about it is once you learn how many dots are on each number, where they are. You really can start to memorize those dots. And then even when the dots aren't present, you see the number three and your brain automatically counts three dots at three spots.

Laurie: You can see the kids, like do their pencil down 1, 2, 3. Yeah. For your real visual learners. This is an excellent way to learn some of those. And you know, the great thing about it is it works for multiplication too, because you're just skip counting by threes, right? So 3, 6, 9 on the three dots.

Abbey: And for all those individuals that learn best in a multi-sensory format, touch math is very multi-sensory because you're saying it, you're seeing it, you're touching it. So you're involving multiple senses. So it increases the chances, or the likelihood of it sticking in your memory, going from that working memory, transferring to your long-term memory. And eventually a lot of people who have been taught using touch math, they now mentally in their brain are working through the dots that are on each number when they're doing addition, subtraction, multiplication. So it's a great curriculum that can be. To, uh, really teach a lot of good math skills.

Laurie: I always felt like, with my kids that couldn't memorize their multiplication facts that just giving them a multiplication chart, that if you went to that chart enough times to look up six times seven and found the seven and found the six and found where they meet that eventually you'd be like, oh

yeah, that's already know this one. Right. Like eventually it's going to just stick. And I feel like with some of them, it did, you know?

Abbey: With a lot of students, it does. But if you have a true, specific learning disability in math, like dyscalculia, you may never memorize those, those math facts, those multiplication facts. So. You're going to struggle with those multi-step problems like multiplication, division, algebra, subtracting, and adding fractions, all those high level multi-step processes that you have to do in higher level math classes. So. What I say, and what I oftentimes recommend is give them a calculator.

Laurie: Absolutely

Abbey: Give them that multiplication chart to use as it's appropriate, as they get older, it might be a little stigmatizing to have variation chart on your tape, on your desk, whatever. So give them a calculator and the calculator is not a crutch everybody's using the easy way out, it is very much a real world application and everyone's using them once you get to ninth grade, everyone's using them. But even in, you know, fifth grade, fourth grade, fifth grade, sixth grade, seventh, middle school, you know, give them the calculator. And then it frees up that mental energy for them to really focus on. Okay. Now I got to focus on the steps and the processes and procedures to solving these multi-step problems instead of worrying about each basic calculation.

Laurie: Because they see those numbers and they just panicked. But if they have that calculator and someone's taking the time to show them how to use it, because calculators today make, they're just very complicated. But as long as they understood how to use it, they have to understand can be a huge stress relief.

Abbey: And they can start with a simple calculator. They don't have to be using the scientific calculators or even you're on your phone. If you have a smartphone, your calculator is a simple calculator. If you're looking for vertically, but once you turn it horizontally turns into more of a scientific calculator, but it is a really good support or accommodation that can be implemented. And, and I do hear that a lot from parents. They're scared to have their students start using a calculator because they feel like they're

never then going to learn that skill. But you got to weigh the pros and you got to get through algebra.

Laurie: They have to get through algebra. Exactly. um, where something that we had talked about at one point when we were talking about all of this, and those are huge in math, and I feel like sometimes we don't take advantage of them, right. Remembering those acronyms and how to use them. Right. Um, because they do come in super handy when you, because those are not in your calculator. So knowing that when you have a multi-step problem, the order of operations, right. Um, and he is. What's the acronym for that one for your order of operations.

Abbey: So I've always said, PEMDAS, P E M D A S. That stands for, or please excuse my dear aunt Sally. And that's how I learned the order of operations. The P is for parentheses, the E is for exponents. The M is for multiplying. Then the D is for dividing. The A is for addition, the S is for subtraction. It tells you the order of operations.

Laurie: When there's more than one to do, right?

Abbey: But, learning acronyms. You can even learn acronyms for, for directions, for those people that struggle with North, East, South, West. Um, I personally learned never eat soggy waffles and I still to this day, sometimes if I need, if I'm going north and I have to think about which way is east or which way is west, I'll say never eat, Okay. Yeah. Eat, east is this way. So learning acronyms is, uh, is a great way to remember, to remember. Different steps and procedures. And there's a lot out there. If you're curious about what are some other acronyms to help your child learn math steps, we'll post some on our show notes, but also you can always ask your teacher, your child's math teacher, what are some acronyms you're teaching them to help remember? That we can help reinforce at home, cause using that same language is important.

Laurie: Same with putting things. So like multiplication rap, that was, that was how my kids learned their multiplication facts. Did the multiplication rap, which was fun. I enjoyed that. It was fun. It was fun for me too, which isn't always fun for the parents.

Abbey: So, or rhythm to something. It helps. It makes it more engaging and exciting and novel first and foremost, but it also helps their memory. They can memorize it more easily.

Laurie: It's a multi-sensory piece.

Abbey: It is definitely, um, I learned states and capitals to the beat of a song and it was like a rap song. The Spanish class. I had to learn this, the capitals of all the north or the south American countries, the central American countries to memorize something like that. That was not meaningful to me at the time. It was very hard. But once I had just learned a song, it was, and it had a good beat and I can rap it. I was able to memorize it and still to this day, I can remember it.

Laurie: That's crazy.

Abbey: It's useless knowledge, but yeah

Laurie: But you're fun at a party, right? I'm taking you to trivia.

Abbey: That's right. So putting things to songs and teaching them to memorize songs.

Laurie: And I think, just helping the kids learn strategies, like drawing the tallies, drawing pictures, using their fingers and letting kids know it's okay. Right. No one is judging, but those are the strategies and it's okay to define the one that works best for you because. You know, you're, you're going to try several until you find that one that really clicks. That really makes sense. Sometimes it's using a number line. Sometimes it's using touch math, but trying to find those strategies and letting the individual kind of work theirs, work themselves through different strategies until they find that one. They're like, okay, this makes sense to me.

Abbey: Right, and drawing pictures. Everyone uses those strategies.

Laurie: We always talk about the prognosis is, is a discount. Coolio does calculus. It's like, it's going to go away one day?

Abbey: You know, most likely it is not going to go. You, I think that you can build a lot of skills and you can teach a lot of compensatory techniques and coping strategies, and you can see a lot of improvement and a reduction in that math anxiety, but dyscalculia does not go away. So all, a lot of those symptoms that we mentioned, an individual is going to struggle lifelong with a lot of those symptoms.

Laurie: They've got to learn how to manage that anxiety then, right. Because that's not, if it's not going away, You got to figure out how to manage the anxiety.

Abbey: Right, you have to take math throughout college, high school, college.

Laurie: Well and, you don't want to be like on a date when the bill comes and you've got to figure out the tip, then all of a sudden you have this whole anxiety attack. Right. You've got to figure out how to okay. Take a deep breath. I have a strategy for that, you know, and know that, um, this is not the end of the world and we gotta be there ways to work through that and figure it out. So I think the math anxiety is the one that. Takes most adults down, right? That's where they just kind of have a meltdown. Like I can't do math. And then they think about going back to school or having to, to further their degree and the thought of math shuts them down, completely.

Abbey: Or some people in their job, you know, they have, there are some math operations that they have to do as part of their job responsibilities and duties. And they're embarrassed. Anxious about struggling with math. So, you know, be okay with using different technology pieces like calculators or math applications, even talking about figuring a tip. There's an app that you can put on your smartphone that's like a tip calculator and I've seen people pull it out and use it because not everyone understands money concept and then desperate percentages. Absolutely. Just me. I know to move the decimal and that's how I know how to figure out percentages. And then I double and whatnot, but those are abstract concepts for individuals with dyscalculia. So they really do just learn coping strategies and they can benefit from a lot of intensive remediation and filling in those gaps and then learning strategies.

Laurie: That's awesome. Well, this has been good. I'm glad we had this talk. I feel like we do get a lot of questions about dyscalculia and it's very

misunderstood. And again, it kinda, sometimes people think it's the reversing numbers, right? Um, not, you know, transcribing numbers and things like that.

Abbey: And it's not related to dyslexia at all. Not at all. Only thing it has in common is the DYS at the beginning. That's fix.

Laurie: Yeah. If you guys have any other questions about dyscalculia and want to, uh, reach out, you can reach us at letstalklearningdisabilities@gmail.com. If you have some suggestions of things you'd like to hear I'm on the. Don't hesitate to let us know. We'd be happy to cover any other topics. Um, thank you guys for joining us today, and we're going to add some information to the show notes, some links to some information. Um, so please visit those. If you would like to learn more about dyscalculia. Alright, thanks Abbey.

Abbey: Thank you. You guys have a great day.

Laurie: Take care.

Abbey: Bye-bye

Thank you so much for joining us today. In our show notes you can find information about today's talk, as well as links to the resources and other episodes. If you have questions about today's talk, have ideas for future episodes or just want to stay connected, you can contact us through Diagnostic Learning Services on Facebook, Twitter, LinkedIn and Instagram. So, Let's Keep Talking Learning Disabilities. This podcast is sponsored by E Diagnostic Learning. You can find more information at www.ediagnosticlearning.com.

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