

Finding the Words...

by Marge Blanc, M.A., CCC-SLP

When It's Hard to Find Your Voice! Helping Your Child with Dyspraxia, Part 1

A little over a year ago, we presented a two-part series entitled, "When Speech Gets Stuck," a look at supporting speech development in kids with ASD who are considered "non-verbal." In this column, and the next, we return to this important topic, and address some of the questions readers posed about their own children whose speech was "stuck." We hope that if your child is one of these, the thoughts here will help!

Let's briefly clarify who we are talking about: kids with ASD who don't babble on their own, or "coo" with voice inflection. They might cry or scream, and maybe even laugh, but, otherwise, we usually describe them as "silent." In the past, these kids made up the 40% on the spectrum who remained essentially non-verbal, or minimally verbal, all their lives. We usually thought this was because they didn't seem to care about much, and that they didn't get involved or initiate social interaction because they weren't interested. We sometimes called them "low-functioning," and even suspected they might be challenged cognitively.

Fortunately, we now know that these kids are not disinterested or lacking intelligent, intentional thought! We know that they are not "in their own world" at all, but, rather, are significantly affected by dyspraxia, a severe motor disorder that affects speaking...and all the other movement systems in the body! And, fortunately, we see that, with the right support... and plenty of time...these kids, our kids, can learn to move their muscles with intention... and learn to talk!

Before you continue this column, please refer back to the original article series. If you have your Digests from September-October and November-December 2004, please dig them out, and refresh your memory about the topic and the terms. If you don't have the articles, you can download them from the author's website, www.communicationdevelopmentcenter.com.

When you're reviewing, please keep these things in mind:

1 Speech is movement. It is "motor," or muscle, behavior. It is not language. As a motor behavior, it is very complex. It involves: (a) breathing, specifically exhalation; (b) voice, or "vocal" production at the level of the larynx, or "voice box"; and, (c) as it develops, coordination with sequenced movement of the jaw, tongue, and lips ("articulation").

2. Dyspraxia is a disorder of muscle coordination that affects unique motor “plans,” not automatic muscle sequences. When a child screams out of distress, this is automatic. If he tries to repeat this vocalization, on purpose, it is a “plan.” The latter would be difficult, if not impossible, for a child with severe dyspraxia.

3. The eight-level hierarchy of supports for dyspraxia address the foundations for breathing, voice, and articulated speech from the bottom up, and presents the highly-successful protocol we use in our clinic every day!

Now, with these points in mind, please read the following story of “Jake,” a bright little button of a toddler, and see if he reminds you of anyone you know! If so, you’ll see, step-by-step, how the hierarchy that was applied to a real child over the course of a year might fit for your own child!

At age two and a half, Jake is now, indisputably, a talker. No one denies that he says, “No no no!” as clear as day. No one, in fact, doubts him when he yells, “Mommy... Mommy!” as plaintively as any other child. He cannot, however, say “Daddy” or “Christian,” the names of the others in his family, and he cannot say his own name. But Jake is a talker.

A year ago, Jake was a talker too, but no one really knew it. My vigilant ears pricked up, however, the first day I met him, as he nearly spat out a mono-toned, “Aaaa.” I remember asking his mom what else Jake might say and she replied, “Not much.” Mostly, Jake was silent, and it was just this occasional raw sound that suggested to me that his speech was “stuck” somewhere, probably somewhere beneath the level of his mouth.

Someone without hypervigilant ears could easily miss “Jake the communicator” altogether! Jake didn’t really look interested in communicating at all. He fit the profile described at the beginning of this column: arms at his side, minimal eye contact, walking around seemingly-aimlessly, avoiding touch, occasionally screaming, and throwing himself on the floor and tantruming.

You’ll notice that I said Jake screamed, however, and I was glad to learn that. Screaming is a vocal event (very vocal, in fact!), and I was relieved to hear that Jake could “find” his voice at least to scream! Mostly, Jake was silent however, and he seemed content to push his truck back and forth as he lay on his side, not communicating distress - or anything else - at all.

At age one and a half, Jake could not initiate anything with his voice, unless he was so distressed that he screamed. He did not plan to scream, but he could “find” his voice when it really mattered...at least when he felt so emotional that it came out automatically. And, fortunately for his family, he could also turn off his voice when he was satisfied again!

Jake could also say, “Uh uh” once in awhile, when he was bumping along behind his push car. This was automatic, too, but it was a nice contrast to distressed screaming. I was acutely aware that, even though he was severely dyspraxic, Jake was one of the lucky ones. Usually pain-free, Jake was happy enough to have a “happy” sound early in his life. His parents didn’t have to go through the difficult search to find comfort for their child. Jake was already there. He could express it at an automatic level, and we had something to go on to build more of the same!

Hierarchy of Practical Supports for Dyspraxia in Children with ASD

Level 1 - Deep breathing/exhalation

Level 2 - Voice/vocal production

Level 3 – Intonation

Level 4 - Starting, maintaining, and stopping sound

Level 5 - Vowel sounds

Level 6 - Consonant sound development

Level 7 - Sequencing sounds

Level 8 - Purposeful speaking

As we move along in Jake’s story, let’s refer back to the eight levels of support from “When Speech Gets Stuck” (see sidebar). Jake clearly had a little success at Level 2, when he was bumping along behind his push car. The sound he made was infrequent, however, and could not be continued for long. It appeared that Level 1 was not really well-supported, and that this was the level where we needed to focus in order to get speech “unstuck” at Level 2.

In our play together, we started at Level 1. To promote deep breathing, I played with Jake in a high-energy



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way he enjoyed: running around the basement together and landing in the ball pit. I was rewarded with the extra bonus of laughter! Then we started running down the hill in front of his house, bumping behind the push car. We huffed and puffed, and, again, laughed at the involuntary sounds we made. Later, after I got to know Jake's sensory system, and learned what was OK, I played invisible "drums" on his back. For his part, Jake began extending his exhalation to make it funny. His laughter turned into a continuous, "Uh uh uh uh uh uh," a string of sound that he could keep going until he took in another breath. Jake was a little boy at the time, so we only kept up this high-energy play for brief spurts at a time, only as long as it was fun!

As you can see, the success at Level 1 was enough to naturally lead to success at Level 2, even though we weren't targeting Level 2 (voice production)! And that's our first take-home lesson: Start at the level below the one you're targeting! Remember, we're not "working on" our targets; we're supporting them!

Once Jake had some success at creating his own voice, he laughed more often...and we laughed with (and at!) each other. The value of logging in laughing time cannot be overestimated! It gives a child a feeling of power, and allows a child to get used to the sound of his own happy voice! And along with laughter and shared hilarity, came eye contact. This just added to the fun, as, invariably, I did something funny whenever Jake looked at me. The laughter continued!

I urged Jake's parents to simply continue what we were doing, until Jake's voice began to show some variation in tone, and he could maintain it for longer periods, not just saying, "Uh uh uh" in fits and bursts, but "Uhhh" for an entire second. Try this yourself, and you'll see that a second is a pretty long time. If we can fit the entirety of "one, one thousand" in a second, we can clearly say "Uuuuhhh" with rising tone, or falling tone. Again, try these two intonational contours, and see if you aren't asking yourself an intonational question...and then answering it! This is Level 3!

Level 3 support is the stuff of conversation, believe it or not! If you have a teenager in your family, this wordless Q/A probably sounds frighteningly familiar! Just for fun, ask yourself, "What's for dinner?" entirely with intonation, and then answer, "I don't know" in the same way. What your child has done at Level 3 is expand the "duration" of voicing, to become long enough for intonation to be possible! Jake no longer sounded "monotone." He could use "intonational utterances," or comments he "uttered" with intonational contours!

Once Jake could use intonation, we started to play with it as we ran around the basement, or I drummed his back. Because Jake wanted to play the game again and again, Level 4 starting and stopping sound became well-practiced. Maintaining sound, while repeating the same syllable again and again, happened during back-drumming, and Jake was eventually ready for Level 5.

If it seems strange that I am talking about Jake doing things to achieve a purpose, and I have already said we are working at the automatic level, I want to explain the discrepancy. When kids are little, they are not thinking about their thinking (metacognition) or thinking about their talking (metalinguistics). It is a blissfully spontaneous time for kids who are 2-5 years old. By the time kids are 6-8, however, they have become "meta" in their thinking, and it's a lot harder to "trick" them into back-drumming games, etc. We will have more to say about older kids in our next column. But for now, let's watch Jake again.

Within the context of one-minute-at-a-time talking, Jake's vowels developed variety. "Uh," the universal "grunt" was clearly easiest, but when Jake started laughing, his jaw dropped open, and "Ah" was possible. Jake's parents followed their OT's feeding recommendations carefully, and as Jake got used to more and more food textures, his chewing and tongue control allowed his mouth to develop more and more shapes. With these shapes came more vowel sounds, because vowels are nothing more than the sound that comes out when the oral cavity assumes different shapes!

The magic of Level 5 is that kids suddenly sound like they're talking! No longer are "grunts" and screams the order of the day, but kids sound like they are engaged in little mini-conversations that seem like English spoken in the other room! Often mistakenly called "jargon," this speech will actually turn out to be real words, when viewed in retrospect. So, take-

home lesson #2 is, “Talk to your child like he is saying real words.” Not only will you encourage him in the most powerful way you can, but, when his speech becomes clearer, you will find out that you were right!

Level 6 is a big one, and not to be attempted without some forethought. Truth be known, if you just support at Level 5 longer, some Level 6 consonants will develop naturally. This is because, like vowels, consonants are the by-products of differences in mouth shape. If you close your mouth and vocalize, you will make the sighing “mmm” sound. Please stop now and see what I mean. If you continue your “mmm” a little longer, and open your mouth, you’ll find yourself saying “mmmah.” And if you close your mouth again, you’ll say, “mmmahmmm,” whether you meant to or not! It is interesting that this simple sequence becomes a word, unintentional at first, interpreted with meaning, and, eventually, becoming the intentional word, “Mom!”

Please note that everything we have described so far has been fun and appropriate physical support. Notice that nothing has been about *trying* to talk! Support through all the levels thus far is not about asking kids to try! Because dyspraxia is a disorder of **trying**, of purposeful, volitional talking, we can’t help our kids get to their best outcomes by asking them to try! It absolutely makes it worse! Instead, we have to give our kids years of talking for fun, involuntarily taking big breaths, involuntarily laughing, involuntarily making sound, before we can help them discover an awareness of sound-making, and slowly help them discover they can repeat some of those sounds...almost on purpose! This is take-home lesson #3...the most important in this column...it is a slow, gentle process, filled with fun, interaction, and physical activity!

Our next column will continue Jake’s story, as he ventures into levels 6, 7, and 8. But now, it is a good time to “pause” his story, and suggest some homework assignments for you, your child’s best teacher!

Level 1 Questions and Assignments

Why is deep breathing necessary for speech? Check it out for yourself: exhale **completely**; then when you’re completely out of air, try to talk. What happens?

What part(s) of your own body move when you are relaxed and breathing deeply? Do you always breathe that way? When do you, and when do you not? If breathing is really deep and relaxed, the belly moves out with inhalation. It is making room for the diaphragm (a muscle) to lower. You may notice that the lungs expand next. This is good...a complete deep breath.

At times your shoulders may rise instead of your belly and rib cage expanding. This is called “clavicular” breathing, and

happens when we try to “catch” a quick breath, or when we’re under stress.

When does your child use relaxed, deep diaphragmatic breathing? Check out the rising and falling of his belly when he’s asleep to feel what his own deep breathing is like. It may not be happening at any other time, and if that’s the case, please search out an OT/PT evaluation to see how to address “core muscle” challenges. Yes, these affect speech development...at “the core!”

Level 2 Questions and Assignments

How do you create your own voice? Check out where your own body vibrates when you hum. What happens when you try to hum after you have let all your air out? You can then see how Level 2 cannot happen without Level 1.

When does your child have voicing? Crying? Screaming? Laughing? If there is no pleasurable time of voicing, can you create some? If not, and your child sincerely seems to be enjoying himself, is he breathing deeply enough to support his voice? If not, the energy level of activity probably needs to increase. If he cannot tolerate higher energy, please search out an OT/PT eval to find out why. Sensory issues are probably involved. If kids feel insecure in space, or having their heads out of alignment with their bodies, or if they can’t tolerate touch or other sensations, this high energy activity may be simply terrifying.

Level 3 Questions and Assignments

How long can you maintain voice yourself? Time yourself, and see. Now, notice children around you. How long can they maintain voice on one breath? Look at your child with dyspraxia. How long can he maintain his voice? Why? Go back and check out Level 1 and 2 for your answer.

If he can maintain his voice for one second or longer, do you see any variation in intonation? Notice this throughout the day, and jot down when you hear variation. If you heard it at least once, under pleasurable conditions, you may be ready for Level 3. If you are hearing lots of laughing and giggling, that’s even better!

Level 4 Questions and Assignments

Think back on the last day with your child. Did you get to exchange laughs, giggles, shouts, or anything else vocally? If so, you “took turns” with your voices; you took “play conversation” turns!

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So now, if your child can stop and start his voice (no, it's not really "on purpose" yet...he just "can"), and he can maintain voice long enough to use intonation, you and your child can take turns throughout all kinds of playful exchanges. Amazingly, your child is learning the give and take nature of conversation now, all without a single, understandable "word!"

Level 5 Questions and Assignments

Notice how you make vowel sounds yourself. Say the long vowel sounds slowly: A, E, I, O, U. Now do it again, in this order: E, A, I, O, U and feel the subtle shifts in your oral cavity. Notice how you made these shifts. Did you drop your jaw, without moving the top of your face?

Now see what your child's mouth looks like when he makes sound. If his jaw opens without his head tipping back, this is good, and suggests his face is ready for vowels. If not, his jaw is not really "differentiated" from his head, and it's time to look at body support lower down... core muscles, shoulder girdle, neck. Check with your OT/PT.

But even if he seems ready, you will want to carefully look at the underlying foundational levels to make sure he is really ready! Remember: each level prepares the child for the next!

Whew! Dear reader, if you are exhausted, don't worry. You should be, after reading and truly digesting all of this. Put this column away, and don't look at it again for another week. You have time! Your child has many, many glorious years of development potential ahead of him, and you do not want to try to apply any of these ideas before you can think of how to do it with joy and fun. Go rest and ponder... We'll be here when you return!



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