

WEBVTT Kind: captions Language: en

00:00:00.331 --> 00:00:02.748 [♪♪♪]

00:00:05.150 --> 00:00:08.400 - Children with autism vary from one another

00:00:08.400 --> 00:00:11.250 and that's what creates this amazing spectrum

00:00:11.250 --> 00:00:14.903 that we often are puzzled about and try to understand.

00:00:15.800 --> 00:00:17.860 - Every family has a different story.

00:00:17.860 --> 00:00:20.595 Families are coming to us more often than not

00:00:20.600 --> 00:00:23.600 with a concern about their child's development.

00:00:24.060 --> 00:00:28.200 Many of them may have concerns specific for autism,

00:00:28.200 --> 00:00:30.720 but many of them do not, so we really try

00:00:30.720 --> 00:00:32.160 to meet the families where they are.

00:00:39.660 --> 00:00:43.790 - One of the big breakthroughs in the past several years

00:00:43.790 --> 00:00:45.730 has been the fact that now

00:00:45.730 --> 00:00:47.740 we can diagnose autism very early.

00:00:47.740 --> 00:00:50.630 We can diagnose autism early in the second year of life.

00:00:50.630 --> 00:00:52.540 - [Dr. Powell] The concerns that parents are raising

00:00:52.550 --> 00:00:55.440 at 18 or 24 months are actually skills

00:00:55.440 --> 00:00:57.530 that we would expect a child to have

00:00:57.530 --> 00:00:58.860 by their first birthday.

00:00:59.820 --> 00:01:02.280 - [Dr. Chawarska] At this point, we don't have a biological marker

00:01:02.290 --> 00:01:06.020 for autism so we cannot run a blood test or a brain screen.

00:01:06.020 --> 00:01:09.450 So in order to diagnose a child, we need to conduct

00:01:09.450 --> 00:01:10.970 a behavioral assessment.

00:01:10.970 --> 00:01:13.670 - A toddler who's presenting in our research program

00:01:13.670 --> 00:01:16.860 or our clinic, it's almost like being in an environment

00:01:16.860 --> 00:01:19.030 where you're exposed to almost like a different language

00:01:19.030 --> 00:01:20.950 and you don't understand what's happening,

00:01:20.950 --> 00:01:23.200 but you also don't necessarily understand

00:01:23.200 --> 00:01:25.202 the social norms that are happening.

00:01:25.202 --> 00:01:29.710 - One of the defining features of autism in toddlers

00:01:29.710 --> 00:01:33.810 is that they have difficulties monitoring faces

00:01:33.810 --> 00:01:35.640 of interactive partners.

00:01:36.020 --> 00:01:38.790 They don't look at people who try to engage them

00:01:38.790 --> 00:01:40.500 using eye contact or speech.

00:01:41.230 --> 00:01:45.260 - Learning tends to happen most by children observing

00:01:45.270 --> 00:01:46.890 what other people are doing.

00:01:46.890 --> 00:01:49.330 So if a child's not necessarily paying attention

00:01:49.330 --> 00:01:52.340 to someone's face or what they're doing,

00:01:52.340 --> 00:01:54.010 they're missing those opportunities

00:01:54.010 --> 00:01:55.740 to learn about the world.

00:02:05.500 --> 00:02:08.080 - [Dr. Chawarska] Eye-tracking technology allows us to show,

00:02:08.090 --> 00:02:10.710 for instance, a video to a child

00:02:10.710 --> 00:02:13.470 and then through the use of special cameras,

00:02:13.470 --> 00:02:17.920 record their point of regard with very high accuracy.

00:02:17.920 --> 00:02:21.350 And by looking at this data, we can determine very closely

00:02:21.350 --> 00:02:22.800 where the children are looking,

00:02:22.800 --> 00:02:25.360 what they are paying attention to.

00:02:25.360 --> 00:02:27.100 - Are they paying attention to the objects?

00:02:27.100 --> 00:02:30.010 Are they paying attention to the people, the faces?

00:02:30.010 --> 00:02:32.280 Where on the face are they looking?

00:02:32.280 --> 00:02:35.200 - [Dr. Chawarska] By using this technology, we were able to show

00:02:35.200 --> 00:02:38.470 that toddlers with autism have major difficulties

00:02:38.470 --> 00:02:39.610 in social attention.

00:02:39.610 --> 00:02:42.290 We were also able to show that infants

00:02:42.290 --> 00:02:45.040 are also showing the same kind of difficulties

00:02:45.040 --> 00:02:47.050 way before the behavioral symptoms

00:02:47.050 --> 00:02:49.080 of autism begin to emerge.

00:02:49.080 --> 00:02:52.510 By studying how infants tend to the social world,

00:02:52.510 --> 00:02:55.440 we can also learn about their strengths and weaknesses.

00:03:04.500 --> 00:03:06.180 - Early intervention is crucial.

00:03:06.180 --> 00:03:08.140 Early identification is crucial.

00:03:08.140 --> 00:03:10.750 So we spend a lot of time with the families

00:03:10.750 --> 00:03:13.560 trying to figure out what would be best for their child

00:03:13.560 --> 00:03:15.960 to work on language and communication,

00:03:15.960 --> 00:03:19.580 social engagement, daily living skills.

00:03:19.580 --> 00:03:22.360 So more often than not, we're recommending a team

00:03:22.360 --> 00:03:24.160 of professionals come together to work

00:03:24.160 --> 00:03:25.960 with the child and family.

00:03:25.960 --> 00:03:30.040 - [Dr. Chawarska] So early in development, the brain is extremely plastic

00:03:30.040 --> 00:03:33.640 and it develops depending on the kinds of experiences

00:03:33.650 --> 00:03:34.970 it encounters in the world.

00:03:34.970 --> 00:03:38.090 So we believe that providing children with autism

00:03:38.090 --> 00:03:41.910 with more normative experiences is going to

00:03:41.910 --> 00:03:45.750 maybe not ameliorate symptoms of autism entirely,

00:03:45.750 --> 00:03:49.580 but at least change their developmental trajectories

00:03:49.580 --> 00:03:52.310 and optimize their outcome.

00:03:52.310 --> 00:03:55.730 - We do see children who make remarkable progress

00:03:55.730 --> 00:03:59.010 and are able to access regular education.
00:03:59.010 --> 00:04:01.950 They can have good relationships, they can hold jobs,
00:04:01.950 --> 00:04:03.400 they can go to college.
00:04:03.400 --> 00:04:06.980 So the outcomes of our young children with autism
00:04:06.980 --> 00:04:10.300 who have had the experience of early intervention
00:04:10.300 --> 00:04:12.310 has been kind of mind-blowing in a way
00:04:12.310 --> 00:04:15.120 about how much progress can be made.
00:04:15.120 --> 00:04:19.550 - [Dr. Chawarska] If we give this child capacity to communicate
00:04:19.550 --> 00:04:22.920 using animals, using gestures, eye contact,
00:04:22.920 --> 00:04:26.240 pictures, or words, the whole new world
00:04:26.240 --> 00:04:28.240 opens up to this child.