

WEBVTT

NOTE duration: "00:05:17.269"

NOTE Confidence: 0.98734325

00:00:06.080 --> 00:00:07.279 When we want to move

NOTE Confidence: 0.98734325

00:00:07.279 --> 00:00:09.300 our body, we have impulses

NOTE Confidence: 0.98734325

00:00:09.440 --> 00:00:10.719 that come from our brain

NOTE Confidence: 0.98734325

00:00:10.719 --> 00:00:11.860 that send signals

NOTE Confidence: 0.96838933

00:00:12.400 --> 00:00:14.080 down the spinal cord to

NOTE Confidence: 0.96838933

00:00:14.080 --> 00:00:15.705 the nerves that innervate our

NOTE Confidence: 0.96838933

00:00:15.705 --> 00:00:16.364 muscles, and

NOTE Confidence: 0.9963975

00:00:16.745 --> 00:00:18.185 these muscles get a signal

NOTE Confidence: 0.9963975

00:00:18.185 --> 00:00:18.845 to move.

NOTE Confidence: 0.96158934

00:00:19.145 --> 00:00:20.265 And when we wanna stop

NOTE Confidence: 0.96158934

00:00:20.265 --> 00:00:22.105 moving, then the brain stops

NOTE Confidence: 0.96158934

00:00:22.105 --> 00:00:23.465 the signal and the muscle

NOTE Confidence: 0.96158934

00:00:23.465 --> 00:00:24.525 is able to relax.

NOTE Confidence: 0.98214895

00:00:25.225 --> 00:00:26.525 The problem in spasticity

NOTE Confidence: 0.94574577

00:00:27.064 --> 00:00:28.425 is the brain is telling  
NOTE Confidence: 0.94574577

00:00:28.425 --> 00:00:29.485 that muscle to  
NOTE Confidence: 0.9295413

00:00:29.960 --> 00:00:31.400 contract, to move all of  
NOTE Confidence: 0.9295413

00:00:31.400 --> 00:00:32.059 the time.  
NOTE Confidence: 0.9983042

00:00:33.320 --> 00:00:33.820 Spasticity  
NOTE Confidence: 0.99938923

00:00:34.199 --> 00:00:36.120 is an abnormal firing of  
NOTE Confidence: 0.99938923

00:00:36.120 --> 00:00:36.780 the nerves  
NOTE Confidence: 0.95891315

00:00:37.159 --> 00:00:38.519 and it can happen after  
NOTE Confidence: 0.95891315

00:00:38.519 --> 00:00:39.720 a brain injury or a  
NOTE Confidence: 0.95891315

00:00:39.720 --> 00:00:41.800 spinal cord injury or certain  
NOTE Confidence: 0.95891315

00:00:41.800 --> 00:00:43.340 other neurologic conditions.  
NOTE Confidence: 0.99433917

00:00:44.405 --> 00:00:46.104 And we lose that ability  
NOTE Confidence: 0.99433917

00:00:46.165 --> 00:00:48.005 to relax the muscle and  
NOTE Confidence: 0.99433917

00:00:48.005 --> 00:00:49.305 to relax the motion.  
NOTE Confidence: 0.9932293

00:00:49.925 --> 00:00:51.284 Because of the muscle tightness,  
NOTE Confidence: 0.9932293

00:00:51.284 --> 00:00:52.985 it can cause abnormal positioning

NOTE Confidence: 0.9932293  
00:00:53.045 --> 00:00:54.585 of their arms and  
NOTE Confidence: 0.9115542  
00:00:55.205 --> 00:00:56.725 stiffness in their joints that  
NOTE Confidence: 0.9115542  
00:00:56.725 --> 00:00:57.465 their joints,  
NOTE Confidence: 0.8882266  
00:00:57.845 --> 00:00:59.125 depending on severity, might not  
NOTE Confidence: 0.8882266  
00:00:59.125 --> 00:00:59.580 be able to  
NOTE Confidence: 0.964347  
00:01:00.780 --> 00:01:01.760 move at all. Spasticity  
NOTE Confidence: 0.94588095  
00:01:02.220 --> 00:01:04.060 can be very limiting to  
NOTE Confidence: 0.94588095  
00:01:04.060 --> 00:01:05.500 functional activities, and of course,  
NOTE Confidence: 0.94588095  
00:01:05.500 --> 00:01:06.880 there's a range of spasticity  
NOTE Confidence: 0.94588095  
00:01:07.100 --> 00:01:08.459 from very mild to very,  
NOTE Confidence: 0.94588095  
00:01:08.459 --> 00:01:09.280 very involved.  
NOTE Confidence: 0.98652023  
00:01:10.060 --> 00:01:11.340 And so that's why it's  
NOTE Confidence: 0.98652023  
00:01:11.340 --> 00:01:12.860 so important to have a  
NOTE Confidence: 0.98652023  
00:01:12.860 --> 00:01:14.459 lot of different experts putting  
NOTE Confidence: 0.98652023  
00:01:14.459 --> 00:01:15.735 their heads together both to  
NOTE Confidence: 0.98652023

00:01:15.735 --> 00:01:17.515 understand the patient's unique  
NOTE Confidence: 0.9449155

00:01:17.815 --> 00:01:18.795 pattern of spasticity,  
NOTE Confidence: 0.9838701

00:01:19.334 --> 00:01:20.875 but also how that's functionally  
NOTE Confidence: 0.9838701

00:01:20.935 --> 00:01:22.375 impacting them and come up  
NOTE Confidence: 0.9838701

00:01:22.375 --> 00:01:23.735 with treatment plans that will  
NOTE Confidence: 0.9838701

00:01:23.735 --> 00:01:24.635 work for them.  
NOTE Confidence: 0.9896601

00:01:24.935 --> 00:01:26.455 There's absolutely no cookie cutter  
NOTE Confidence: 0.9896601

00:01:26.455 --> 00:01:28.135 approach to spasticity. We have  
NOTE Confidence: 0.9896601

00:01:28.135 --> 00:01:29.415 to treat each patient and  
NOTE Confidence: 0.9896601

00:01:29.415 --> 00:01:31.440 their particular patterns of muscle  
NOTE Confidence: 0.9896601

00:01:31.440 --> 00:01:31.940 spasticity  
NOTE Confidence: 0.94839954

00:01:32.560 --> 00:01:34.020 and their particular goals.  
NOTE Confidence: 0.9658172

00:01:34.480 --> 00:01:35.760 Otherwise, we won't get the  
NOTE Confidence: 0.9658172

00:01:35.760 --> 00:01:36.800 results that the patients are  
NOTE Confidence: 0.9658172

00:01:36.800 --> 00:01:37.620 looking for.  
NOTE Confidence: 0.9966913

00:01:43.125 --> 00:01:45.065 Yale looks at the individual

NOTE Confidence: 0.9966913

00:01:45.125 --> 00:01:45.865 as a whole.

NOTE Confidence: 0.99043334

00:01:46.485 --> 00:01:48.425 It's not just one specialist

NOTE Confidence: 0.99043334

00:01:48.485 --> 00:01:49.685 coming in and looking at

NOTE Confidence: 0.99043334

00:01:49.685 --> 00:01:50.645 that one part of the

NOTE Confidence: 0.99043334

00:01:50.645 --> 00:01:52.565 body. Usually, we'll start with

NOTE Confidence: 0.99043334

00:01:52.565 --> 00:01:54.725 physical or occupational therapy to

NOTE Confidence: 0.99043334

00:01:54.725 --> 00:01:56.085 really work on the muscle

NOTE Confidence: 0.99043334

00:01:56.085 --> 00:01:57.740 range of motion and try

NOTE Confidence: 0.99043334

00:01:57.740 --> 00:01:59.200 and help the muscle relax.

NOTE Confidence: 0.9797741

00:02:00.460 --> 00:02:02.860 And in cases where we

NOTE Confidence: 0.9797741

00:02:02.860 --> 00:02:05.180 really understand the affected muscles

NOTE Confidence: 0.9797741

00:02:05.180 --> 00:02:06.720 and it's not more widespread.

NOTE Confidence: 0.99685484

00:02:07.580 --> 00:02:09.180 We are able to come

NOTE Confidence: 0.99685484

00:02:09.180 --> 00:02:10.160 up with tentative

NOTE Confidence: 0.9746877

00:02:10.460 --> 00:02:11.855 surgical plans for the patients

NOTE Confidence: 0.9383691

00:02:12.315 --> 00:02:13.355 and then able to test  
NOTE Confidence: 0.9383691

00:02:13.355 --> 00:02:14.415 them in real time,  
NOTE Confidence: 0.99398744

00:02:14.875 --> 00:02:16.655 whether it's nerve blocks or  
NOTE Confidence: 0.95756656

00:02:17.115 --> 00:02:18.495 Botox type treatments.  
NOTE Confidence: 0.993913

00:02:19.035 --> 00:02:20.555 We have a new therapy  
NOTE Confidence: 0.993913

00:02:20.555 --> 00:02:21.375 called cryoneurolysis.  
NOTE Confidence: 0.99458665

00:02:22.395 --> 00:02:24.075 We're actually targeting the nerve  
NOTE Confidence: 0.99458665

00:02:24.075 --> 00:02:25.855 that innervates the tight muscle  
NOTE Confidence: 0.99707085

00:02:26.180 --> 00:02:27.780 and reducing the amount of  
NOTE Confidence: 0.99707085

00:02:27.780 --> 00:02:29.620 nerve impulses coming into the  
NOTE Confidence: 0.99707085

00:02:29.620 --> 00:02:30.120 muscle.  
NOTE Confidence: 0.9837552

00:02:31.139 --> 00:02:32.020 So we can see the  
NOTE Confidence: 0.9837552

00:02:32.020 --> 00:02:33.860 impact that nerve based procedures  
NOTE Confidence: 0.9837552

00:02:33.860 --> 00:02:35.080 would have on the extremity.  
NOTE Confidence: 0.9905526

00:02:35.780 --> 00:02:37.300 But it's also amazing because  
NOTE Confidence: 0.9905526

00:02:37.300 --> 00:02:38.440 it lets us uncover

NOTE Confidence: 0.98086417  
00:02:39.084 --> 00:02:40.764 tightness in the joints or  
NOTE Confidence: 0.98086417  
00:02:40.764 --> 00:02:42.364 shortness of the muscles, so  
NOTE Confidence: 0.98086417  
00:02:42.364 --> 00:02:43.325 we can determine if they  
NOTE Confidence: 0.98086417  
00:02:43.325 --> 00:02:44.944 also need more traditional  
NOTE Confidence: 0.9923355  
00:02:45.405 --> 00:02:47.425 tendon or joint based surgery.  
NOTE Confidence: 0.98261523  
00:02:48.285 --> 00:02:49.325 So they almost get to  
NOTE Confidence: 0.98261523  
00:02:49.325 --> 00:02:50.364 see a little bit what  
NOTE Confidence: 0.98261523  
00:02:50.364 --> 00:02:51.965 surgery would be like. So  
NOTE Confidence: 0.98261523  
00:02:51.965 --> 00:02:52.944 that is invaluable.  
NOTE Confidence: 0.9889845  
00:02:53.480 --> 00:02:54.200 And then if you take  
NOTE Confidence: 0.9889845  
00:02:54.200 --> 00:02:55.419 that the next step,  
NOTE Confidence: 0.9939342  
00:02:56.200 --> 00:02:57.739 having plastic surgery,  
NOTE Confidence: 0.98884255  
00:02:58.360 --> 00:02:59.879 nerve surgeon work together with  
NOTE Confidence: 0.98884255  
00:02:59.879 --> 00:03:01.799 an orthopedic surgeon brings two  
NOTE Confidence: 0.98884255  
00:03:01.799 --> 00:03:02.700 very different  
NOTE Confidence: 0.999715

00:03:03.400 --> 00:03:04.780 types of training together.  
NOTE Confidence: 0.98905635

00:03:05.575 --> 00:03:07.174 So I'm able to find  
NOTE Confidence: 0.98905635

00:03:07.174 --> 00:03:08.855 the nerve branches to some  
NOTE Confidence: 0.98905635

00:03:08.855 --> 00:03:09.594 of the muscles.  
NOTE Confidence: 0.98202974

00:03:09.894 --> 00:03:11.014 When the nerves are branching  
NOTE Confidence: 0.98202974

00:03:11.014 --> 00:03:12.694 into tiny filaments and entering  
NOTE Confidence: 0.98202974

00:03:12.694 --> 00:03:14.294 the muscle, I'm actually going  
NOTE Confidence: 0.98202974

00:03:14.294 --> 00:03:15.894 and treating the spasticity as  
NOTE Confidence: 0.98202974

00:03:15.894 --> 00:03:17.174 well by taking away eighty  
NOTE Confidence: 0.98202974

00:03:17.174 --> 00:03:18.474 percent of the nerve fibers  
NOTE Confidence: 0.96321714

00:03:19.014 --> 00:03:20.989 to reduce the the tone  
NOTE Confidence: 0.9942113

00:03:21.370 --> 00:03:22.489 and give it a more  
NOTE Confidence: 0.9942113

00:03:22.489 --> 00:03:24.189 normal amount of innovation.  
NOTE Confidence: 0.9829389

00:03:24.810 --> 00:03:26.010 Now what we started doing  
NOTE Confidence: 0.9829389

00:03:26.010 --> 00:03:28.010 is combining those methods with  
NOTE Confidence: 0.9829389

00:03:28.010 --> 00:03:29.689 what's been done historically, what

NOTE Confidence: 0.9829389  
00:03:29.689 --> 00:03:31.310 works for tendon lengthening,  
NOTE Confidence: 0.98631734  
00:03:31.689 --> 00:03:33.129 joint fusions, and things like  
NOTE Confidence: 0.98631734  
00:03:33.129 --> 00:03:34.575 that. So that we can  
NOTE Confidence: 0.98631734  
00:03:34.575 --> 00:03:36.575 target the too much nerve  
NOTE Confidence: 0.98631734  
00:03:36.575 --> 00:03:37.795 signal and also  
NOTE Confidence: 0.93311054  
00:03:38.415 --> 00:03:40.035 too short a muscle pathway.  
NOTE Confidence: 0.99881774  
00:03:40.815 --> 00:03:42.035 The two heads together  
NOTE Confidence: 0.9954781  
00:03:42.495 --> 00:03:43.615 actually comes up with a  
NOTE Confidence: 0.9954781  
00:03:43.615 --> 00:03:44.895 better result for the patient  
NOTE Confidence: 0.9954781  
00:03:44.895 --> 00:03:45.855 and allows us to do  
NOTE Confidence: 0.9954781  
00:03:45.855 --> 00:03:47.155 things to maximize  
NOTE Confidence: 0.9991246  
00:03:47.455 --> 00:03:48.915 their clinical result.  
NOTE Confidence: 0.9077119  
00:03:54.010 --> 00:03:55.290 We also have a team  
NOTE Confidence: 0.9077119  
00:03:55.290 --> 00:03:57.370 of excellent therapist and in  
NOTE Confidence: 0.9077119  
00:03:57.370 --> 00:03:58.190 our multidisciplinary  
NOTE Confidence: 0.9702539

00:03:58.730 --> 00:04:00.650 clinic, we specifically have an  
NOTE Confidence: 0.9702539

00:04:00.650 --> 00:04:01.150 occupational  
NOTE Confidence: 0.996583

00:04:01.450 --> 00:04:01.950 therapist.  
NOTE Confidence: 0.96209306

00:04:02.435 --> 00:04:03.394 A lot of the procedures  
NOTE Confidence: 0.96209306

00:04:03.394 --> 00:04:04.194 are getting them into a  
NOTE Confidence: 0.96209306

00:04:04.194 --> 00:04:05.815 better position for function.  
NOTE Confidence: 0.9944628

00:04:06.355 --> 00:04:06.855 So  
NOTE Confidence: 0.9606512

00:04:07.155 --> 00:04:08.355 I'll brace them to make  
NOTE Confidence: 0.9606512

00:04:08.355 --> 00:04:09.894 sure that we maintain that.  
NOTE Confidence: 0.9606512

00:04:10.114 --> 00:04:11.575 And then after that,  
NOTE Confidence: 0.949008

00:04:12.355 --> 00:04:13.555 we talk about like how  
NOTE Confidence: 0.949008

00:04:13.555 --> 00:04:15.095 to actually use the function.  
NOTE Confidence: 0.99028826

00:04:16.650 --> 00:04:17.789 What about the wrist?  
NOTE Confidence: 0.85527736

00:04:18.169 --> 00:04:19.710 The wrist seems pointy. Me?  
NOTE Confidence: 0.8085175

00:04:20.490 --> 00:04:22.190 Yes. I love it.  
NOTE Confidence: 0.83947736

00:04:22.570 --> 00:04:23.789 It looks great.

NOTE Confidence: 0.9970296  
00:04:24.490 --> 00:04:25.949 Doing some rehabilitation  
NOTE Confidence: 0.9930708  
00:04:26.490 --> 00:04:28.490 post surgery really leads to  
NOTE Confidence: 0.9930708  
00:04:28.490 --> 00:04:29.310 better outcomes  
NOTE Confidence: 0.9178448  
00:04:29.690 --> 00:04:31.130 and hopefully that the patient  
NOTE Confidence: 0.9178448  
00:04:31.130 --> 00:04:33.015 can have lasting results.  
NOTE Confidence: 0.8184189  
00:04:37.875 --> 00:04:38.995 You can break it in  
NOTE Confidence: 0.8184189  
00:04:38.995 --> 00:04:40.214 so you can touch her?  
NOTE Confidence: 0.8184189  
00:04:40.275 --> 00:04:41.795 Not or not body, just  
NOTE Confidence: 0.8184189  
00:04:41.795 --> 00:04:42.455 the hand.  
NOTE Confidence: 0.86498785  
00:04:42.995 --> 00:04:43.495 Yep.  
NOTE Confidence: 0.95801985  
00:04:43.955 --> 00:04:45.255 Yeah. Look at that.  
NOTE Confidence: 0.9944293  
00:04:46.100 --> 00:04:47.400 Adults with spasticity  
NOTE Confidence: 0.9662206  
00:04:47.779 --> 00:04:49.480 oftentimes have very complicated  
NOTE Confidence: 0.9681565  
00:04:50.020 --> 00:04:51.300 medical problems. They've had a  
NOTE Confidence: 0.9681565  
00:04:51.300 --> 00:04:52.339 big stroke or they had  
NOTE Confidence: 0.9681565

00:04:52.339 --> 00:04:53.380 a big brain bleed, a  
NOTE Confidence: 0.9681565

00:04:53.380 --> 00:04:54.600 spinal cord injury,  
NOTE Confidence: 0.99825495

00:04:55.139 --> 00:04:55.639 and  
NOTE Confidence: 0.99650896

00:04:55.940 --> 00:04:56.980 there can be so much  
NOTE Confidence: 0.99650896

00:04:56.980 --> 00:04:58.820 focus on life and death  
NOTE Confidence: 0.99650896

00:04:58.820 --> 00:04:59.560 at the beginning  
NOTE Confidence: 0.98031247

00:05:00.020 --> 00:05:01.125 that they get forgotten.  
NOTE Confidence: 0.9969434

00:05:02.245 --> 00:05:03.525 But if we can improve  
NOTE Confidence: 0.9969434

00:05:03.525 --> 00:05:05.605 their comfort, their extremity function,  
NOTE Confidence: 0.9969434

00:05:05.605 --> 00:05:07.205 the ability for folks to  
NOTE Confidence: 0.9969434

00:05:07.205 --> 00:05:08.505 help take care of them,  
NOTE Confidence: 0.9969434

00:05:08.725 --> 00:05:09.765 it can have a profound  
NOTE Confidence: 0.9969434

00:05:09.765 --> 00:05:10.825 impact on them.