Responsive neurostimulation helps Carlos Martinez help others with epilepsy

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<td>Meet Carlos Martinez. Like many young people, Carlos who lives in Florence, Arizona has big plans. And he's on his way with an assist from Mayo Clinic to make those plans reality. Despite an epilepsy diagnosis,</td>
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**Carlos Martinez**

"I used to be a very independent person. And then once I started having seizures, it really affected me. I started feeling a disconnect between my mind and my mouth. And I didn't know what was going on. And I was like, what, what's happening."

**Matthew Hoerth, M.D. Neurology, Mayo Clinic**

"This area where seizures are coming from is an area called the insula. If you think about looking at the brain from the side, you have that kind of that line, that kind of cleft that goes through the side of the brain. If you were to imagine like pulling that open and looking deep inside there, that's where his seizures came from. It's like in this deep area very difficult to get to, and there's some vital functions of the brain that happened in that area."

**Carlos Martinez**

"Epilepsy also affects my family, because of my epilepsy. It's all fair to them. But we just keep moving forward."

Treatment isn't one size fits all, there can be different challenges for different patients. Carlos and his male care team turned to an innovative treatment approach responsive neurostimulation.

**Matthew Hoerth, M.D. Neurology, Mayo Clinic**

"Responsive neurostimulator device, it is a device that gets implanted into the brain itself, the device sits within the skull, and we put the electrodes into the area of the brain that the seizures are coming from, it watches the brainwave patterns, and depending on what we tell it that what a seizure looks like with that brainwave pattern, it will then recognize that pattern and then shock the brain to get that seizure to essentially stop before a patient feels it."

**Carlos Martinez**

"After my implant. Surgery, I recovered very well. And now I'm taking classes. And I just want to keep going, keep going, keep going, keep going, keep going."
Matthew Hoerth, M.D.  
Neurology,  
Mayo Clinic

"His outlook on life and his ability to bounce back from those seizures and still kind of push ahead. It's inspiring. This has really been a breakthrough in our treatment of patients with epilepsy, to be able to do these advanced devices in areas of the brain that we cannot resect we have reduced the number of seizures hasn't gone to zero, but his seizures have become less severe. It's allowed him to do a lot more terms of his getting through school, interacting with his family, just feeling like himself. But I think even beyond the actual like numbers and severity of seizures that have reduced, I think it's given him hope."

With his own treatment underway, Carlos has turned his sights on helping others his age who may be facing the same situation.

Carlos Martinez

"My goal when it comes to being a person with epilepsy is to also be a guide. Because I understand the feeling of being lost. And I know that darkness, I need to do something about this I need to share my story. So, I started a YouTube channel. I need to share what I've been through, and maybe other people will share their experiences too. It makes me feel really, really amazing."

For the Mayo Clinic News Network. I'm Deedee Stiepan.