

# Breaking

Free

Twins Amanda and Sara are the first patients in Colorado to have their OCD treated with deep brain stimulation, allowing them to break free from the crippling anxiety that kept them locked inside their house.

**S**ara and Amanda Eldritch had peculiar habits as toddlers. Wrinkles had to be out of socks, they tucked in their shirts (always), and they washed their hands — a lot.

As they grew into adolescents, it became clear there was something deeper affecting the twin girls. A single hand-washing could take 20 minutes. A shower required hours — and an entire bottle of shampoo.

“It was an anxiety that couldn’t be controlled,” Sara says.

They cleaned their home bathroom two to three times a day. They went through hundreds of latex gloves and bottles upon bottles of rubbing alcohol each month to disinfect anything they touched.

Public restrooms incited panic, severely limiting travel and outings. They painstakingly removed every speck of lint on their clothing. They couldn’t go barefoot in their own home.


To avoid the anxiety surrounding the shower, Sara and Amanda would sometimes go a week or two without bathing. They felt at war with their own existence. And in a desperate cry for help as adolescents, they tried taking their own lives.

Finally, when they were 16, they heard the diagnosis they already knew: obsessive-compulsive disorder (OCD).

Sara and Amanda spent the next 15 years trying various combinations of medications, counseling, and other therapies to escape the desperation and despair they felt daily.

But nothing helped — until they met David VanSickle, MD, PhD, a neurosurgeon at Littleton Adventist Hospital who specializes in deep brain stimulation surgery.

A year after undergoing the surgery (typically used to treat Parkinson’s disease and essential tremor), the twins today are finding hope and joy in simple things like taking a morning walk — something they hadn’t done in more than a decade.



Twins Amanda (left) and Sara Eldritch are feeling lighter and brighter after DBS helped alleviate the OCD symptoms that robbed them of normal lives.

1% of U.S. adults have obsessive-compulsive disorder, and half of these cases are considered “severe.”



Dr. David VanSickle

### UNDERSTANDING OCD

People with OCD are inundated with unwanted thoughts they can't avoid, called obsessions, which make them perform repeated

behaviors — compulsions — to ease their anxiety. OCD can interfere with a person's ability to live a normal life, affecting school, work, and social functions, as multiple hours a day are devoted to obsessive thoughts and rituals, such as counting or hand-washing.

Because of their OCD and related anxiety and depression, and the side effects of medications, the Eldritchses, now 31, say they spent their 20s “moping around.”

Their OCD was so severe and resources were so lacking, says their mother, Kathy Worland, that she struggled to find medical professionals who could help them.

“Their OCD just got worse and worse and worse,” she says. “After high school graduation, they retreated to their beds. They didn't leave the house until April of the next year.”

They couldn't hold jobs or attend school or even go to a movie.

“We can't be more than 15 minutes from home because they can't use a public restroom,” Kathy adds. “That limits what we can do. That, in turn, adds to the depression.”

### THE PROMISE OF DBS

When they were 28, Sara and Amanda read about deep brain stimulation (DBS), a surgical therapy more commonly used to treat Parkinson's disease and essential tremor. They contacted a surgeon, who explained that to be candidates for the surgery, they needed to go through certain steps — including making sure they had tried every other possible treatment.

They followed the protocol. And two years later, they met VanSickle, who agreed they were candidates for DBS.

“I was pretty convinced this was going to be their only hope,” VanSickle says.

In spring 2015, Sara and Amanda were the first people with OCD to be treated with DBS in the state of Colorado.

### HOW DBS WORKS

DBS, VanSickle explains, is an inhibitory surgery: “You're inhibiting the part of the brain that's overactive.”

In those with OCD, the goal is to suppress the anxiety, which increases the chances of therapy being able to address the habits associated with the disorder, he says.

DBS requires two separate procedures. During the first procedure, the surgeon places electrodes on specific areas of the brain.

“Traditionally, most of these surgeries are done while the patient is awake,” VanSickle says. “But we can do the surgery while the patient sleeps. Amanda and Sara didn't think they could get through an awake surgery.”

Adapting the Mazor Robotics Renaissance® Guidance System, a system commonly used for spine surgery, VanSickle is one of the first surgeons in the world to perform robot-assisted Asleep DBS surgery, and now performs more of

these than any other surgeon in the world. “With the robot, we gain higher levels of precision,” he says. “And the more accurately we put the electrodes in the first time, the better.”

The electrode wires are placed under the skin of the head, neck, and shoulder, connecting with a battery pack (called a neurostimulator), which is implanted in the chest during a second procedure about a week later. Then, routine programming appointments help ensure the brain gets the proper amount of stimulation. DBS, which was first developed in 1987, has come a long way, VanSickle says.

“In the last few years, the procedure itself has become much better. Outcomes were always good, but the procedure has become more consistent, faster, much less expensive — more mundane, really,” he says. “Yet it's highly underutilized as a therapy.”

Once their battery packs were turned on, Sara and Amanda felt different — lighter.

“We didn't realize you didn't have to be miserable all the time,” Amanda says. Instead of sleeping all day, they get up in the morning. They go for morning walks. They ride their bikes.

“I'm really excited to not feel like I'm at war with my own existence.”

They make their meals.

“The day is so much longer and brighter,” Amanda says.

“And prettier,” Sara adds.

### LOOKING AHEAD

Sara and Amanda continue to see a psychiatrist for their OCD, but they also see hope.

“I feel like I can identify my anxiety,” Sara says. “I can actually see where it's coming from. And I feel like I can deal with it.”

Amanda agrees.

“I'm really excited to not feel like I'm at war with my own existence,” she says. “I can be functional enough to go get a job and make a difference. There's a world out there I want to be a part of.”

Worland saw different people in her daughters almost immediately. They have joy and hope; they laugh.

“Their laughter,” she says. “That was something I hadn't heard in years.”

Convinced her daughters would've ended their own lives, Worland is immensely grateful for VanSickle and Littleton Adventist Hospital.

“This surgery has changed their lives — and saved their lives,” she says.

She's eager to see who her daughters become. But as a mother, there's one hope she clings to.

“I haven't been able to hug my daughters since they were 16. And I know that because of this surgery, I'll be able to someday,” she says. “That's what I live for.”

The FDA has approved DBS therapy for severe cases of OCD under a humanitarian device exemption and is now covered by some insurance plans. Surgeons at Littleton Adventist Hospital currently perform the procedure on a case-by-case basis. For more information, please go online to [mylittletonhospital.org/dbs](http://mylittletonhospital.org/dbs).