# The Sound (((of))) Sound

tweet tweet tweet

How does it feel to be a little girl with a cochlear implant? Juliet's mom wonders. BY JENNIFER ROSNER

it

itte with coch

tap tap **t** 

ts

Juie

hts

tte gir

<sup>Ckle</sup>snap

crackle snaf

hahah

# For my 4-year-old daughter, Juliet, hearing is optional.

She was born profoundly deaf. Juliet has a cochlear implant, which brings her access to sound, so long as she wears her external processor—a behind-the-ear device that looks like a hearing aid with a small magnetic disk that attaches to the implant in her head. Throughout each preschool day, Juliet wears her processor, and with it she hears. And she talks. She hums. She sings. Juliet's language and music are wonders to behold. But when she arrives home from school exhausted, she often wants to take her processor off.

"I don't want my sound," she says, and she piles the mound of earmold, wire, and magnet into my open palm.

If a restaurant is too loud and Juliet is tired—yank—I have to rush to catch this several-thousand-dollar "ear" before she sets it down on a table smeared with ketchup or blue cheese dressing. Just as quickly, I race to settle Juliet into a comfortable position because, with the blessing of quiet and the shut of her eyes, she



falls asleep in seconds. On weekend mornings, Juliet asks to wait before putting on her processor. She enjoys puttering around the house in silence, tuning us out, ignoring our demands. When she wants us, she just stands in place and yells (she has no idea how loudly) until we show ourselves in her visual field. Juliet signs, and we sign back, yet she often chooses not to reason with us when her sound is out. Sometimes she won't even look our way, disabling our speaking voices and our signing hands. To be sure, Juliet can be ornery with and without her sound. But without it, her face takes on so much expression that her glower can send us packing.

Juliet rips her processor off at the sight of the blender or the vacuum cleaner. She puts it back on when she spies a book I could read to her or a video she wants to watch. Like a baseball cap: off for the bath, on for the playdate, off to run through the sprinkler, then back on for the cupcakes. I wonder sometimes whether to encourage this. Why should she hear the babies crying at the pediatrician's office if she doesn't have to? Why not miss the jackhammer blast when the car is stuck in traffic? Juliet senses everything that's happening through vibrations anyway. Whether her sound is on or off, she knows when someone walks into the room, and she can read a face like a book. As she reminds me with a scowl when I repeat in sign what I've said aloud: "I know what you just said."

## It's impossible for me to

know what Juliet's experiences are like, with sound or without it. When I first heard a simulation of how a voice sounds through a cochlear implant, I was horrified. It sounded like Darth

#### About Juliet and Sophia

Juliet, 4, and her sister Sophia, 7, have genetic hearing impairments—the result of recessive genes that Jennifer and her husband Bill both carry. Jennifer has looked into her family tree and found, since 1871, six ancestors who were deaf, including two great-great-aunts who, like Sophia and Juliet, were sisters. On a scale of mild, moderate, severe, and profound, Sophia's deafness is severe; she can hear with hearing aids. Juliet's deafness, though, is profound, which made her a candidate for a cochlear implant. When she was 3, Juliet got a second implant, in her other ear, which has enhanced her ability to locate sound.

# "No, it's my turn to be the surgeon! You can be the audiologist this time."

Vader speaking through Demi Moore as she imitated the Wicked Witch of the West. "We're going to drill into her tiny skull for *this*?" I asked the Boston Children's Hospital cochlear implant team. Can I never expect her to hear the timbre of my voice, or to distinguish between voices, or experience the beauty of music? I was placated, ultimately, by the sight (and sound!) of other implanted children at the playground of a nearby school for the deaf.

Juliet's cochlear implant surgery took place on her first birthday, and it lasted five hours. A few weeks after, her sound was "turned on"—the external processor was programmed and activated. It was set at a low volume, so as not to scare her, and it came with extra settings that grew gradually louder.

We were warned that most implanted babies cry when they hear sound for the first time. I wrapped my arms around Juliet as the audiologist attached the processor—glop—and the external magnet glommed onto Juliet's head like a magnet onto a refrigerator. Instructing us to be quiet, the audiologist handed Juliet a drum and a stick. Juliet whacked the drum, then jumped back like a startled animal at the sound of the boom. She searched our faces with wide questioning eyes. She beat the drum once again. Then Juliet thrust back her head and laughed.

For the next hour, she used the drumstick to beat other things: the audiologist's pant leg made almost no sound, the metal file cabinet made a loud clanging boom, the tone of the wood chair was different than the thicker wood table. Juliet had become a scientist, studying and experimenting with sound.

According to the audiologist, all sounds would come in as beeps and blips at first. It would be months before the neural pathways between Juliet's auditory nerve and her brain would be forged and able to translate the input into meaningful sound. That is, it would be months before "moo" could be distinguished from "quack" and pinned on its rightful farm speaker. And months before Juliet would turn at my calling of her name. In the meantime, we would put in a lot of "moos" and "quacks." We would point out and comment on nearly every sound that could be heard in our home: the sizzling of an egg in the skillet, the full rush then drip drip of water from the faucet, the stray cock-a-doodle-doo of a neighbor's rooster, the metallic scritch of a zipper running up a coat. "I hear it," I'd say, pointing to my ear, as the phone rang, or the heat kicked in.

The flop of a pancake. The

shake of the milk bottle. The sound of the birds as we walked outside. The click of the carseat buckle before we drove. The clank of carts and the thunk of grapefruits as we shopped. Every sound: listened for, acknowledged, remarked upon.

## Each morning, I'd put on

Juliet's implant processor. I also stuck a hearing aid into her nonimplanted ear. I was used to hearing aids. Juliet's older sister, Sophia, had a lesser hearing impairment, and hearing aids enabled Sophia to hear and speak. Juliet objected to her aid, but I persisted. Set at its highest volume, it might give her access to new sounds.

Then, to keep things cheery, I'd chase her around the house. One snowy day in February, when Juliet was  $1\frac{1}{2}$ , we were running round and round. "I'm going to get you, Juliet," I yelled, offering her the lead, then trailing in the sea of squeal and laughter that floated in from the room ahead. At one point the tea kettle whistled and I broke the chase for a quick hearing lesson. I stood still in the kitchen until Juliet knocked into me, and as she caught her breath I pointed out the highpitched whistle, thick steam shooting up at the kitchen cabinets. "I hear it," I said, pointing to my 📂



ears. Then I switched off the stove, and resumed the chase.

Time out had to be called several times because Juliet's processor magnet slipped off, dragged down by the weight of her controller which flapped in a pocket I had hastily sewn onto her T-shirt. Juliet took the time-outs like a puppy halted mid-nip to scratch an itch. Her hair came loose from her topknot. Her eyes sparkled. At one point, as I gained on her, sock-skating into the dining room, I called out, "Juliet!" and she turned her head to look at me.

I stopped in my tracks like Road Runner.

"Juliet?" I ventured again. By now she was smiling a huge smile—she had heard and recognized her name.

"Juliet," I choked, and I scooped her into my arms, "I got you, Juliet. I got you. I've gotten you."

Jennifer Rosner is currently writing a book inspired by the history of deafness in her family. She reports that Juliet and Sophia often hear more than hearing people, because they have

learned how to listen. Of course, they sometimes opt not to listen, especially when she calls out that it's time for bed.

