Sacral Nerve Stimulation Helps Keep Kids Dry — When All Else Fails

Pediatric urologists at Cincinnati Children’s recently began offering sacral nerve stimulation (SNS) for children with refractory bladder dysfunction. The hospital is one of only a few pediatric institutions in the country to offer this therapy for the management of bladder symptoms.

SNS has been shown to stop or greatly reduce symptoms related to bladder dysfunction and significantly improve a child’s quality of life. “The SNS device is a small neurostimulator that is implanted in the upper buttock area,” says Andrew Strine, MD, a pediatric urologist at Cincinnati Children’s. “It delivers gentle electrical impulses through a lead that’s placed in the third sacral foramen of the patient’s spine. The impulses optimize the neural communication between the bladder and brain, although the exact mechanism of action is not completely understood.”

SNS may be offered to children with bladder dysfunction that is not responding well to therapies such as behavioral modification, pelvic floor physical therapy and medication. More than 90% of patients who have the device implanted experience long-term clinical improvement.

Strine and his colleagues are offering a new neurostimulator called the Interstim Micro, which became available in August 2020. It’s 50% smaller than the first-generation neurostimulator, with a rechargeable battery that essentially doubles the device’s lifespan to about 15 years. The new device is magnetic resonance imaging safe, a significant benefit for patients.

SNS is just one of several “next-level” therapies that pediatric urologists at Cincinnati Children’s consider for children with refractory bladder dysfunction. Others include percutaneous tibial nerve stimulation and transcutaneous electrical stimulation of the sacral nerve. Strine says that those can be effective; however, those treatments require multiple, repetitive sessions over the course of many weeks. Once the sessions stop, symptoms are likely to return.

“SNS is a good option because it’s a one-time therapy with a permanently implanted device, and you can adjust its settings easily,” he says. “It’s not right for everybody, but we’re excited to offer it as a treatment option for kids who don’t respond to other therapies.”

For more information or to make a referral, contact pedsurology@cchmc.org.