

Sacral nerve stimulator helps manage chronic incontinence in children

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Incontinence is typically a condition associated with adults; however, many children also struggle with incontinence – bladder, bowel or both. In order to help these children, doctors at Nationwide Children's Hospital have turned to a device, typically used in adult patients, to help manage children with chronic incontinence.

The [sacral nerve stimulator](#) is a surgically implanted device that helps regulate the bowel muscles and/or urethral (bladder) sphincter to control fecal and urine flow. The implantation of the device and ongoing medical management address the communication problem between the brain and the nerves that control bowel and [bladder function](#); if the nerves are not communicating properly, the muscles may not function properly which leads to control problems. The technique of sacral [neuromodulation](#) is based on mild [electrical pulses](#) sent through a small wire (attached to an electrical device) to the pelvic nerves which should stimulate the muscles that are not functioning properly.

Sacral nerve stimulation is a promising new therapeutic modality for children with incontinence. The two-stage procedure involves a test phase followed by permanent implantation of the electrical stimulator if the patient shows significant improvement in fecal and/or urinary incontinence during test simulation. The device is used as a last resort if the patient has tried other treatments such as medications and behavioral therapy. In addition to the [surgical implantation](#), Nationwide Children's provides medical management from an integrated team of specialists, including pediatric urologists pediatric gastroenterologists and pediatric

surgeons with unique expertise with complex motility disorders. While a few other children's hospitals in the United States offer sacral neuromodulation based on subjective criteria and clinical symptoms, Nationwide Children's is one of the first institutions to structure this therapy by evaluating objective bladder and [bowel function](#) studies before and after the procedure to assess treatment response.

Steven Teich, MD, surgeon at Nationwide Children's Hospital, is leading the surgical efforts for the sacral nerve stimulator at Nationwide Children's and is also an expert in the field of surgical neurostimulator therapies. "The stimulator is surgically implanted under the skin and is connected to two electrodes placed near the tailbone," said Teich, also an associate professor of Clinical Surgery at The Ohio State University College of Medicine. "This device tells the muscles when to contract, ultimately helping control the ability to urinate or have a bowel movement."

Dr. Teich is working closely on this endeavor with his colleagues in the Division of Pediatric Urology at Nationwide Children's, including Seth Alpert, MD, attending pediatric urologist and clinical assistant professor of Urology at The Ohio State University College of Medicine. "We see and treat many children with urinary incontinence, but most will respond to medication and/or behavioral modification," said Dr. Alpert. "However, a small number of children with incontinence who are refractory to these standard modalities may benefit from sacral neuromodulation and we are pleased to be able to offer help with these challenging and difficult cases."

Pacemakers, or stimulators, have been used for years in adults with incontinence problems. While this is a new procedure in children and adolescents, doctors at Nationwide Children's say the early results are promising having implanted four devices to date.

"We are excited to offer this technology and advanced therapy option to children who are suffering from chronic [incontinence](#)," said Carlo Di Lorenzo, MD, chief of Gastroenterology, Hepatology and Nutrition at Nationwide Children's Hospital and professor of Clinical Pediatrics at The Ohio State University College of Medicine. "This therapy is a promising treatment option for [children](#) who have not had success with medications and behavioral therapy."

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Provided by Nationwide Children's Hospital

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