

InterStim

The implanted InterStim™ II system electrically stimulates the sacral nerve, which is thought to normalise neural communication between the [bladder](#) and [brain](#) and between the [bowel](#) and [brain](#) ^{1) 2)}

In the early 1980s Tanagho and Schmidt began developing an implantable sacral electrode that would provide the basis for the concept of [sacral neuromodulation](#) (SNM) and the [InterStim](#) device ([Medtronic](#)) ³⁾.

It is indicated for refractory [urinary urgency](#), frequency, urge [incontinence](#), non-obstructive [urinary retention](#), and [fecal incontinence](#). If a [trial](#) with a temporary lead placed adjacent to the [sacral nerve](#) via the [S3](#) foramen produces >50% reduction in symptoms, it is connected to an [implantable pulse generator](#). [mechanism of action](#) is poorly understood but may modulate the afferent signals of the [micturition reflex](#) ⁴⁾ Improvement in symptoms is seen in up to 70% of patients with complete resolution in incontinence around 39% ⁵⁾. Contraindications to implantation include failure to improve with trial and the likely need for repeated MRIs in the future (the device is MRI conditional for head only with ≤ 1.5 Tesla MRI).

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Leng WW, Chancellor MB. How sacral nerve stimulation neuromodulation works. Urol Clin North Am. 2005;32:11-18.

²⁾

Patton V, Wiklendt L, Arkwright JW, Lubowski DZ, Dinning PG. The effect of sacral nerve stimulation on distal colonic motility in patients with fecal incontinence. Br J Surg. 2013;100:959-968.

³⁾

Tanagho EA, Schmidt RA, Orvis BR. Neural stimulation for control of voiding dysfunction: a preliminary report in 22 patients with serious neuropathic voiding disorders. J Urol. 1989 Aug;142(2 Pt 1):340-5. doi: 10.1016/s0022-5347(17)38751-7. PMID: 2787411.

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Sukhu T, Kennelly MJ, Kurpad R. Sacral neuromodulation in overactive bladder: a review and current perspectives. Res Rep Urol. 2016; 8:193-199

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Herbison GP, Arnold EP. Sacral neuromodulation with implanted devices for urinary storage and voiding dysfunction in adults. Cochrane Database Syst Rev. 2009 Apr 15;(2):CD004202. doi: 10.1002/14651858.CD004202.pub2. PMID: 19370596.

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