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**Title:** SACRAL NEUROMODULATION AND PREGNANCY

### **Aims of Study:**

Sacral neuromodulation is effective in the treatment of lower urinary tract dysfunction (1-3). However, despite its increasing use and a preponderance of female patients treated, its effect on the pregnant woman and the developing foetus remains unknown. Therefore we collected information from physicians who had treated women with sacral neuromodulation who became pregnant. We wanted to know more about the possible adverse effects of neuromodulation on the pregnancy or the developing foetus, the effects of implant deactivation, and the possibility of implant dysfunction postpartum.

### **Methods:**

Data was collected using a standardised proforma from four physicians who had a total of six eligible patients. We recorded the patient's urological history, indication for neuromodulation, the course of the pregnancy, the mode of delivery and health of the neonate. We also recorded the timing of implant deactivation and reactivation.

### **Results:**

Five patients had their stimulators deactivated between the third and ninth weeks of gestation. Two patients with a history of retention developed urinary tract infections following this. One had her stimulation turned off two weeks prior to conception. The only noted complication was in one pregnancy, where delivery was premature at 34 weeks. Three patients had normal vaginal deliveries, and in one of these subsequent reactivation of the implant did not resolve the voiding dysfunction. Three patients had an elective Caesarean section (CS) to avoid the possibility of lead damage or displacement. All of the neonates were healthy.

### **Conclusion:**

We suggest that when a woman who is receiving neuromodulation is planning a pregnancy, the stimulation should be deactivated prior to conception. When this is not possible, and the patient falls pregnant with active neuromodulation, the implant should be immediately deactivated, even though there is no evidence currently that neuromodulation compromises the foetus or pregnancy. If implant deactivation leads to

urinary related complications that threaten the pregnancy, reactivation should be considered. Elective CS should be discussed, as it is possible for sacral lead damage or displacement to occur during vaginal delivery.

This study has received support from Medtronic Inc.

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