



## Spinal Cord Stimulation – Risks & Complications

SCS is a safe and effective treatment for a variety of chronic neuropathic conditions<sup>1</sup>. SCS has positive, symptomatic, long-term effects in cases of:

- Chronic low-back/leg pain after spinal surgery
- Refractory angina pain,
- Severe ischemic limb pain secondary to peripheral vascular disease,
- Peripheral neuropathic pain

Research suggests 50-60% of patients with Post Laminectomy Syndrome or Complex Regional Pain Syndrome (CRPS) report greater than 50% relief with SCS.

### **IS SCS EFFECTIVE IN RELIEVING PAIN?<sup>2</sup>**

Looking at research & studies, SCS is effective in reducing pain with variable reductions of pain scores. Pain scores can be reduced anywhere from 2/10 to >5/10. SCS seems to be more effective at relieving leg pain over back pain.

A SCS trial is undertaken for each patient, to identify the potential benefits of permanent SCS to each individual and their pain.

### **IS SCS EFFECTIVE IN IMPROVING FUNCTION?<sup>2</sup>**

The effect of SCS on function is less clear, with the majority of studies not focusing on function and some studies not designed to identify changes in function. The SCS trial is designed to assist in identifying whether improvements in function would result for each individual.

### **DO SCS EFFECTS ON PAIN AND FUNCTIONING CHANGE OVER TIME?<sup>2</sup>**

Most of the research does not clearly report data to answer this question. However, there is some suggestion that pain relief reported after SCS decreases over time.

In some studies that showed that pain scores reduced over time, 80% of the patients said they would undergo the procedure if they had to do it all over again. A common reason for not wanting to repeat the procedure and having the device removed, was pain at the receiver site.

### **TRIAL**

The trial is approximately 7- 14 days, and is designed to clarify whether SCS will be beneficial in managing your pain. You are encouraged during the trial to undertake your regular daily activities to identify what benefit SCS would be to you. There can be technical failures with the trial but may be treated with IPG & leads secured.

### **COMPLICATIONS<sup>2</sup>**

Complications can occur with both trial stimulation and permanent implanted stimulators. Looking at 22 research studies the following complications occurred:

• Any complication	34%
• Stimulator revision	23%
• Stimulator removal	11%
• Dural puncture	11%
• Equipment failure	10%
• Pain in the region of components	6%
• Superficial infection	4.5%
• Biological complications other than infection or local pain	3%
• Deep infection	0.1%

### **WHAT YOU CAN'T DO ONCE A SCS IS IMPLANTED**

- You can't have an MRI. The equipment is not MRI compatible. (Medical companies are developing MRI compatible SCS devices, but there are a number of limitations with these).
- You will need to turn off the stimulator when you are driving, for medico-legal reasons.

### **References:**

1. Cameron T. Safety and efficacy of spinal cord stimulation for the treatment of chronic pain: a 20-year literature review. *J Neurosurg.* 2004 Mar;100(3 Suppl Spine):254-67.
2. Turner, JA, Loeser JD, Devon RA, Sanders SB. Spinal cord stimulation for patients with failed back surgery syndrome or complex regional pain syndrome: a systematic review of effectiveness and complications. *Pain,* 2004; 108: 137-147Top of FormBottom of Form