



**Effectiveness of
electrical stimulation
and continuity of care for
the treatment of pressure sores
in users with spinal cord injury**

EXECUTIVE SUMMARY

of the abridged ETMI report

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ISSUE

People with spinal cord injury (SCI) require frequent assessment and regular follow-up by members of an integrated team of healthcare professionals to prevent and treat pressure sores (Norton *et al.*, 2019). Complementary therapies are suggested to promote healing of this type of wound, including electrical stimulation (ES). Although this therapy is an important component of wound treatment in the Canadian healthcare system, it is rarely used in clinical practice (Hao *et al.*, 2023). Furthermore, the use of ES varies considerably between institutions. This raises questions about the effectiveness of this treatment, equitable access to it and the continuity of pressure wound care in institutions, home care services, and community services.

CONTEXT

The CIUSSS de la Capitale-Nationale myelopathy program provides services to people with spinal cord injuries. Physiotherapists in this program have been trained to offer electrical stimulation (ES) as an adjunctive therapeutic option to standard pressure sores treatments for this client group. Despite the clear clinical effectiveness of ES, according to available evidence, there is still no consensus within the scientific community regarding the management of pressure sores using this treatment method. The divergence of practices at regional level is a cause for concern.

OBJECTIVE

The aim of this evaluation of technologies and intervention methods (ETIM) is to document the effects of ES interventions for treating pressure ulcers (PU) in people with spinal cord injury (SCI), as well as related clinical practices.

For further information, see the report at:

https://www.ciusss-capitalenationale.gouv.qc.ca/sites/d8/files/docs/MissionUniversitaire/ETMISSS/Rapport-ETMISS_Stimulation-electrique.pdf

METHODOLOGY

A systematic literature review was conducted to collect, evaluate, and synthesize relevant studies related to the issue. The MEDLINE (Ovid), CINAHL, and Embase bibliographic databases were searched using a literature search strategy, as well as the web, to identify studies published on the subject between January 2010 and April 2024. Contextual and experiential data were also collected from February 1 to June 15, 2025 using a three-part online questionnaire targeting managers and professionals who use or have used ES, as well as users who receive or have received ES for the treatment of pressure ulcers.

RESULTS

Of the 693 documents identified, 11 were selected for inclusion in the review. These included six primary studies, three systematic reviews, and two practice guidelines published between 2010 and 2018.

Eight of the documents measured the effectiveness of ES according to different parameters. The results presented show that ES has enabled:

- Improve wound healing rates and appearance;
- Reduce gross wound area;
- Increase the number of healed wounds;
- Increase blood flow in the skin surrounding the lesion.

The reported side effects are minor and fade quickly: irritation, redness, swelling and itching.

Two documents and empirical data identified the following issues:

- Lack of training
- Lack of communication
- Lack of collaboration
- Lack of resources (human, financial and time-related).

FINDINGS

Finding 1:

Despite its proven effectiveness in the literature and recommendations to use ES to treat pressure ulcers in people with SCI, this technique is reportedly underused, and perceptions of its effectiveness are mixed in the Capitale-Nationale and Montreal regions.

Finding 2:

The limited available data on the safety of ES does not permit a definitive conclusion regarding the safety of this approach. Further studies are needed.

Finding 3:

Professional and organizational challenges associated with using ES to treat pressure wounds in people with SCI include a lack of training, collaboration, communication and resources.

CONCLUSION

Although scientific literature shows that ES is an effective treatment for pressure sores in people with spinal cord injuries, local issues such as outdated training, unavailable equipment, organizational decisions compromise its use. This situation could hinder the desired regional cohesion in the treatment of pressure sores in this clientele.

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