PO Box 65503, Mairangi Bay, Auckland 0754, New Zealand

Email: admin@speechtherapy.org.nz | Website: www.speechtherapy.org.nz. Tel:09 475 0214

New Zealand Speech-language Therapists' Association
Te Kāhui Kaiwhakatikatika Reo Kōrero o Aotearoa

Use of Neuromuscular Electrical Stimulation in Speech and Swallowing Rehabilitation

NZSTA Position Statement

Author: Dr Anna Miles - Expert Advisor Adult Dysphagia - NZSTA

New Zealand Speech-language Therapists' Association
Te Kāhui Kaiwhakatikatika Reo Kōrero o Aotearoa

Use of Neuromuscular Electrical Stimulation in Speech and Swallowing Rehabilitation

NZSTA Position Statement

NZSTA Position

We advise our members not to use neuromuscular electrical stimulation (NMES) in speech and swallowing rehabilitation at this time.

Current evidence

The exploration of NMES for speech and swallowing rehabilitation has received substantial research interest over the last decade, especially in patients after stroke. Several systematic reviews exploring the utility of NMES for swallowing have recently been published. They provide a good overview of the current evidence base.

NMES shows some effectiveness in improving swallowing when combined with routine swallowing therapy. There is limited research on long-term effects, and effects vary across individual studies. All reviews conclude that further work is required before NMES can be safely and effectively translated into widespread routine clinical practice. Reviews conclude that research is still needed to establish safe and appropriate guidelines, including criteria for patient selection, optimal procedures and therapy settings for clinical practice across different populations.

NMES in dysarthria treatment is also gaining interest. Again, while some positive outcomes are reported, greater clarity of protocol, safety and patient criteria is recommended before this can become standard practice for SLTs in New Zealand.

NZSTA is not the only Mutual Recognition Agreement Association following this stance at this time.

Speech Pathology Australia also recognises the increasing interest in NMES but warns of the limited evidence base: https://www.speechpathologyaustralia.org.au/Public/Public/About-Us/Our-organisation/Position-statements/NMES.aspx#:~:text=Summary,an%20advantage%20over%20traditional%20treatment.

New Zealand Speech-language Therapists' Association
Te Kāhui Kaiwhakatikatika Reo Kōrero o Aotearoa

References

Assoratgoon I, Shiraishi N, Tagaino R, Ogawa T, Sasaki K. (2023) Sensory neuromuscular electrical stimulation for dysphagia rehabilitation: A literature review. Journal of Oral Rehabilitation, 50 (1): 157-164. https://doi.org/10.1111/joor.13391.

Balzan P, Palmer R, Tattersall C. (2023) Speech and language therapists' management practices, perceived effectiveness of current treatments and interest in neuromuscular electrical stimulation for acquired dysarthria rehabilitation: An international perspective. International Journal of Language & Communication Disorders. https://doi.org/10.1111/1460-6984.12963

Miller S, Peters K, Ptok M. (2022) Review of the effectiveness of neuromuscular electrical stimulation in the treatment of dysphagia – an update. GMS German Medical Science — an Interdisciplinary Journal. doi: 10.3205/000310

Purnama, P. A., Kariasa, I. M., & Waluyo, A. (2023). The Effectiveness of Neuromuscular Electrical Stimulation on Swallowing Function in Stroke Patients with Dysphagia: A Systematic Review. British Journal of Nursing Studies, 3(1), 64–72. https://doi.org/10.32996/bjns.2023.3.1.9.

Schreiber F., Froio N, Coll-Fernandez R, et al. (2023) Neuromuscular Electrical Stimulation for Dysphonia and Dysarthria: A Systematic Review. Principles and Practice of Clinical Research, 8(4). https://doi.org/10.21801/ppcrj.2022.84.10.

Wang Y, Xu L, Wang L, Jiang M, Zhao L. (2023) Effects of transcutaneous neuromuscular electrical stimulation on post-stroke dysphagia: a systematic review and meta-analysis. Frontiers of Neurology, 14. https://doi.org/10.3389/fneur.2023.1163045.

Wang, Z., Xiao, Z., Shen, Q. et al. Neuromuscular Electrical Stimulation for Post-Stroke Dysphagia Treatment: A Systemic Evaluation and Meta-Analysis of Randomized Controlled Trials. Dysphagia (2023). https://doi.org/10.1007/s00455-023-10626-