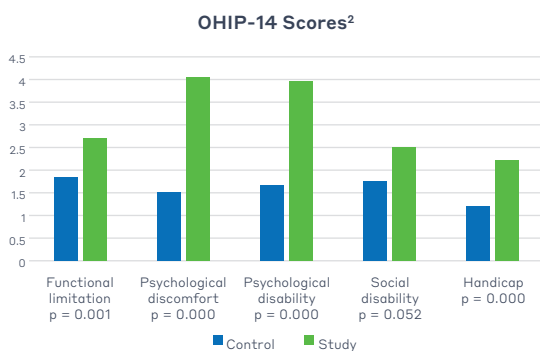


# research shows inferior alveolar nerve deficits can significantly diminish patients' quality of life

As research-driven treatments continue to improve functional outcomes for patients, so should nerve reconstruction efforts to ensure patients don't just survive—but thrive.

During segmental mandibular resection, hard and soft tissue, including nerve tissue, is resected, often leading to loss of neurosensory function and diminished quality of life.<sup>1</sup>

Patients with persistent neurosensory disturbances after inferior alveolar nerve (IAN) damage consistently report reduced quality of life related to their injuries. When evaluated with clinically validated, subjective oral health assessments focused on quality of life, such as the Oral Health Impact Profile-14 (OHIP-14), patients reported more functional limitations, psychological discomfort and disabilities as compared to those who did not suffer the same injury.<sup>2-4</sup>



Control group: n=100; no neurosensory defect of IAN  
Study group: n=100; neurosensory defect of IAN

## reported functional/psychological limitations include:<sup>3,5,6</sup>

- Difficulty eating and detecting food on lips
- Speech deterioration
- Unawareness of drooling
- Increased social anxiety
- Self-induced trauma to lips due to accidental biting

These physical limitations have negative social and psychosocial implications for patients. They've been shown to affect patients' ability to socialize, enjoy food and retain employment.

They can also impact patients' self-perceptions, leading to increased social anxiety, difficulty managing emotions of anger and irritability, and even clinical depression.<sup>3,4,6,7</sup>



# what can you do?

Patients expressed significant frustration and dissatisfaction associated with their IAN injury, indicating a need for better postoperative management.<sup>3</sup>

## 1. Involve and prepare patients for what's ahead

- Manage expectations by communicating IAN surgical options and outcomes
- Explain quality-of-life implications associated with neural damage
- Provide more information preoperatively regarding recovery prognosis

## 2. Offer your patients a potential solution: nerve reconstruction

Studies have shown that repairing the nerve at the time of ablative mandibular resection is more likely to help patients achieve full functional outcomes and improved quality of life. A variety of nerve reconstructive techniques exist to repair the IAN.<sup>8-10</sup>

Connector-Assisted Repair<sup>®</sup> with Avance<sup>®</sup> Nerve Graft and Axoguard Nerve Connector<sup>®</sup> has demonstrated consistent meaningful recovery rates of 89% when used for IAN repair, without the comorbidities commonly associated with autograft.<sup>11</sup>



**“Once the nerve was getting better, I could talk better. Eating was definitely a lot easier...it was really nice once those problems all went away, and I was back to normal.”**

—Veronica, Axogen patient

# you have the power to help patients live better lives

Surgeons aim to provide patients the best possible outcome. Nerve reconstruction is a vital part of that. Contact Axogen to learn how you can bring nerve reconstruction into your practice—and help your patients feel like themselves again.



Hear Veronica's full story and others like hers at [axogeninc.com/patient-stories](https://axogeninc.com/patient-stories)

## references

- Miloro M, Markiewicz M. Virtual surgical planning for inferior alveolar nerve reconstruction. *J Oral Maxillofac Surg.* 2017;75:2442-2448.
- Cakir M, Karaca iR, et al. Effects of inferior alveolar nerve neurosensory deficits on quality of life. *Niger J Clin Pract.* 2018;21:206-2011.
- Patel N, Ali S, et al. Quality of life following injury to the inferior dental or lingual nerve—a cross-sectional mixed-methods study. *Oral Surg.* 2018;11:9-16.
- Leung YY, Lee TC, et al. Trigeminal neurosensory deficit and patient reported outcome measures: the effect on life satisfaction and depression symptoms. *PLoS One.* 2013;8(8):e72891.
- Sandstedt P, Sorensen S. Neurosensory disturbances of the trigeminal nerve: a long-term follow-up of traumatic injuries. *J Oral Maxillofac Surg.* 1995;53(5):498-505.
- Pogrel A, Jergensen R, et al. Long-term outcome of trigeminal nerve injuries. *J Oral Maxillofac Surg.* 2011;69(9):2284-2288.
- Leung YY, McGrath C, et al. Trigeminal neurosensory deficit and patient reported outcome measures: the effect on quality of life. *PLoS One.* 2013;8(10):e77391.
- Ducic I, Yoon J. Reconstructive options for inferior alveolar and lingual nerve injuries after dental and oral surgery. *Annals of Plastic Surgery.* 2019;82(6):653-660.
- Salomon D, Miloro M. Outcomes of immediate allograft reconstruction of long span defects of the inferior alveolar nerve. *J Oral Maxillofac Surg.* 2016;0278-2391/16/30251-8.
- Akbari M, Miloro M. The Inferior Alveolar nerve: to graft or not to graft in ablative mandibular resection? *J Oral Maxillofac Surg.* 2019;77(6):1280-1285.
- Zuniga J, Williams F, et al. A case-and-control, multisite, positive controlled, prospective study of the safety and effectiveness of immediate inferior alveolar nerve processed nerve allograft reconstruction with ablation of the mandible for benign pathology. *J Oral Maxillofac Surg.* 2017;75(12):2669-2681.

## indications and trademark disclaimers

### Avance Nerve Graft

REGULATORY CLASSIFICATION: Avance Nerve Graft is processed and distributed in accordance with U.S. FDA requirements for Human Cellular and Tissue-Based Products (HCT/P) under 21 CFR Part 1271 regulations, U.S. State regulations and the guidelines of the American Association of Tissue Banks (AATB). Additionally, international regulations are followed as appropriate. Avance Nerve Graft is to be dispensed only by or on the order of a licensed physician.

INDICATIONS FOR USE: Avance Nerve Graft is a processed nerve allograft (human) intended for the surgical repair of peripheral nerve discontinuities to support regeneration across the defect.

CONTRAINDICATIONS: Avance Nerve Graft is contraindicated for use in any patient in whom soft tissue implants are contraindicated. This includes any pathology that would limit the blood supply and compromise healing or evidence of a current infection.

**Axogen Corporation:** Phone 888.Axogen1 (888.296.4361) | Fax 386.462.6801 | [customer@axogeninc.com](mailto:customer@axogeninc.com) | [www.axogeninc.com](http://www.axogeninc.com)

© 2021 Axogen Corporation.

The stylized "a" logo is a trademark of Axogen Corporation. Axoguard Nerve Connector and Axoguard Nerve Protector are manufactured in the United States by Cook Biotech Incorporated, West Lafayette, Indiana.

### Axoguard Nerve Connector

INDICATIONS FOR USE: Axoguard Nerve Connector is intended for the repair of peripheral nerve discontinuities where gap closure can be achieved by flexion of the extremity. The device is supplied sterile and is intended for one-time use.

CONTRAINDICATIONS: This device is derived from a porcine source and should not be used for patients with known sensitivity to porcine material.

**revolutionizing the science of nerve repair™**

