

NEUROMODULATORS

MEDIA FACTSHEET

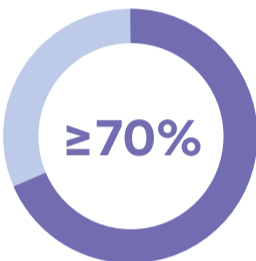
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What are neuromodulators?

Neuromodulators are substances that can affect the activity of neurotransmitters.¹ Botulinum toxin is a type of neuromodulator that, when directly injected into a muscle, can prevent the release of a neurotransmitter that causes muscle contraction.¹ **This means the muscle relaxes and gradually smooths the appearance of the overlying skin, improving lines and wrinkles.**²

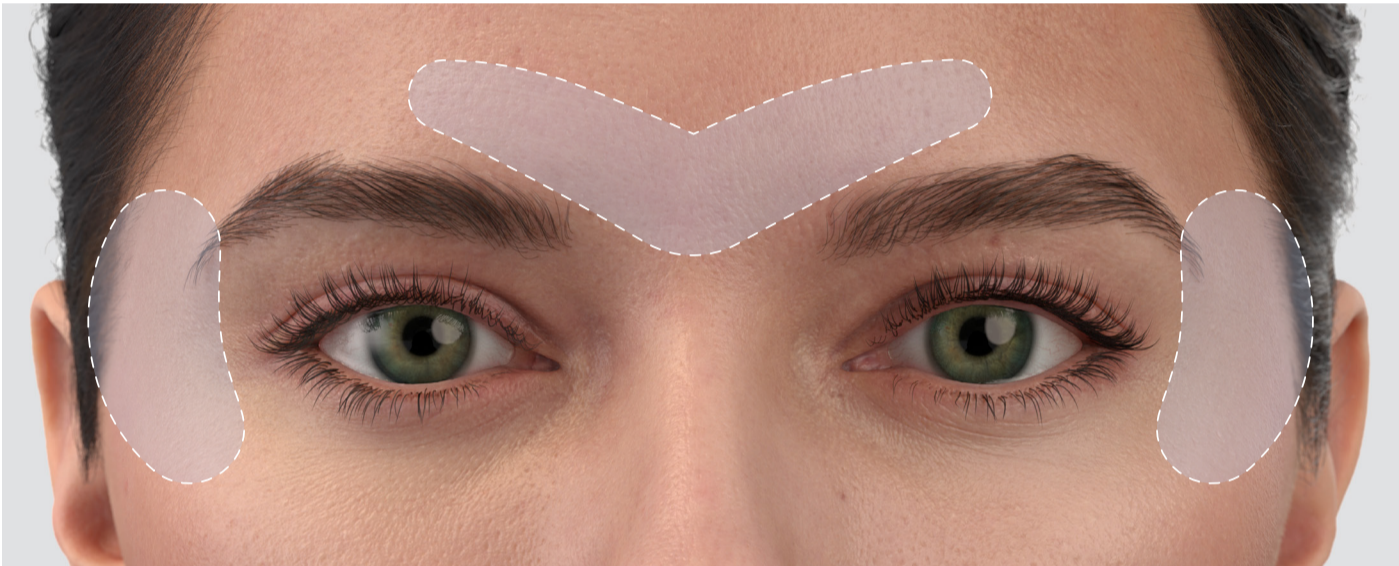


Wrinkles, such as frown lines and crow's feet, are caused by changes to the underlying structure of the skin over time.¹ They can cause people to look old, sad, tired, or angry, regardless of how they may feel, and as a result, can **reduce self-confidence** and **affect quality of life**.^{3,4}



In one study, **70%** or more patients reported that upper facial lines left them feeling unattractive, bothered, and stressed.⁵

Neuromodulators have been used to improve wrinkles for more than **30 years**, and are commonly used to treat frown lines and crow's feet.^{6,7}



The injectable aesthetics **market has historically grown** by more than 10% per year.⁸ Changing attitudes around wellness, beauty and healthy aging have **increased awareness and acceptance of aesthetics**, creating demand from a more diverse customer base, including younger people and men, with the neuromodulator market for men increasing from 10% to 15% between 2018 and 2021.⁸



However, there has been a historic **lack of innovation** in the neuromodulation space for many years.^{6,9} Consequently, patients and healthcare professionals must settle for traditional manufacturing and reconstitution processes that can limit performance, ease-of-use and reliability.^{6,9}

Limitations with existing neuromodulators



Most commercially available neuromodulators begin to take effect within **two to five days**, with maximum results achieved within **two weeks**, and lasting around **three to four months**.⁷



Most neuromodulators are supplied in **powder form**, requiring healthcare professionals to dissolve the powder in liquid, which can be inconvenient, increase risk of dosing errors, and increase packaging waste.^{7,10}



The most common reasons why patients are dissatisfied with current neuromodulators are due to the outcomes not meeting their **expectations** and results not looking **natural**.¹¹



Patients seek **fast and sustained results**, and healthcare professionals look for **longer-lasting and more convenient, ready-to-use solutions**.^{8,12}

Galderma's commitment to advancing the neuromodulator space

Galderma has a **long history** of delivering innovative and effective aesthetic solutions and is the **leading innovator** in neuromodulators, with a range of solutions aiming to address every single injector and patient need.

With the **broadest injectable aesthetics portfolio** on the market, Galderma has the heritage, expertise and capability to continue to sustainably build our **category-leading pipeline** to meet the expectations of our customers and the needs of patients.

References:

1. Gart MS, Gutowski KA. Aesthetic uses of neuromodulators: Current uses and future directions. *Plastic and Reconstructive Surgery*. 2015;136:S62-S71

2. Wortzman MS, Pickett A. The science and manufacturing behind botulinum neurotox-in type A-ABO in clinical use. *Aesthet Surg J*. 2009;29:S34-S42

3. Finn CJ, et al. Social Implications of Hyperfunctional Facial Lines. *Dermatologic Surgery*. 2003;29:450-455

4. Carruthers A, et al. Facial aesthetics: Achieving the natural, relaxed look. *Journal of Cosmetic and Laser Therapy*. 2007;9:6-109

5. Dayan A, et al. The Psychological Impacts of Upper Facial Lines: A Qualitative, Patient-Centered Study. *Aesthetic Surgery Journal Open Forum* (US: Oxford University Press). 2019; 1(2)

6. Hasan H, et al. Manufacturing and Clinical Formulations of Botulinum Neurotoxins. *Handb Exp Pharmacol*. 2021;263:49-62

7. Johnson AJ & Chen DS. Office-based facial plastics procedures: Neuromodulators. *World J Otor Head Neck Surg*. 2023;9:220-226

8. McKinsey. From extreme to mainstream: The future of aesthetic injectables. Available [online](#). Accessed July 2024

9. Montes JR, et al. Technical Considerations for Filler and Neuromodulator Refinements. *Plast Reconstr Surg Glob Open*. 2016;4(12 Suppl):e1178

10. Asher B, et al. Liquid formulation of abobotulinumtoxinA exhibits a favorable efficacy and safety profile in moderate to severe glabellar lines: A randomized, double-blind, placebo- and active comparator-controlled trial. *Aesthetic Surgical Journal*. 2018;38(2):183-191

11. McDonald CB, et al. The importance of patient mindset: cosmetic injectable patient experience exploratory study – part 1. *Aesthetic Surgery Journal Open Forum* (US: Oxford University Press). 2022;4

12. Nestor M, et al. Key Parameters for the Use of AbobotulinumtoxinA in Aesthetics: Onset and Duration. *Aesth Surg J*. 2017;37(S1):S20–S31