



Frown Line Treatment with Neuromodulators

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NCCPA Board Certified

MINT PDO Key Opinion Leader & National Trainer

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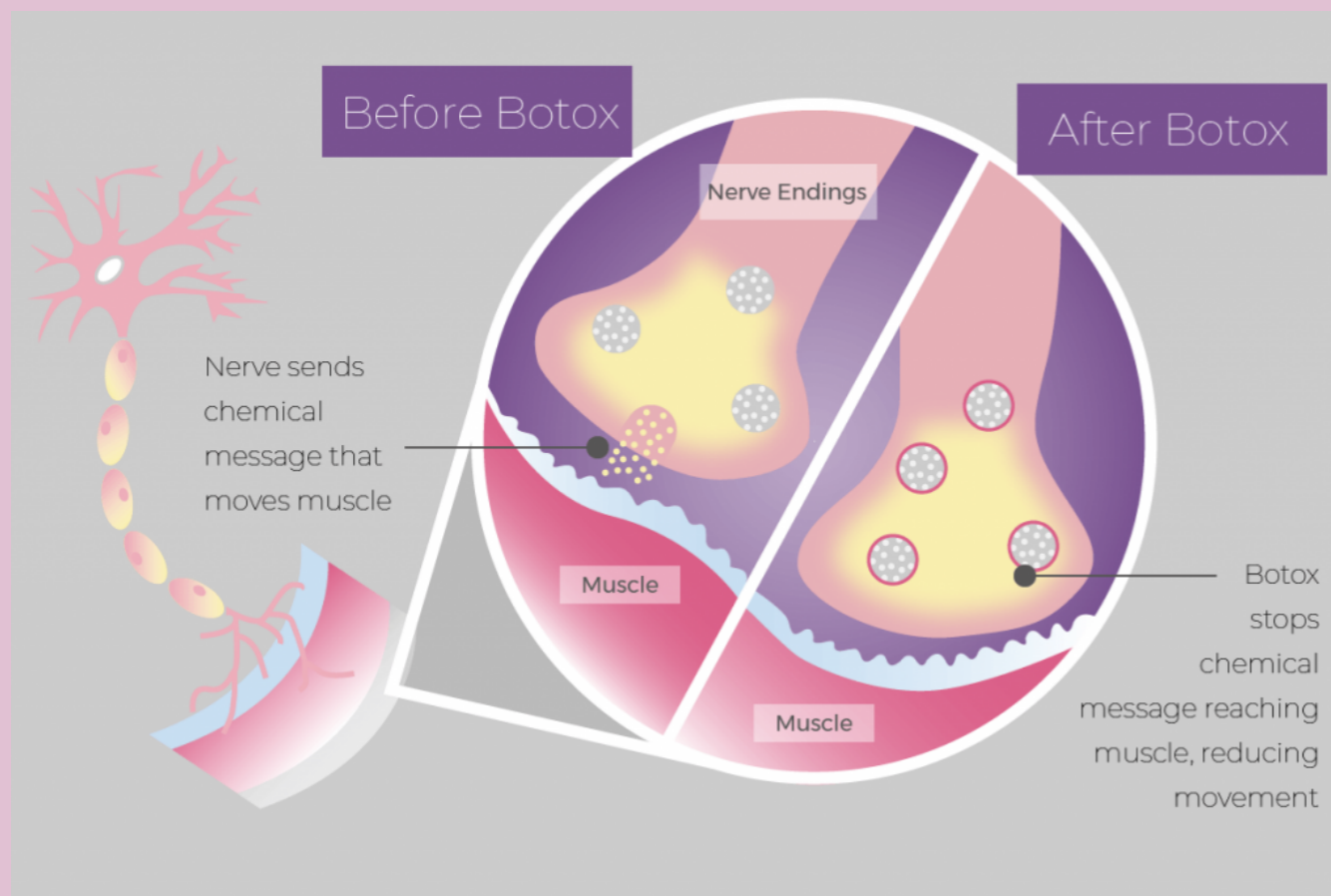
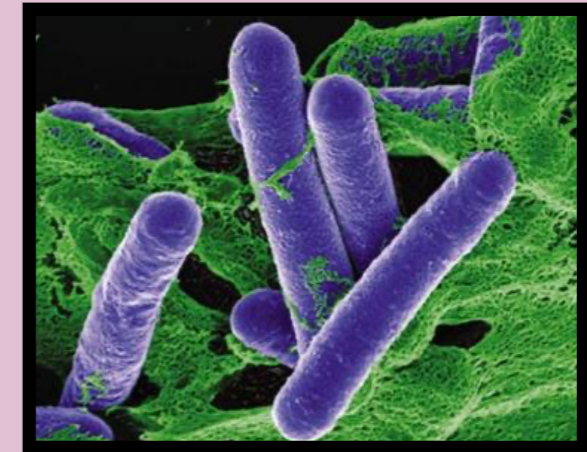
South University Faculty

Medical University of South Carolina Faculty



How Do Neuromodulators Work?

- * Botulinum Toxin is derived from Clostridium Botulinum.
- * Acetylcholine is a neurotransmitter that controls muscle movement.



1. Botulinum Toxin blocks the release of acetylcholine
2. This temporarily weakens muscle movement
3. Which in turn causes the overlying skin to smooth out and softens the wrinkles caused by muscle movement.
4. Gradually over the next 3-4 months the neuromodulator is slowly eliminated from the body, and muscle activity returns.

4 Neuromodulators in the US



All Neuromodulators temporarily relax the targeted muscle leading to limited movement and prevention of lines and wrinkles.

Results will start to appear within in the 1st week of treatment but will take 2 weeks for full treatment to take place.

Results will last 3-6 months, however re-treatment is recommended every 3 months.

1. Botox

- Made by Allergan
- FDA approved in 2002
- Onset 3-5 days
- Dosing average 20u per area
- OG many long term studies done

2. Dysport

- Made by Galderma
- FDA approved in 2009
- Onset 2-4 days
- Dosing average 50u per area
- Widest spread
- No suitable for patients with an allergy to lactose or cow's milk protein

3. Xeomin

- Made by Merz
- FDA approved in 2011
- Onset 5-7 days
- Dosing average 20u per area
- Only product without accessory proteins (great for patients who have stopped responding to other neuromodulators)

4. Jeuveau

- Made by Evolus
- FDA approved in 2019
- Onset 1-4 days
- Dosing average 20u per area
- Tightest spread, most precise

BOTOX[®]
—Cosmetic

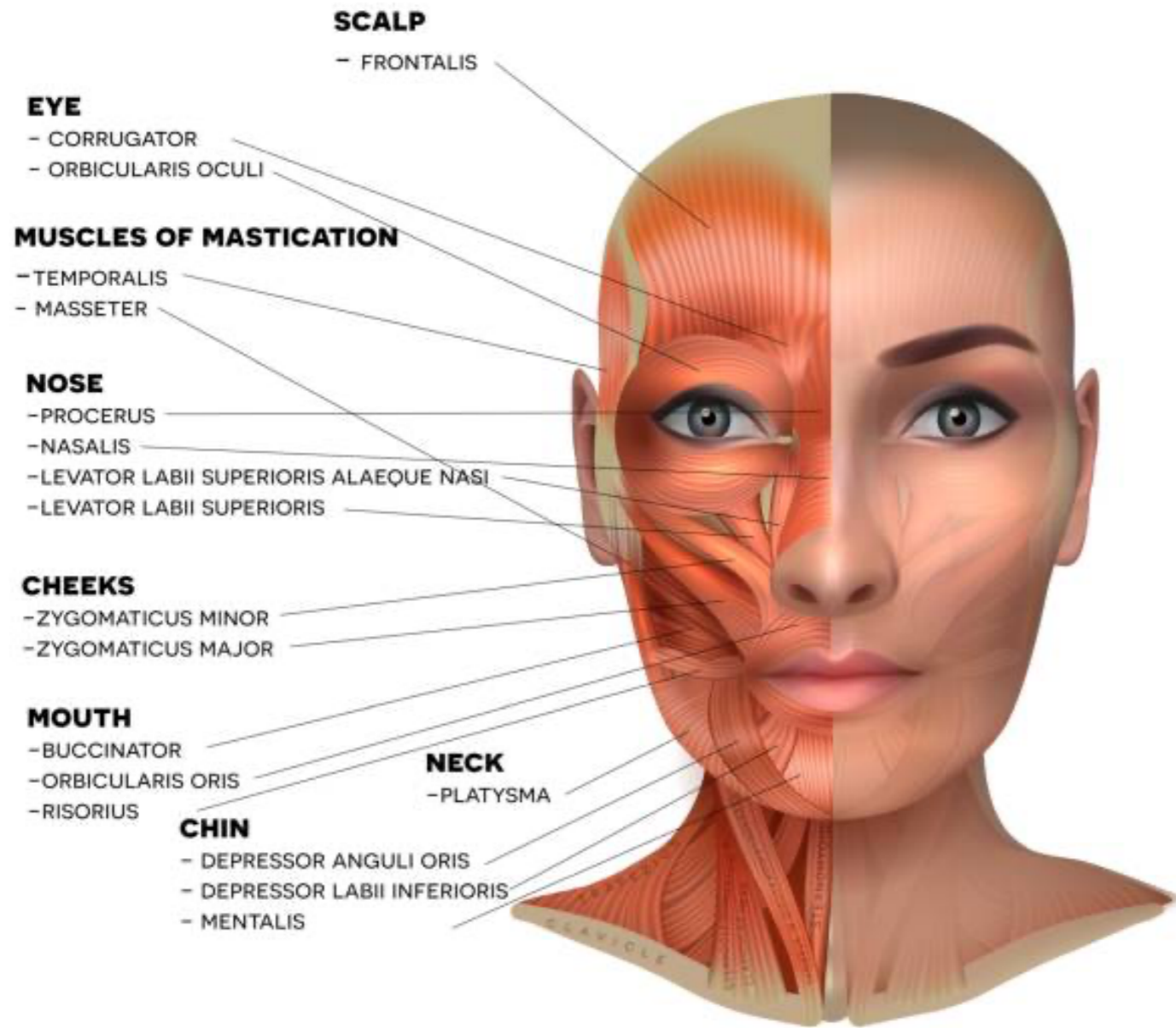
Dysport[™]
abobotulinumtoxinA

XEOMIN[®]
COSMETIC[™]

Jeuveau[™]
prabotulinumtoxinA-xvfs
injection

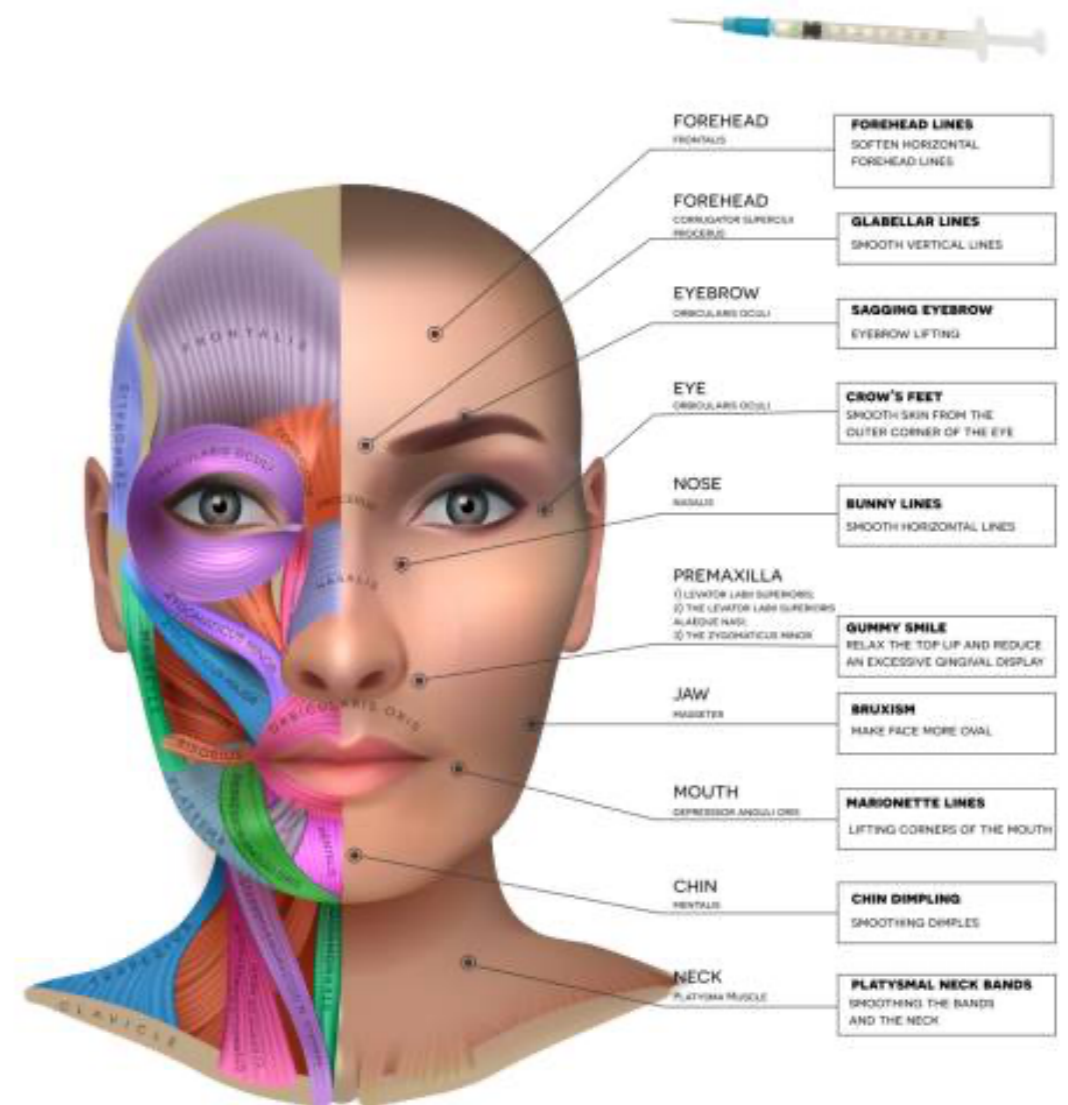
Review of Basic Facial Anatomy

MUSCLES OF THE FACE



NEUROTOXIN INJECTIONS

TREATMENT AREAS, MUSCLES TARGETED AND RESULTS

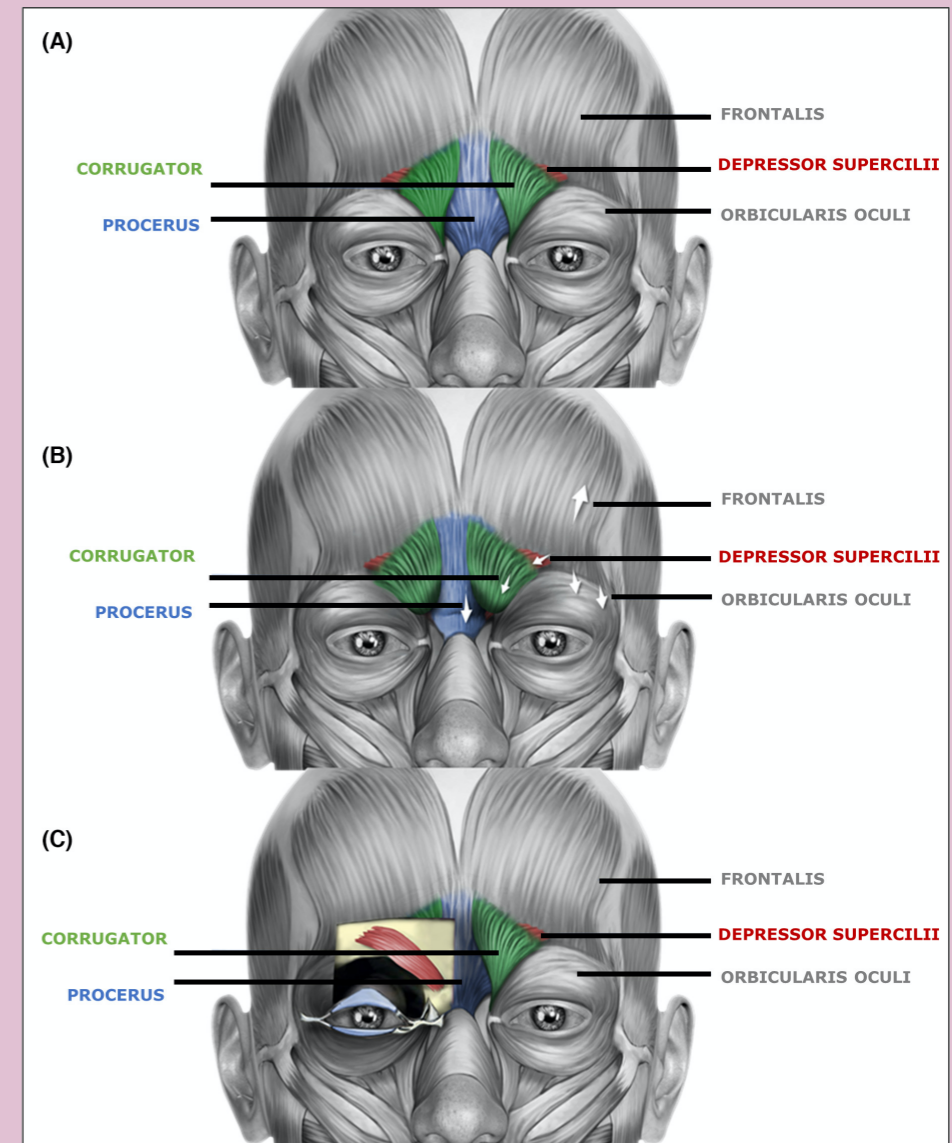


Glabellar Complex

Frown lines result from contraction of the glabellar complex muscles

Muscles Targeted: Procerus, corrugator supercilii, and depressor supercilii.

Dosing: 20 units (Botox, Xeomin, Jeuveau) *or* 50 units (Dysport)



Patient Assessment



1. Assess patient at rest without any movement, making note of lines/wrinkles.
2. Ask the patient to frown or make an “angry face”. Make note of wrinkles that form, and determine where the targeted muscles are on the patient's face. Each patient's anatomy is slightly different thus assessment and understanding of underlying anatomy is crucial.

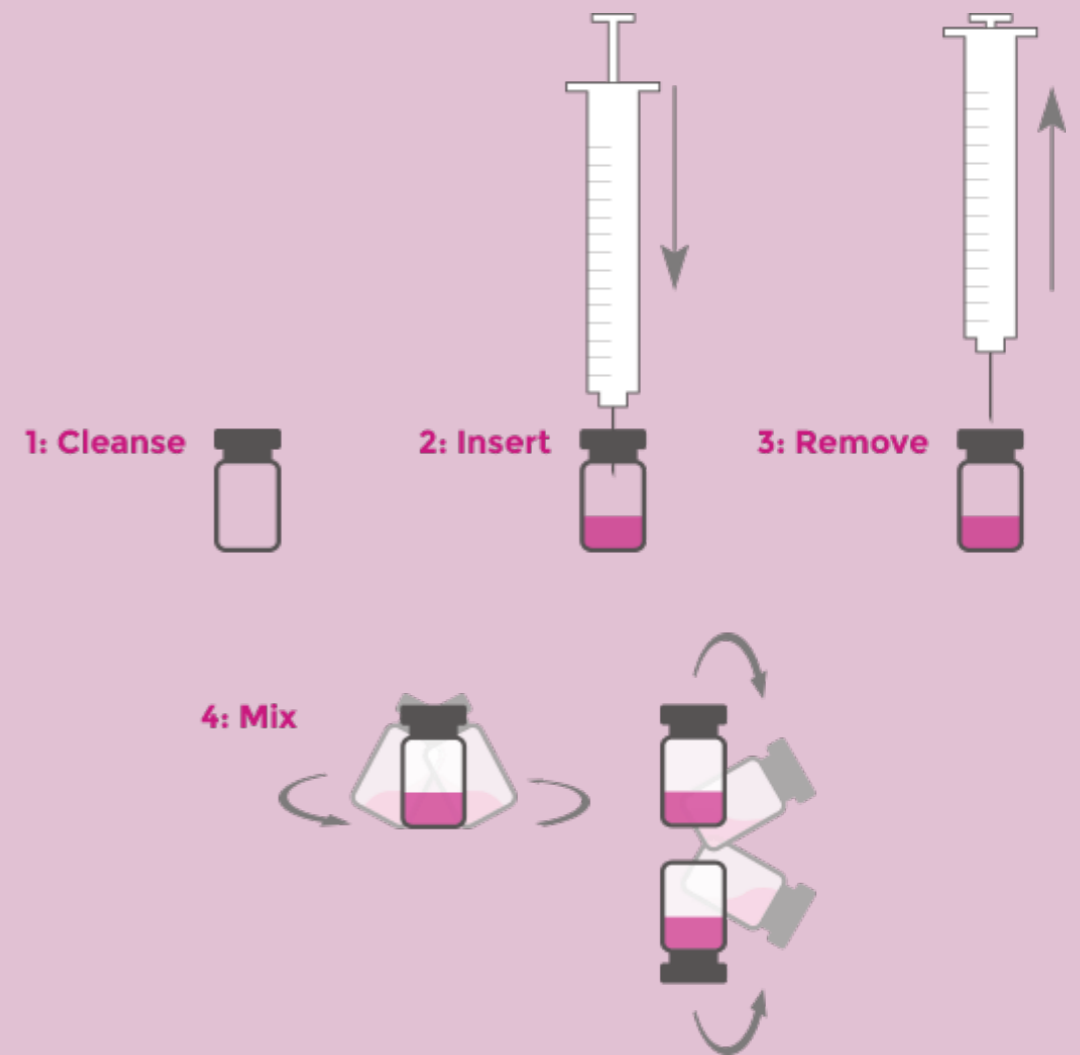
Reconstitution

Botox, Xeomin & Jeuveau all come in 100 unit vials

Reconstitute with 2.5mL of preservative-free Sodium Chloride prior to injection. The concentration of the solution will result in 4 units per 0.1 mL.

Dysport comes in a 300 unit vial

Reconstitute with 2.5mL of preservative-free Sodium Chloride prior to injection. The concentration of the solution will result in 10 units per 0.08 mL.



Preparation

Anesthesia

Not necessary for most patients however ice or topical anesthetic may be used.

1. Position the patient in a seated position with head firmly on headrest.
2. Identify glabellar complex.
3. Identify injection points.
4. Cleanse skin with alcohol and allow to dry.
5. Mark 5 points to be injected.
6. Draw up 20 units of Botox, Xeomin or Jeuveau. Or 50 units of Dysport.



Injection Technique



Botox (B), Xeomin (X), and Jeuveau (J)

5 injection sites, each site is 4 units resulting in a total of 20 units for the treatment area.

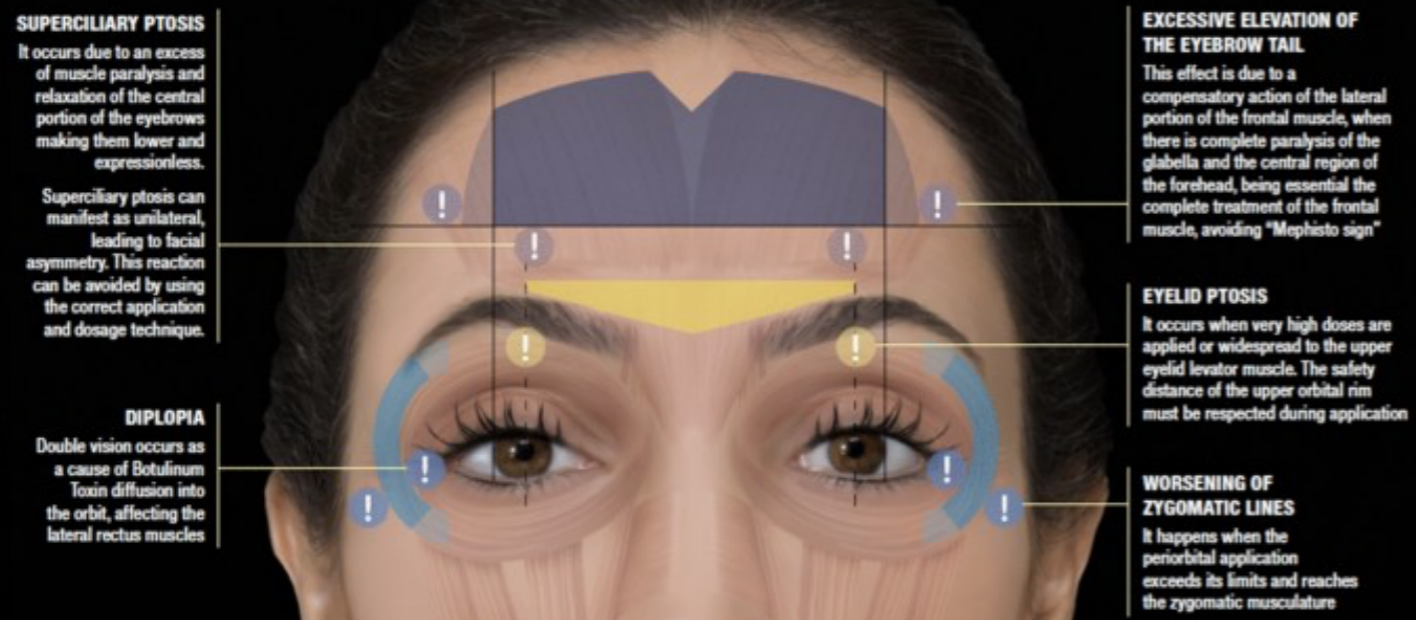
Dysport(D)

5 injection sites, each site is 10 units resulting in a total of 50 units for the treatment area.

The Safety Zone:

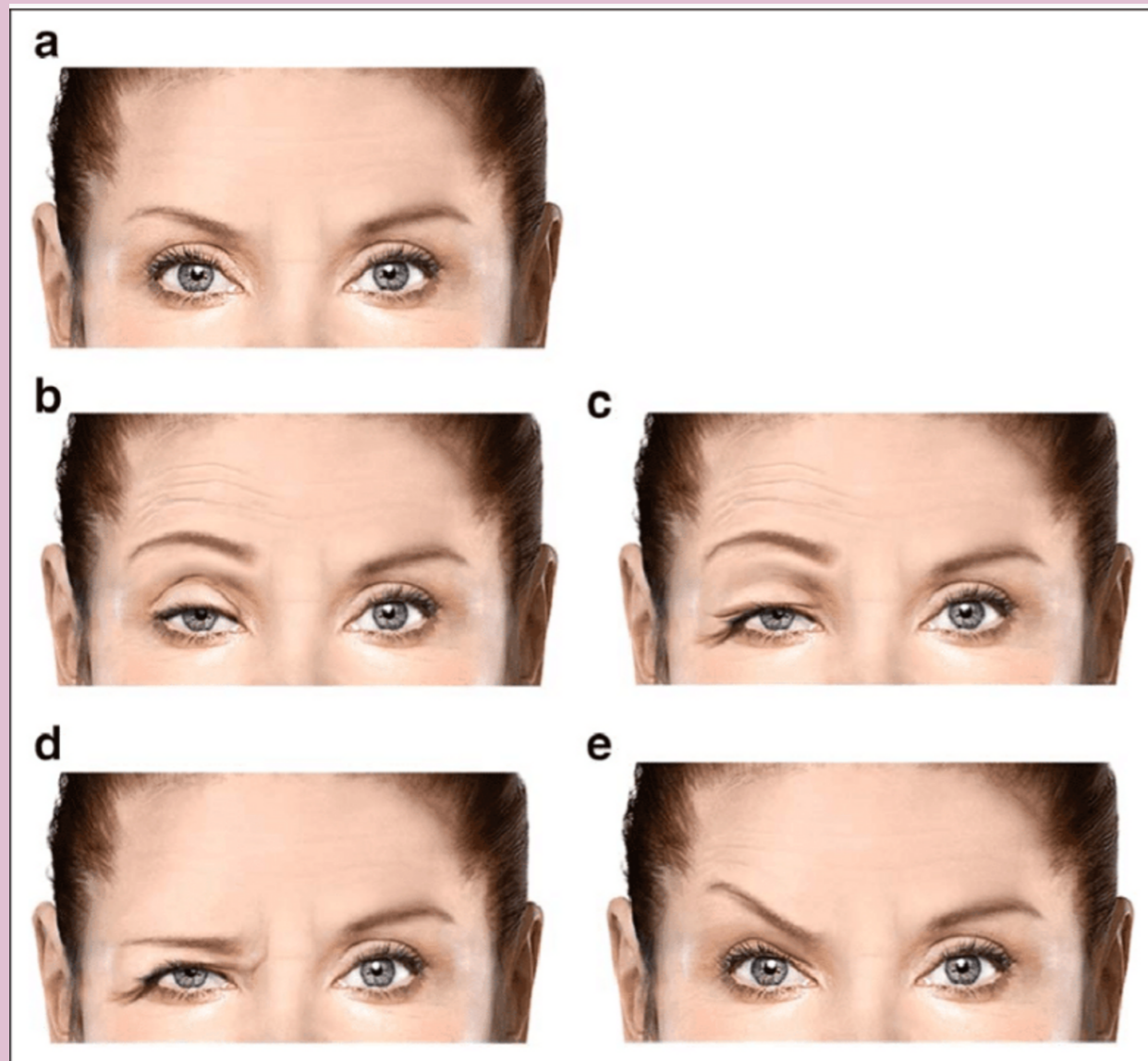
At least 1 cm above the supraorbital ridge to the lateral limbus line and 1 cm below the glabellar prominence.

1. Stay within your safety zone.
2. **Procerus:** Pinch the sides of the muscle with your non-injecting hand directing the product away from the eyes. Insert the needle deep and inject 4u(B,X,J) or 10u(D).
3. **Corrugator Head:** Pinch the muscle with your non-injecting hand and insert the needle deep into the left head of the corrugator as you inject 4u(B,X,J) or 10u(D) and repeat on the right.
4. **Tail of Depressor Supercilii:** Insert the needle on the left from a lateral approach very superficially about 1-2 cm above the supraorbital ridge at the lateral margin of the pull of muscle. Inject 4u(B,X,J) or 10u(D) and repeat on the right.



Follow-Up & Management

Assess patients 2 weeks post their treatment, dynamic muscle movement should be relaxed. If lines persist, additional treatment may be necessary and can be done at that time.



Complications:

Blepharoptosis (droopy eyelid) - Temporary, can occur if toxin is injected too close to supraorbital ridge at lateral limbus line. Usually resolves in 6-12 weeks. UpNeeq can be prescribed to cause contraction of Mueller's muscle resulting in elevation in the eyelid.

Eyebrow Ptosis (droopy eyebrow)- Temporary, can occur if toxin is injected lateral to the lateral limbus line. Usually resolves in 6-12 weeks.

Retreatment

Patients should return every 3-6 months for retreatment.

Any adjustments in dosing made at the initial follow-up should be added at the follow-up.



Thank you and Goodluck!

If you have any further questions please feel free to reach out to me at

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Or on instagram @galidermaesthetics