



Level 1 Botulinum Toxin & Lip Augmentation

Aims

- Day 1

- Background & application botulinum toxin
- Patient assessment and case selection
- Introduction to treatment areas and techniques
- Treatment of upper face using botulinum toxin
- Management of adverse events

- Day 2

- Background and application of dermal filler
- Patient assessment and case selection
- Treatment concepts for lips using needle techniques
- Patient treatment
- Management of adverse events

Course outcomes

- Knowledge of botulinum toxin and indications for treatment
- Knowledge of the types of filler and which to select for a lip filler procedure
- Confidently assess a patient and plan their treatment for upper face toxin and lip augmentation
- Be able to manage patient expectations for upper face toxin and lip augmentation
- Confidently treat a patient from start to finish for the treatment areas covered
- Be able to diagnose and manage adverse events after toxin treatment and lip augmentation

Health & Safety

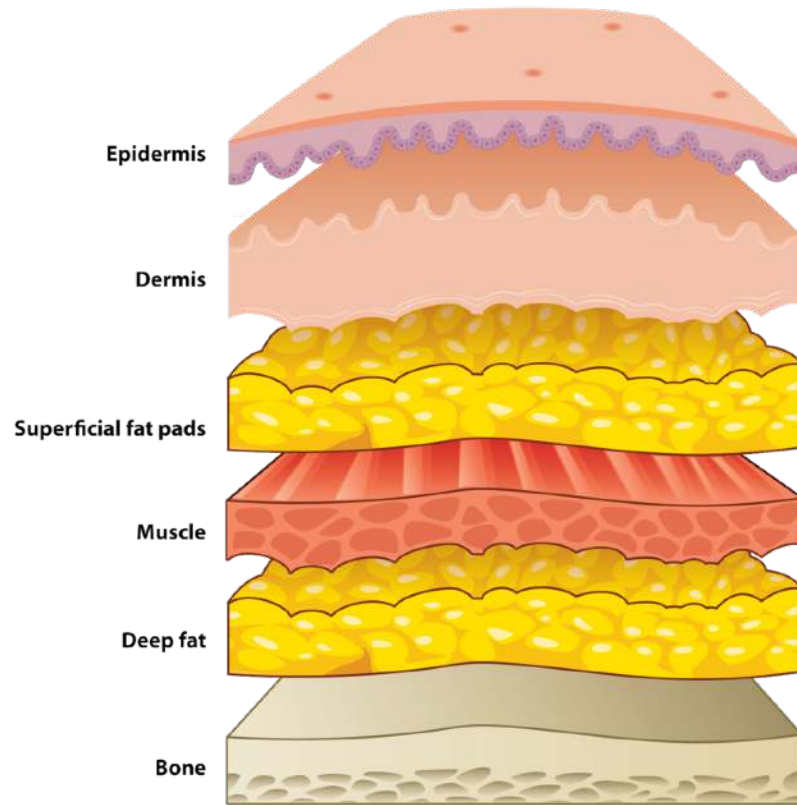
- There are no fire drills planned today or tomorrow
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- In the event of a fire alarm, the muster point is outside the Hilton Hotel
- Washrooms are adjacent to kitchen (unisex)



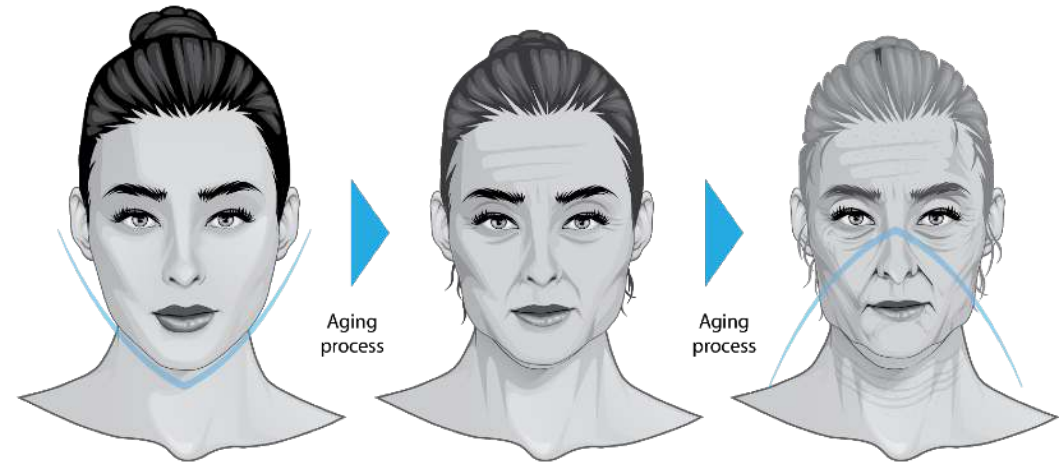
Day 1: Botulinum Toxin

- 09:00 Welcome & Introduction
- 09:15 Facial Ageing
- 09:45 The Consultation
- 10:30 *Break*
- 10:45 Upper face muscles
- 11:15 Treatment areas
- 12:15 Case assessments
- 13:00 *Lunch*
- 13:45 Preparation
- 14:00 Patient treatment
- 16:30 Adverse Events

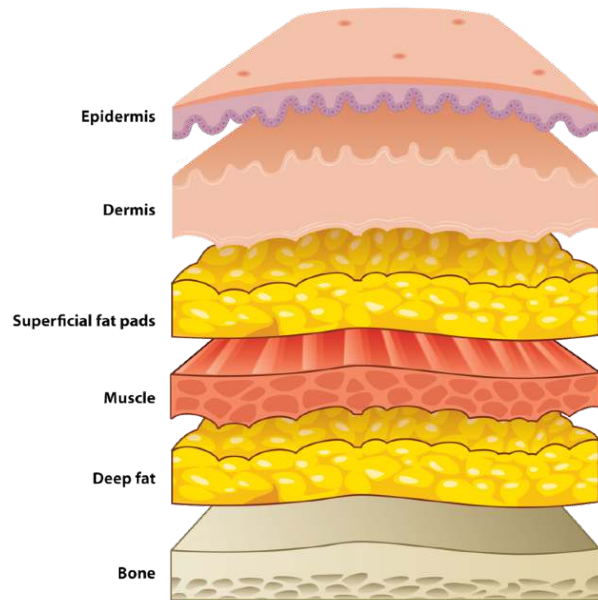
Facial Ageing



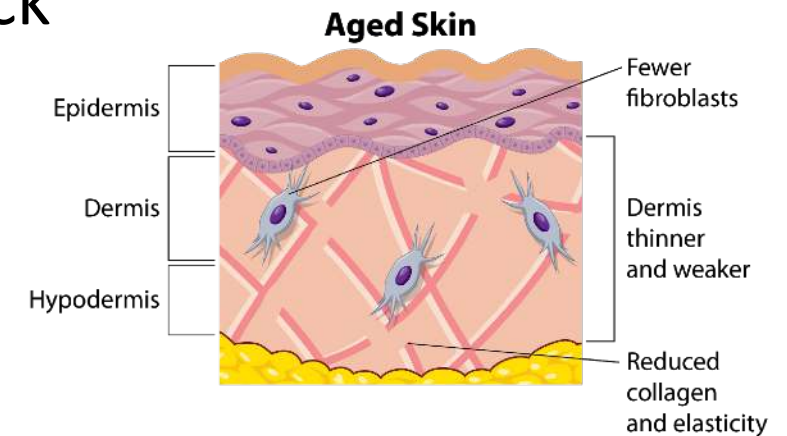
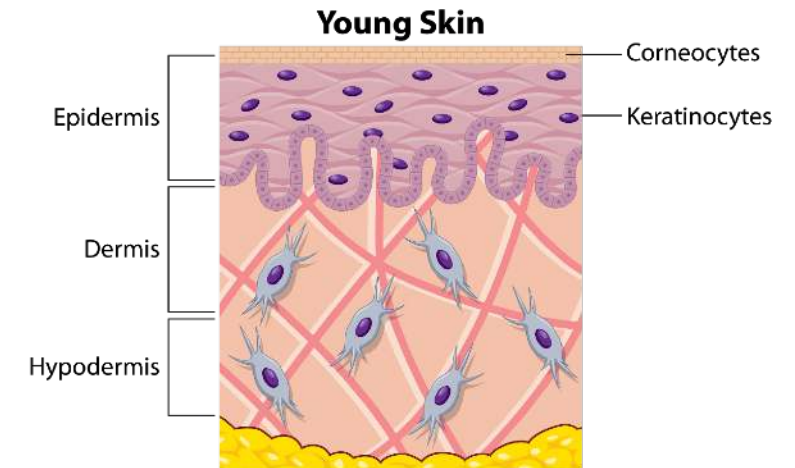
- Ageing affects all layers
- Triangle of youth
 - Redistribution and atrophy



Facial Ageing - Skin

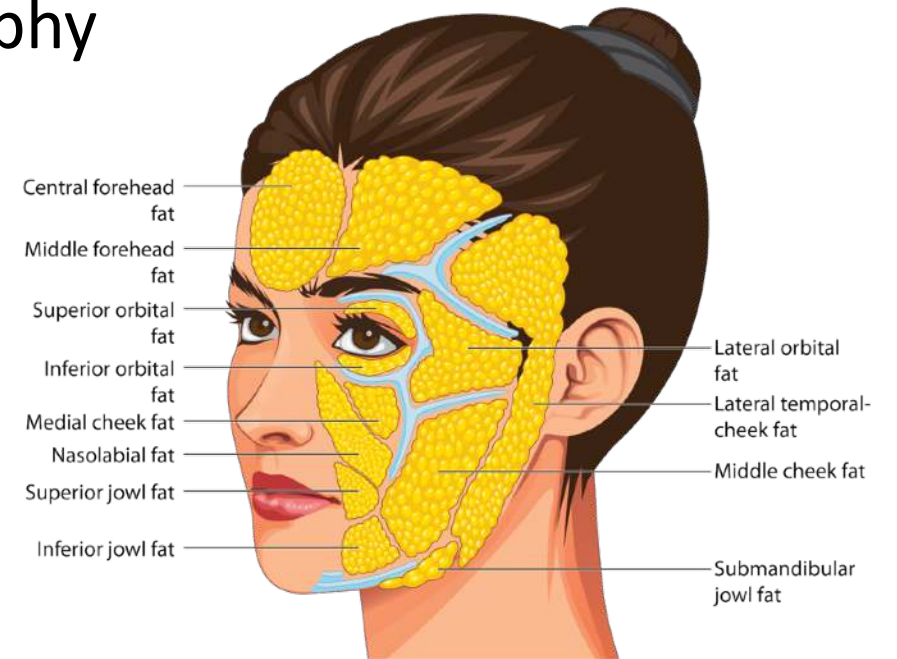
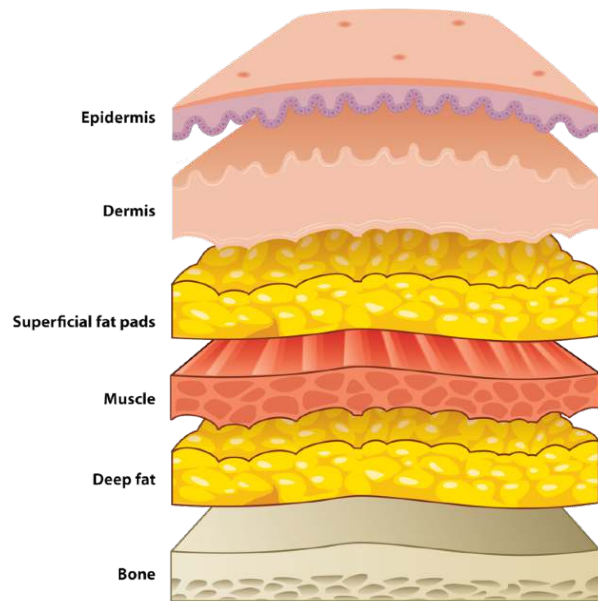


- Rhytides:
dynamic and static
- Less able to bounce back

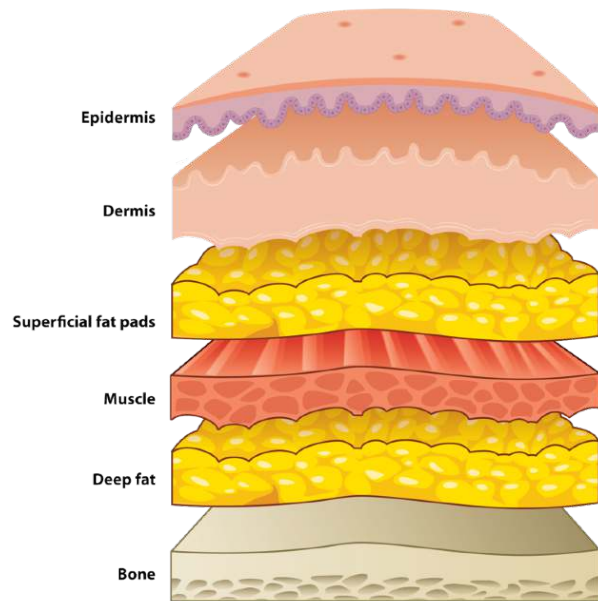


Facial Ageing – Superficial Fat

- Redistribution and atrophy
- Less support

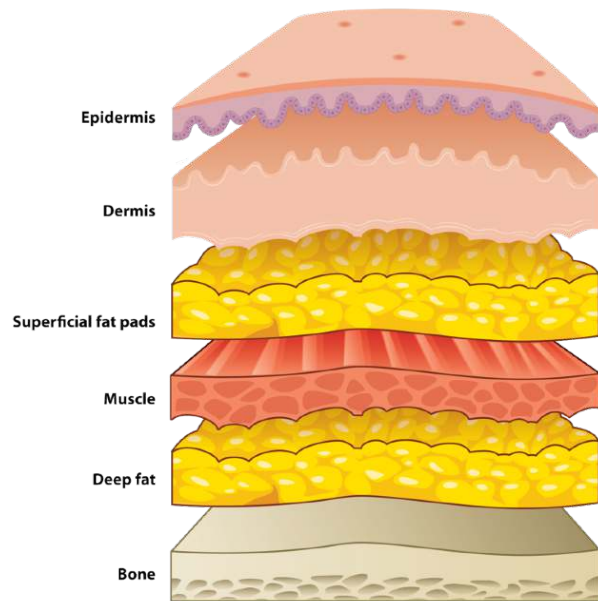


Facial Ageing - Muscle

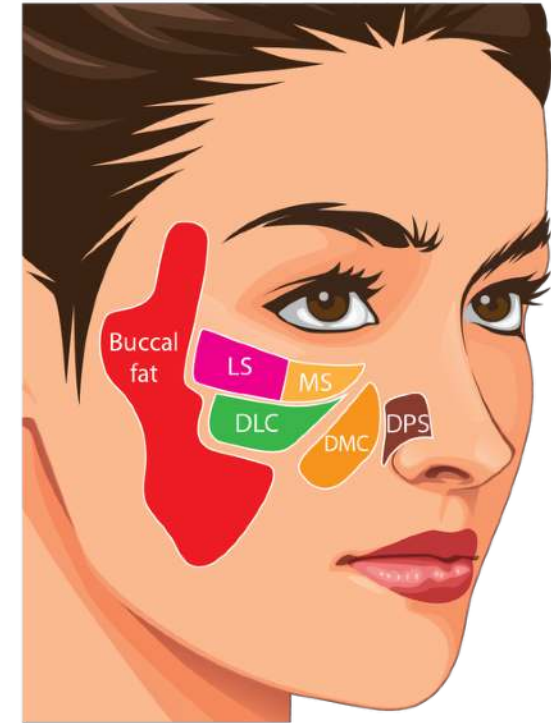


- Muscle tone increases
- Lengthening over time
- More contraction means more wrinkles
- Forehead

Facial Ageing – Deep Fat

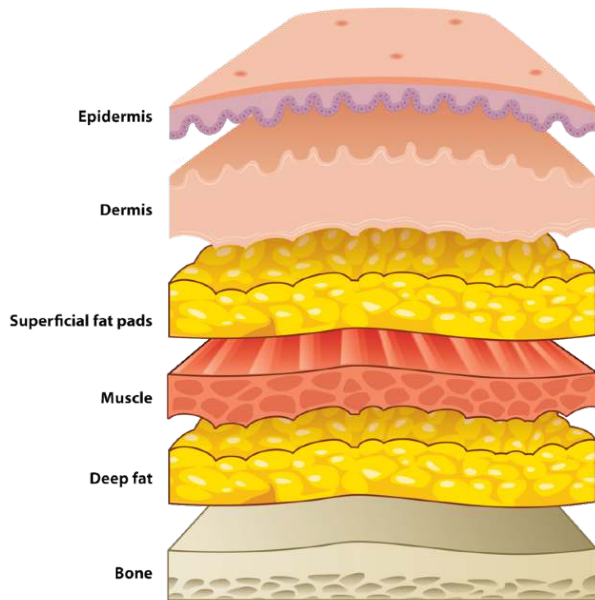


- Bulk of support
- Loss here will affect all layers above



Deep compartments

Facial Ageing - Bone



- Loss here will affect all layers above

The 5 Step Consultation

1. About Them
2. Their health and history
3. What you see & what it means
4. Discussion & Expectations
5. Plan & Recap

1. About them

You don't get a second chance at a first impression

- What brings you here today?
- What's the occasion?
- When you look in the mirror, how do you feel?
- How old do you think you look? / How old would you like to look?

2. Their health & history

- MH
- AH
- SH
 - Smoking
 - Sunlight
 - Exercise
 - Stress
 - Booze & Drugs

3. What you see & what it means

Be systematic

1. Skin
2. Positive attributes
3. Negative attributes
4. Upper face
5. Midface
6. Lower face
7. Anything else

Make A DIAGNOSIS

- Mandatory for toxin
- Good practice for filler

3. What you see & what it means

- Photos & mirror
- Explore with the patient



GROUP	CLASSIFICATION	TYPICAL AGE	DESCRIPTION	SKIN CHARACTERISTICS
I	Mild	28-35	No Wrinkles	Early photo aging: mild pigment changes, no keratosis, minimal wrinkles, minimal or no makeup
II	Moderate	35-50	Wrinkles in Motion	Early to moderate photo aging; early brown spots visible, keratosis palpable but not visible, parallel smile lines begin to appear, wears some foundation
III	Advanced	50-65	Wrinkles at Rest	Advanced photo aging: obvious discoloration, visible capillaries, visible keratosis, wears heavier foundation
IV	Severe	60 & up	Only Wrinkles	Severe photo aging: yellow/grey skin color, prior skin malignancies, wrinkles throughout - no normal skin, cannot wear make-up because it cracks and cakes

4. Discussion & Expectations

- Why is it the way it is
- What can be done about it

1. Problem
2. Solution
3. Reason
4. Risks & Benefits
5. Limiting factors

5. Plan & Recap

- Take what you have gained from step 3 & 4
- Put it into a treatment plan
- Repeat with patients – allow their choice
- Be clear on price
- Thank them for their time

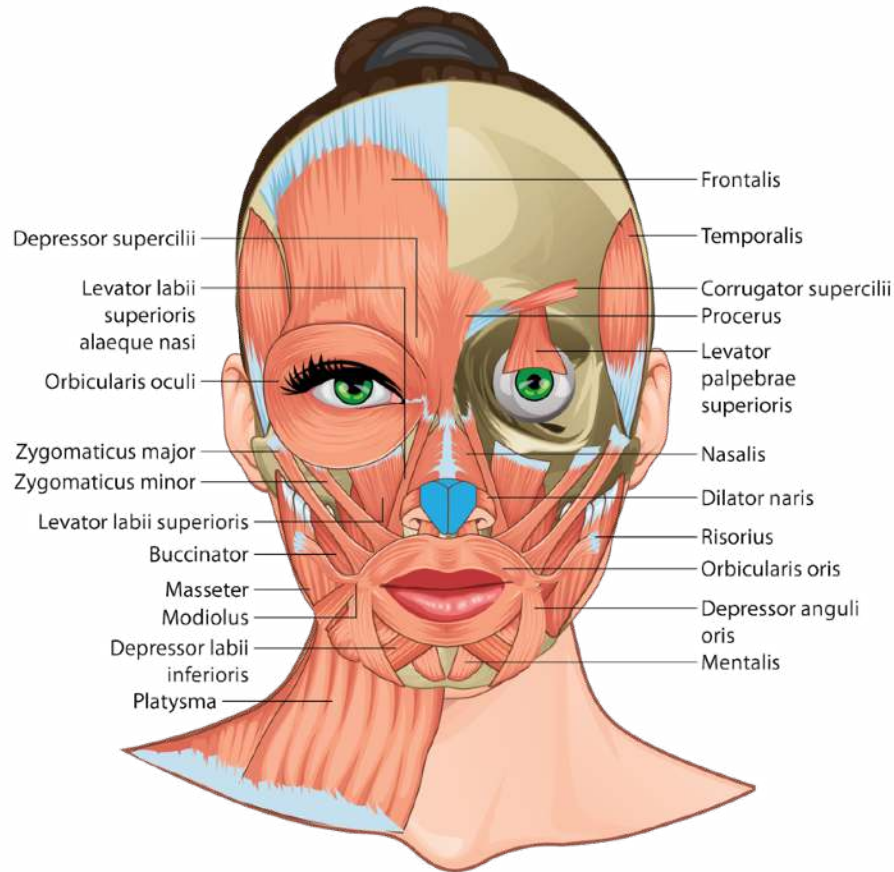
A large, dark, irregular ink blot with splatters on a white background. The blot is roughly circular but has many jagged, feathered edges. It is surrounded by numerous small, dark ink droplets and splatters of varying sizes, creating a sense of motion or a recent splash. The overall effect is artistic and textured.

Break time



Botulinum Toxin

Muscles of the upper face



Upper face relevant to BTX

Frontalis

Glabellar complex

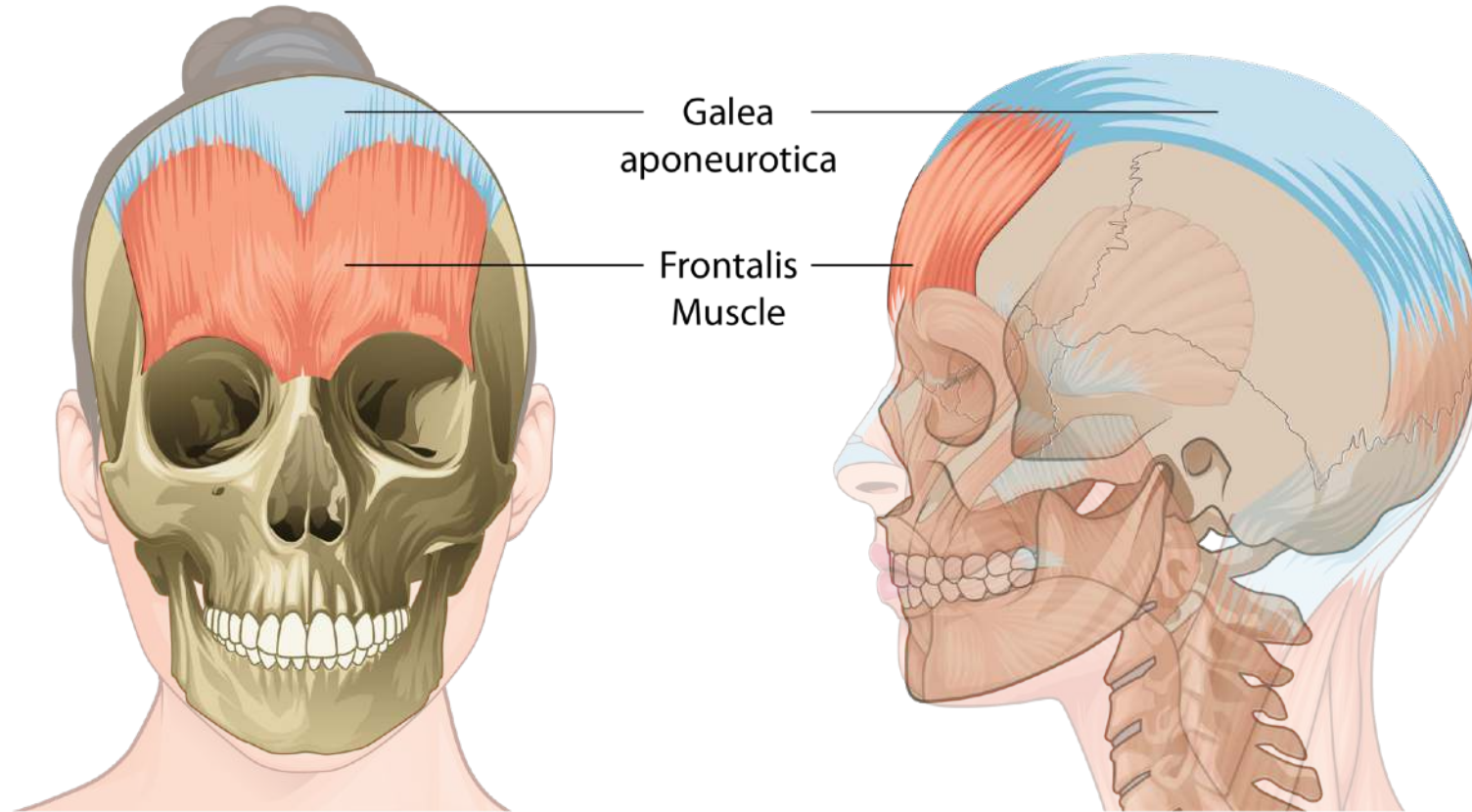
Orbicularis oculi

Nasalis

Toxin treatment

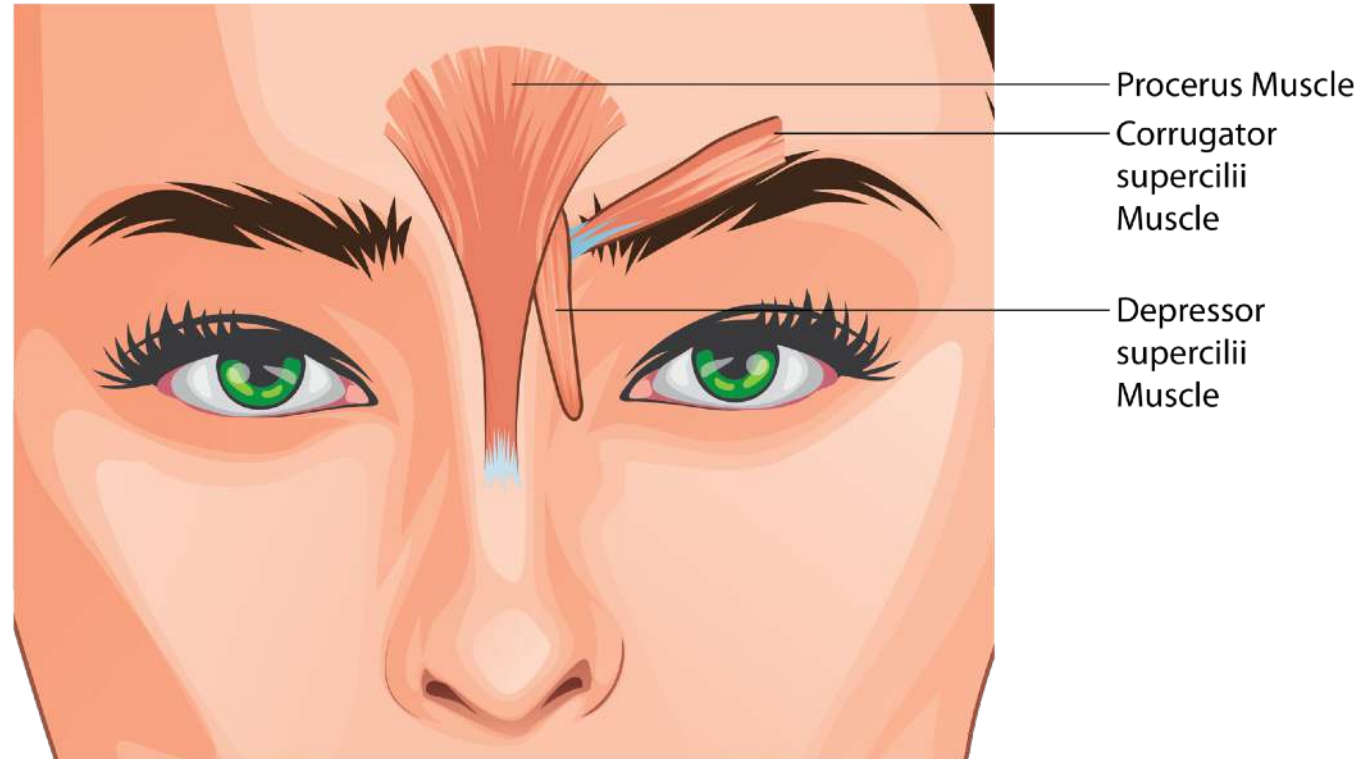
Relaxes muscles

Frontalis

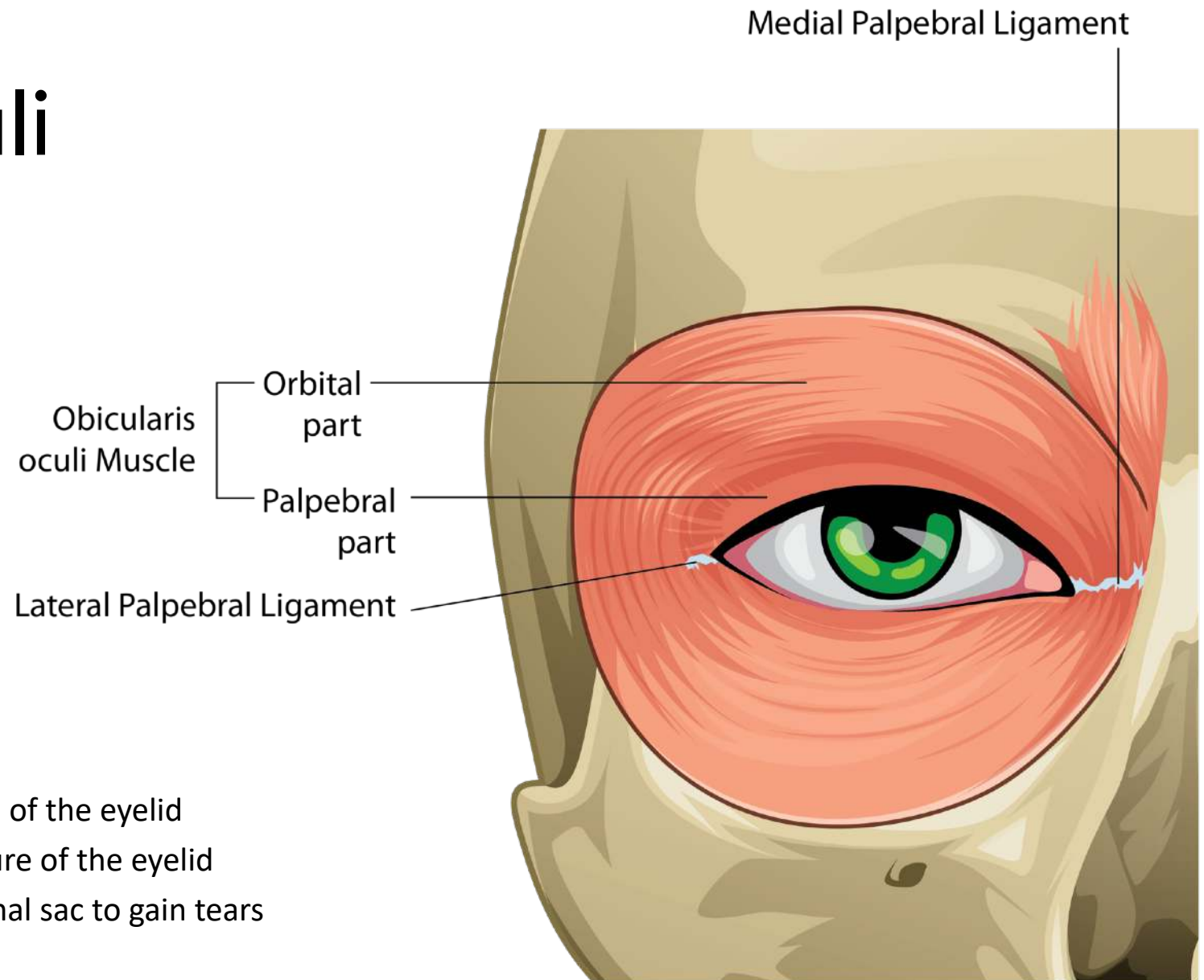


Glabellar complex

- *Procerus, Corrugator supercilii, depressor supercilii and medial part of orbicularis oculi*

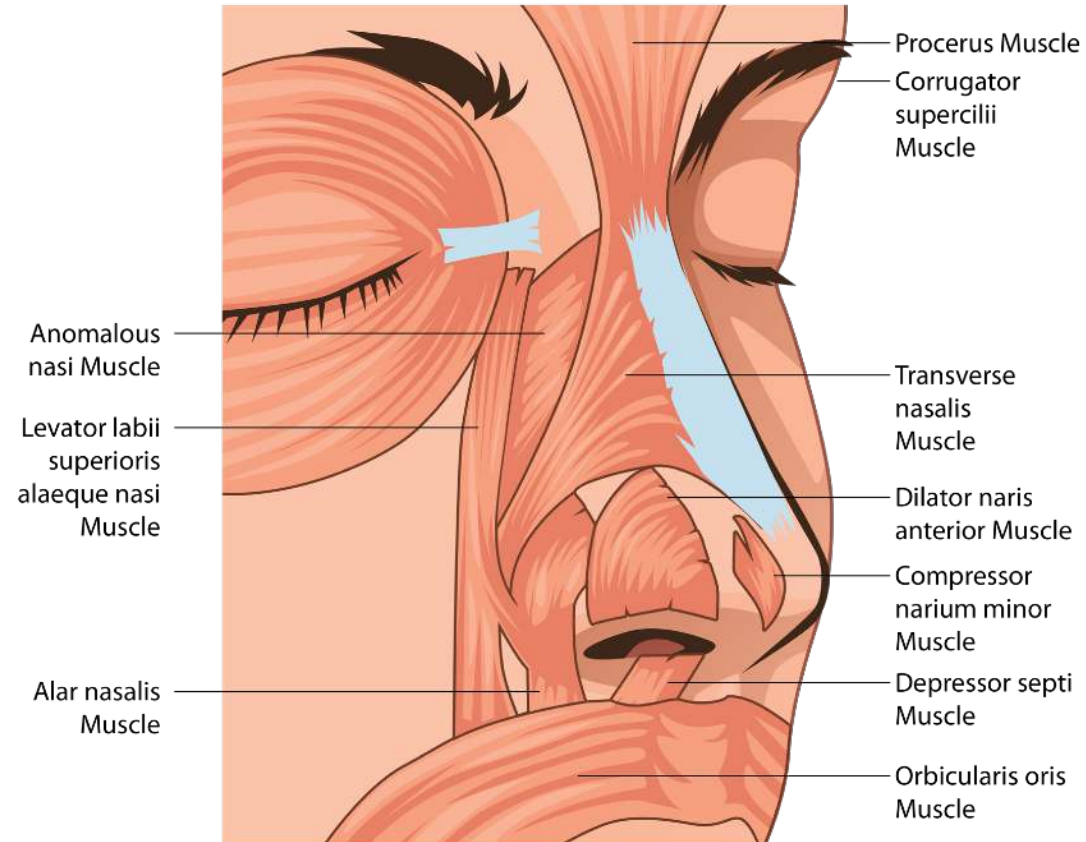


Orbicularis oculi



- This muscle has three parts
 - Orbital: voluntary: tight closure of the eyelid
 - Palpebral: reflex or gentle closure of the eyelid
 - Lacrimal: compression of lacrimal sac to gain tears from lacrimal ducts

Nasalis



Who can have toxin treatment?

- **Indications**

- Patients who want a cosmetic improvement and who have realistic treatment expectations
- Patients that have specific aesthetic concerns that can be improved with botulinum toxin
- Patient has capacity

- **Contraindications**

- neuromuscular disorders such as Myasthenia gravis (autoimmune muscle weakness)
- Aminoglycosides (antibiotics, potentiate botulinum toxin)
- Anticholinergic drugs (may be potentiated)
- Muscle relaxant drugs
- Pregnancy
- Breastfeeding
- Infection or inflammation at the proposed treatment site
- Known hypersensitivity to ingredients of toxin or saline
- Body Dysmorphia
- Patient is under 18

- **Caution in**

- patients with bleeding/clotting disorders and those on Warfarin
- Aspirin, vitamin E, St Johns Wort
- Bells Palsy
- Asymmetries
- Hooded lids – frontalis treatment

What are my aims for treatment?

- WOMEN

- Minimise static and dynamic lines
- Smooth the skin
- Preserve or improve the shape and position of the brow
- Maintain or improve the tissue of the upper eyelid

- MEN

- Minimise static and dynamic lines
- Smooth the skin

Treatment Areas

- GLABELLA

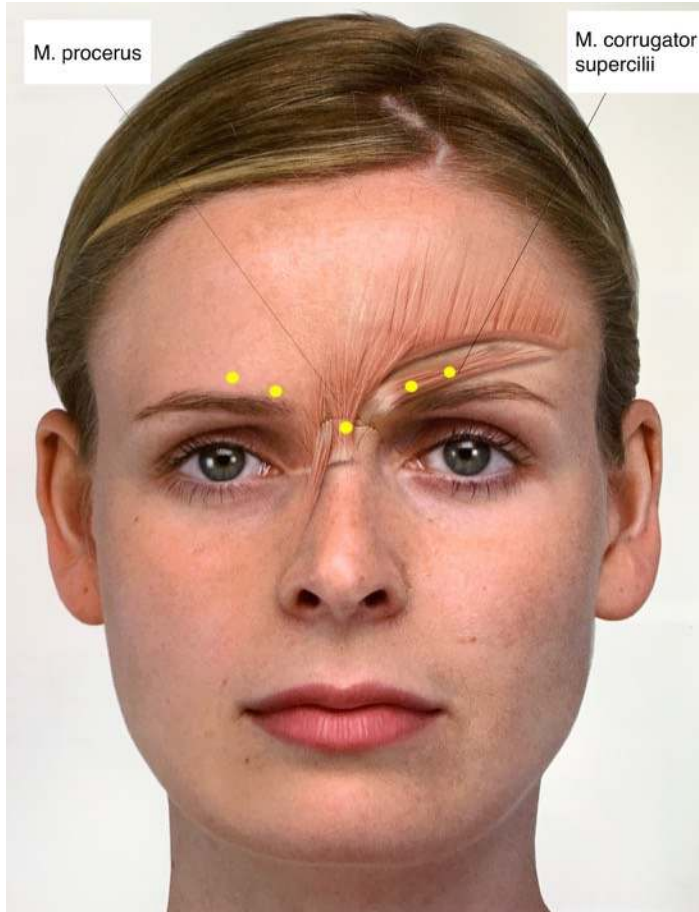
- FRONTALIS

- PERIORBITAL

- BROW LIFT

- BUNNY LINES

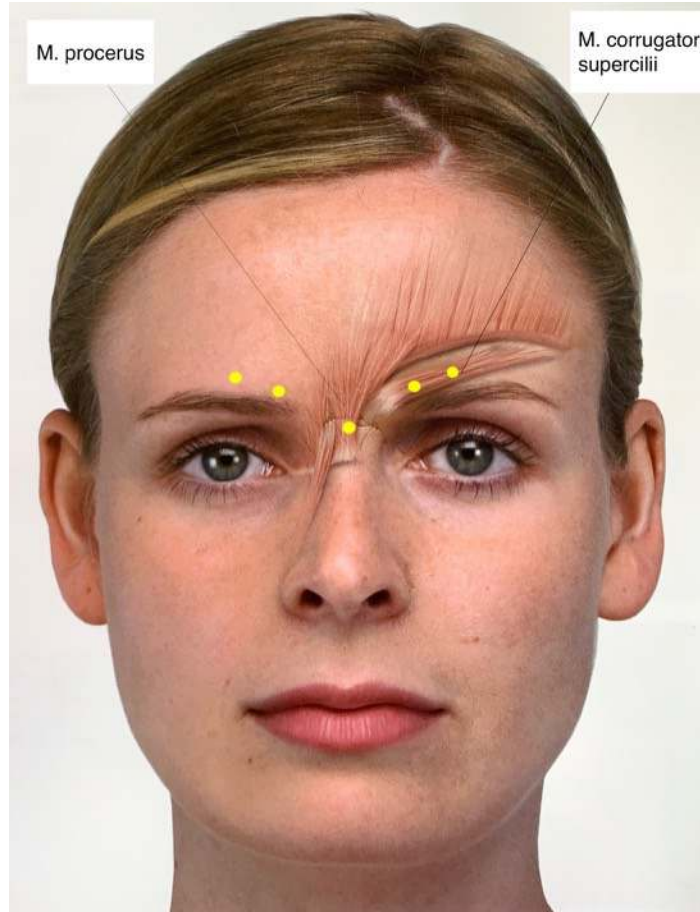
Glabella



4 units at each site marked in yellow

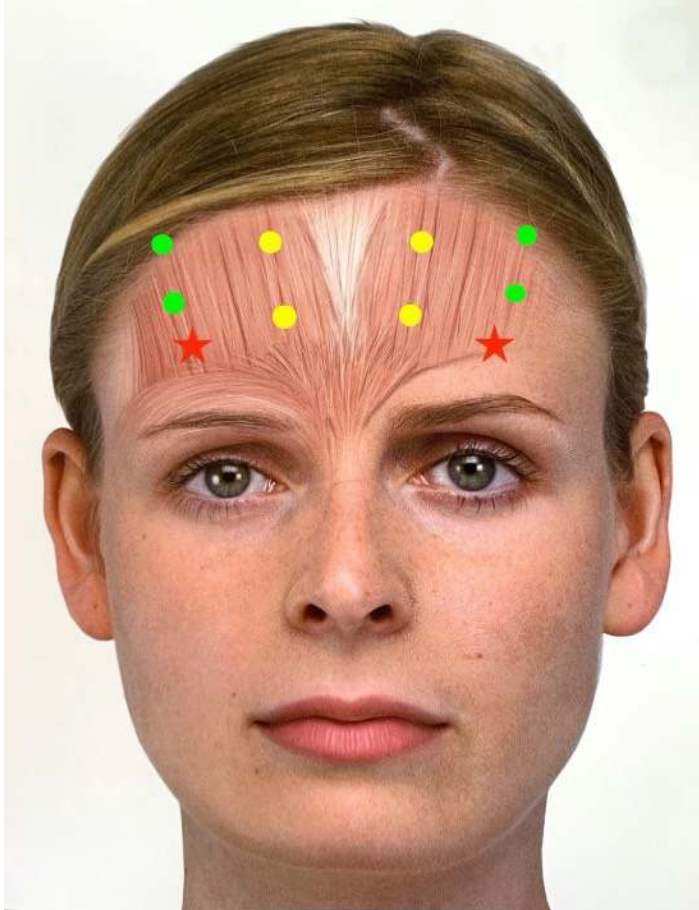
- **Procerus:** 90 degree injection approx. 3mm depth into belly of the muscle.
- **Corrugator supercilii:** medial injection point 45 degree injection, lateral injection point 1cm away from first along the muscle at 20 degree injection. Both sites 1.5cm away from outer edge of bony orbital rim, needle point directed away from the midline.

Glabella



- Variation
 - Procerus
 - Mid-brow
- Effect
- Caution
 - Brow ptosis
 - STA

Frontalis

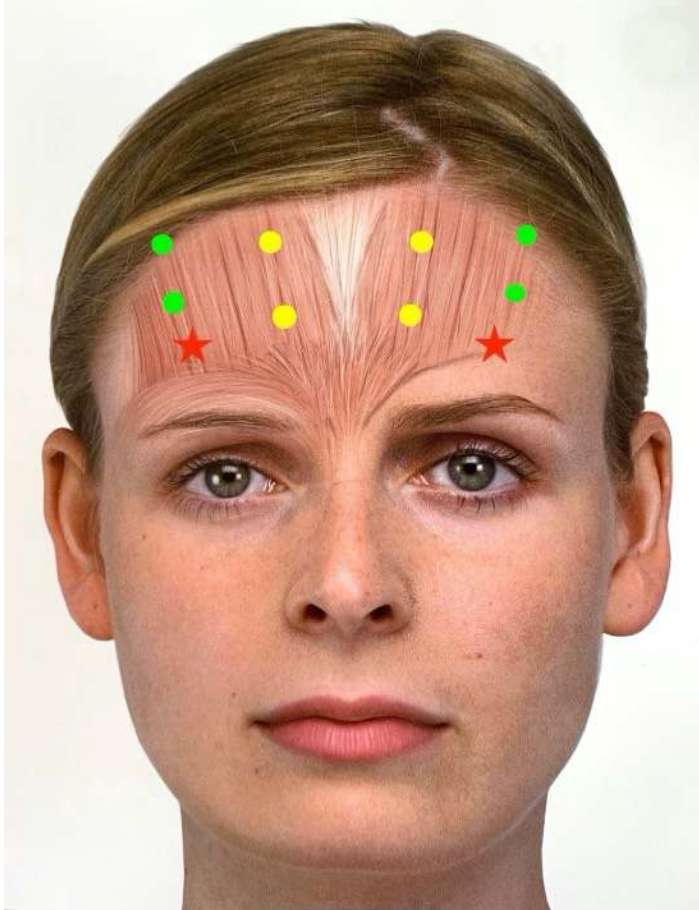


4 units to each site marked in yellow

2 units to each site marked in green

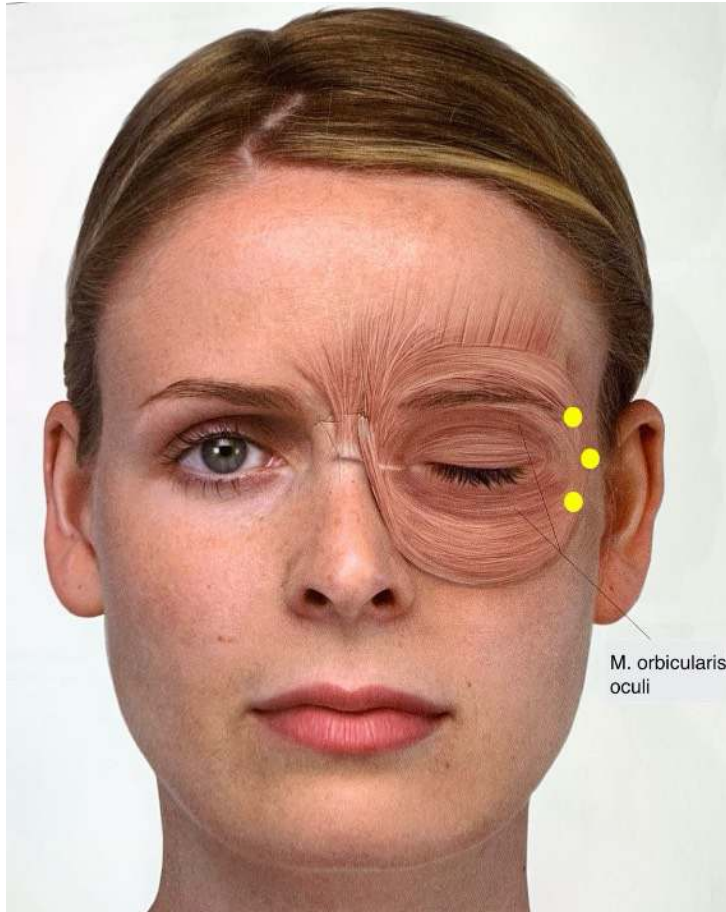
- **Frontalis:** Approx 45 degree injection into the muscle, 2-3mm depth.
- placement in line with the medial canthus and the outer canthus.
- Always stay 2cm away from the brow when treating the frontalis to prevent a brow flattening or ptosis.

Frontalis



- Variation
 - Star placement
- Effect
- Caution
 - Heavy lids

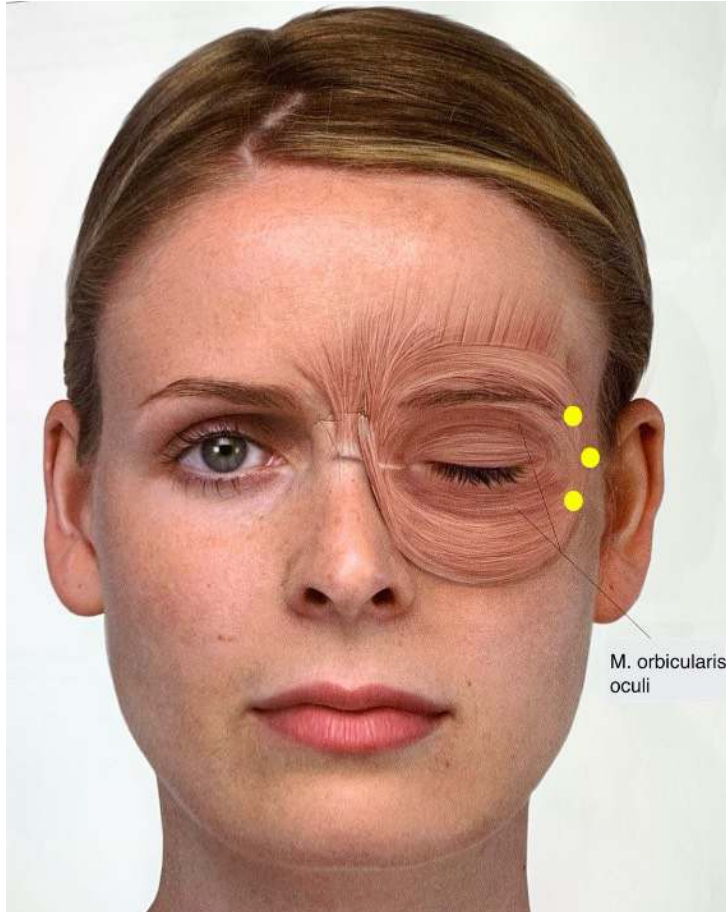
Periorbital



4 units to each site marked in yellow

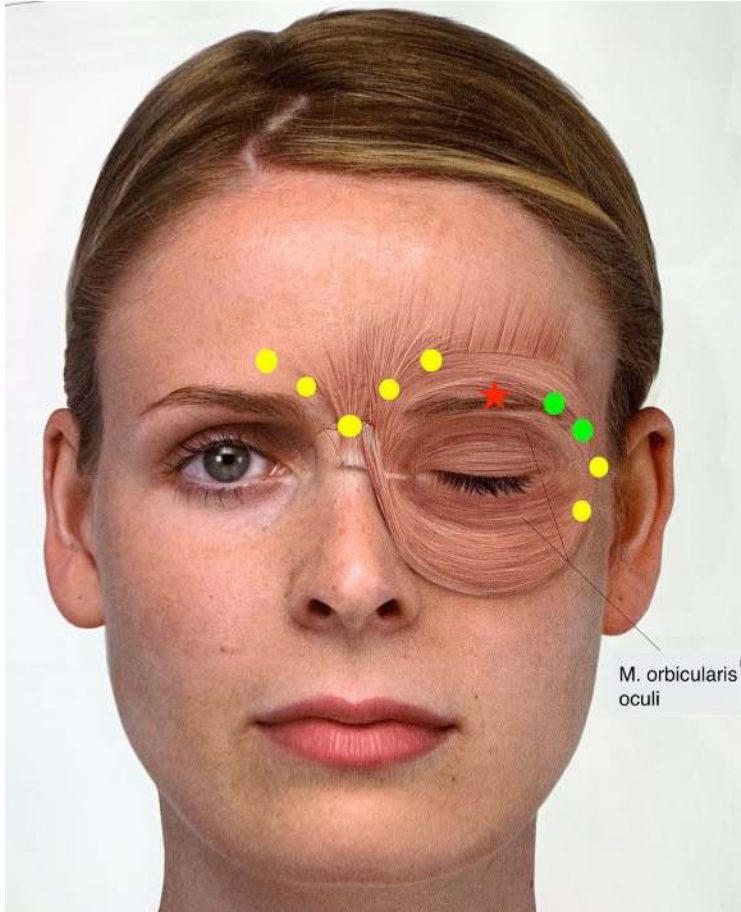
- 1cm outside the border defined by the orbital rim and lateral to the lateral canthus – palpate the orbital rim prior to marking up and placement.
- Direction of injection away from the eye.
- **Orbicularis oculi:** 10 degree angle, intradermal bleb placement

Periorbital



- Variation
 - High brow
- Effect
- Caution
 - Lateral rectus
 - Zygomatic
 - Ageing or muscle action?

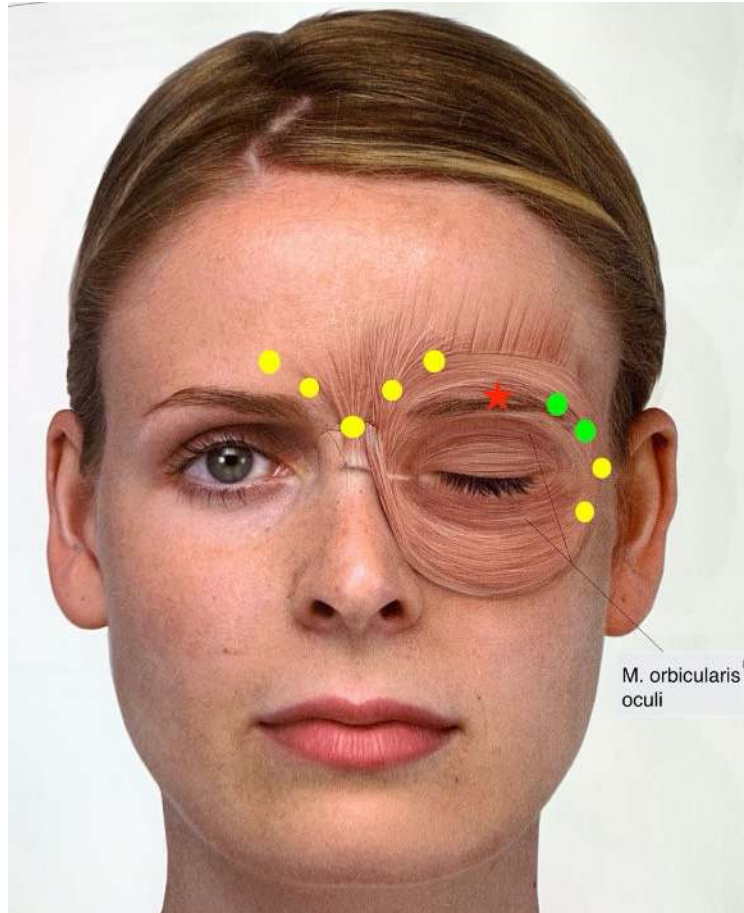
Chemical brow lift



4 units to each sites marked in yellow
2 units to each sites marked in green
1 unit intradermal to sites marked in red star

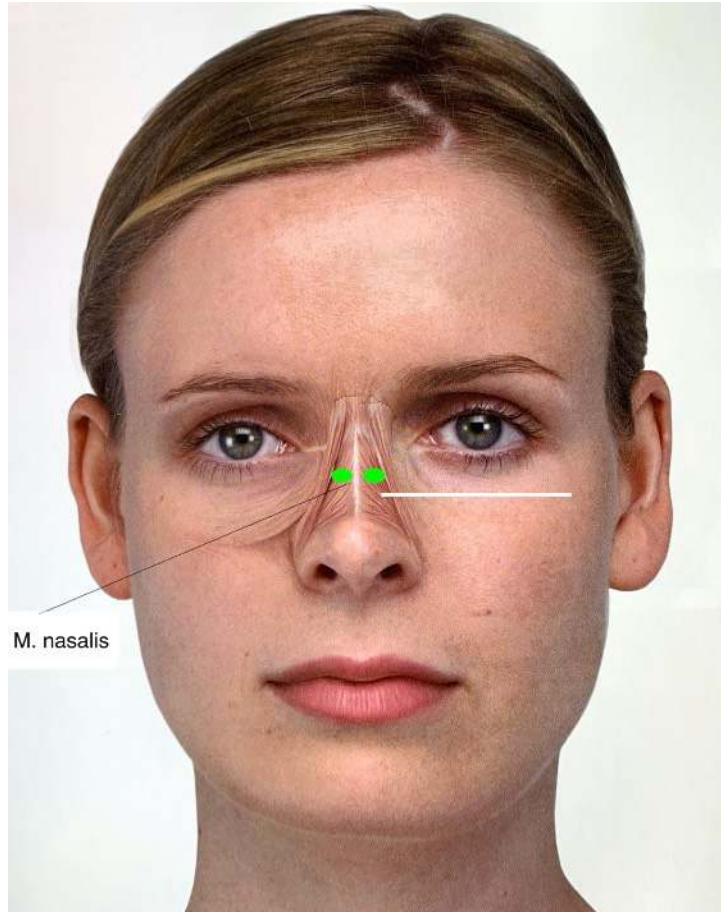
- **Glabella:** Injection sites as for glabellar frown lines. Addition of mid-brow point intradermal bleb.
- **Periorbital:** Injection sites lower two points as for standard periorbital treatment. Modification of the upper site to 2x 2u.

Chemical brow lift



- Effect
 - What's a brow lift?
- Caution

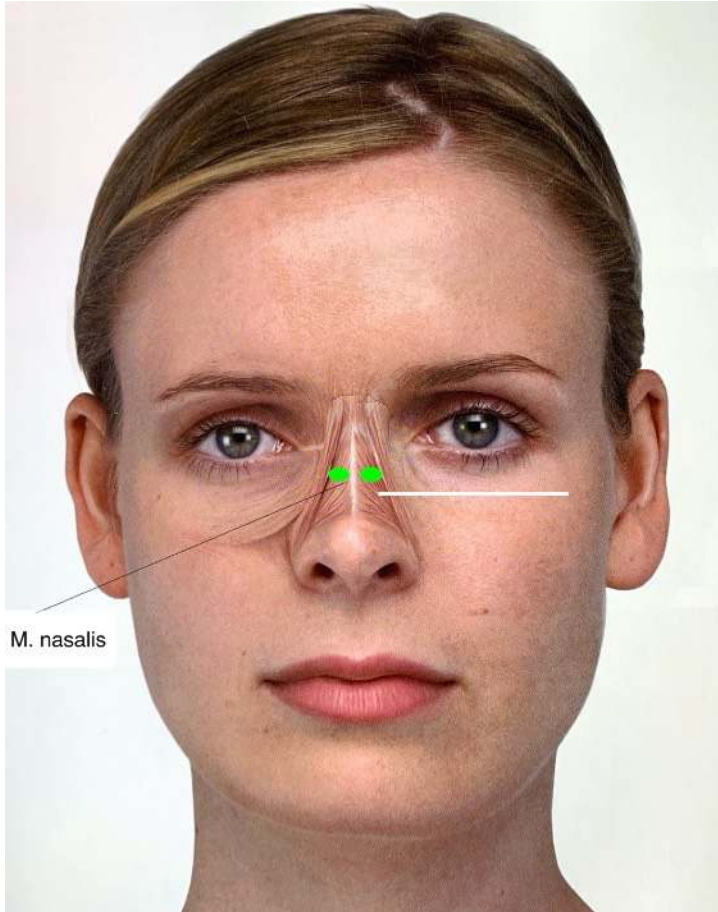
Bunny Lines



2 units to each site marked in green

- Mark a line horizontal line at lower border of the orbit (white line). Inject above.
- Placement of toxin is superficial (intradermal bleb).
- 2 units per side 1cm lateral to midline. Cranio-caudal direction (access from forehead), away from the eye.

Bunny lines

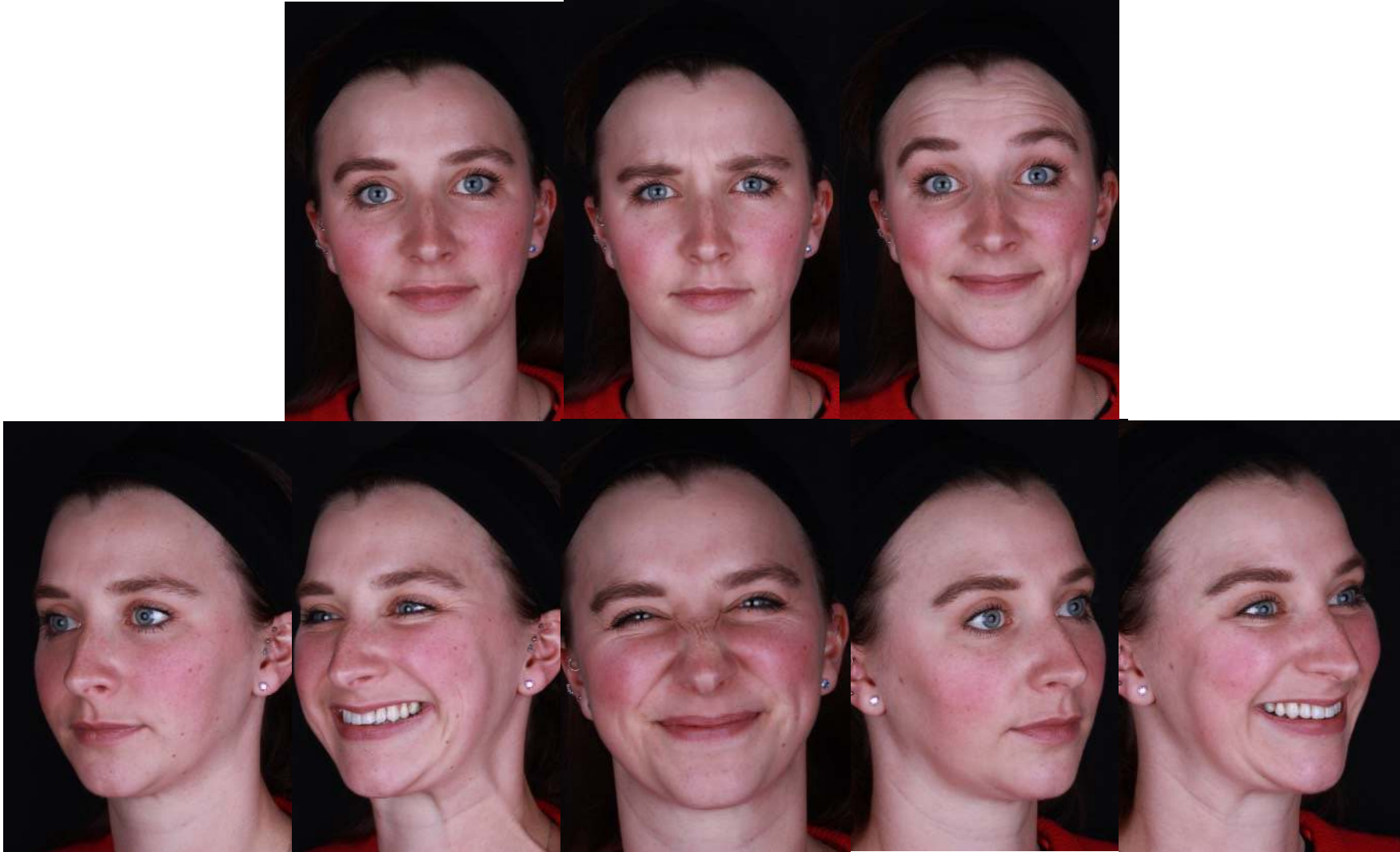


- Effect
- Caution
 - Lip symmetry

Case Assessments

- Tell me about
 - Skin
 - Ageing
 - Muscular activity
 - What you would treat
 - Areas of caution – assess with risks and benefits in mind
 - Expectation setting

Case 1



Case 2



Case 3



Case 4



Case 5



Case 6



Case 7



Case 8



Case 9



Case 10



Case 11



Case 12



Case 13



Case 14



Case 15



Case 16



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Lunch

Preparation



Product and units	Saline reconstitution (ml)	Units per 0.1ml
Botox 50u	1.25	4
Botox 100u	2.5	4
Botox 200u	5.0	4



Treatment set up



Treatment

- Consult with the patient
- Take pictures
- Mark up
- Commence treatment

Post ops

- Avoid exercise immediately after and on same day of treatment
- Avoid touching the treated area
- Alcohol consumption will increase bleeding and bruising risk
- No facial treatment or massages for 2 weeks post-operatively
- Full effect is around 1-2 weeks
- Duration of action around 2-4 months (discuss effect of lifestyle factors)

REVIEW 2/52

Reviews

- 2-4 weeks after treatment
- Review versus “top-up”
- Review dosage minimal
- Compare pre-op photography

Adverse Events

- Lack of response
 - Under-treatment
 - Absence of response
 - Non-responder
- Bruising / swelling
- Intravascular injection
- Headaches
- Flu-like symptoms
- Injection site response
- Brow ptosis
- Lid ptosis
- Arched brow
- Heavy brow
- Diplopia
- Dry eye
- Ectropion
- Angry Patient



Day 2: Lip Augmentation

- 09:00 Introduction
- 09:15 Lip anatomy and assessment
- 09:45 Injection techniques
- 10:30 *Break*
- 10:45 Case assessments
- 11:15 Patient treatments commence
- 13:00 *Lunch*
- 13:45 Patient treatments
- 16:00 Complication management
- 16:45 Q&A and close

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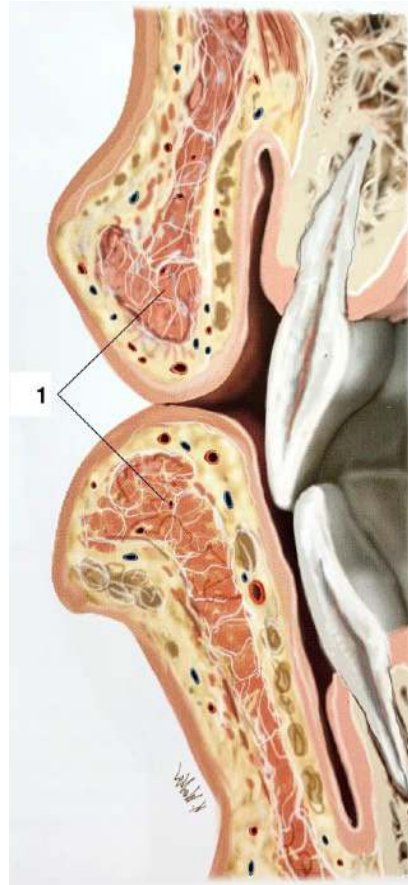
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Lip Augmentation

Lip Anatomy



SLA 4.5mm depth
Crosses vermilion 1cm medial to OC
Most superficial at wet-dry border

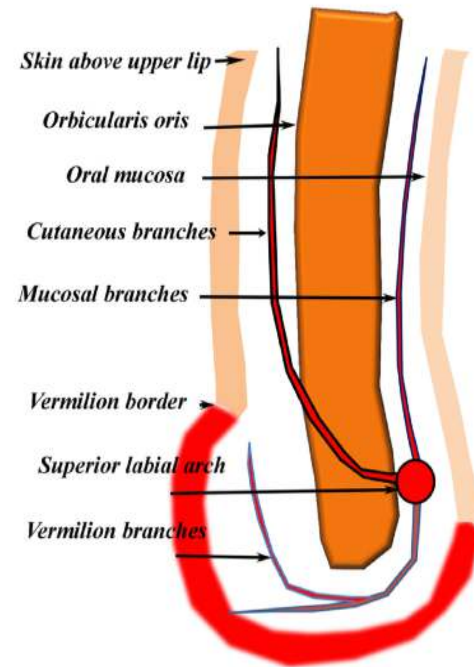
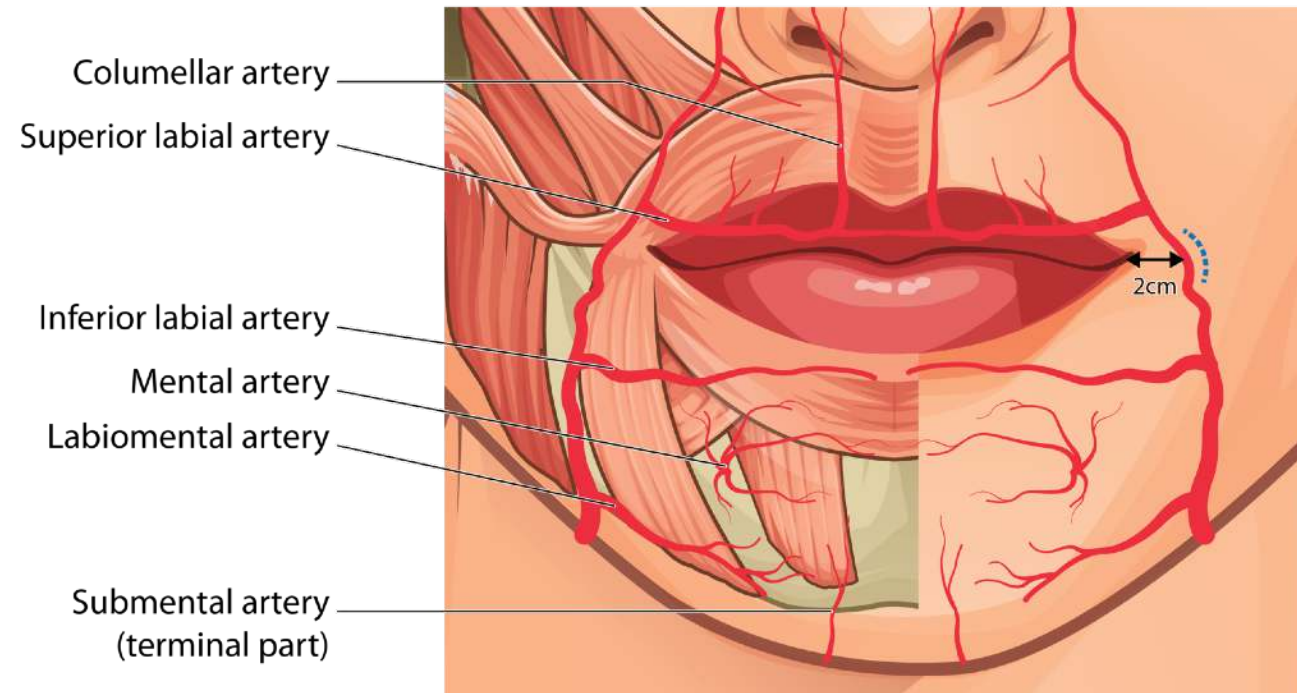
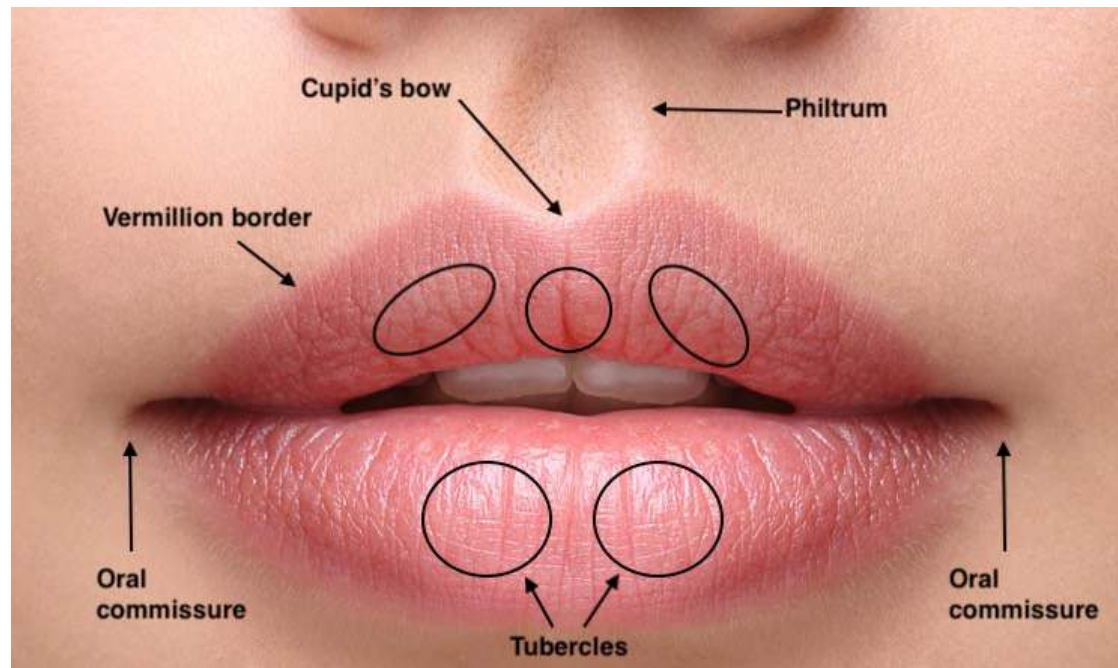


Fig. 2 The superior labial artery lies between the orbicularis oris and the mucosa at the level of the vermilion border. From it emanate the cutaneous, mucosal, and vermilion branches

Lip Anatomy



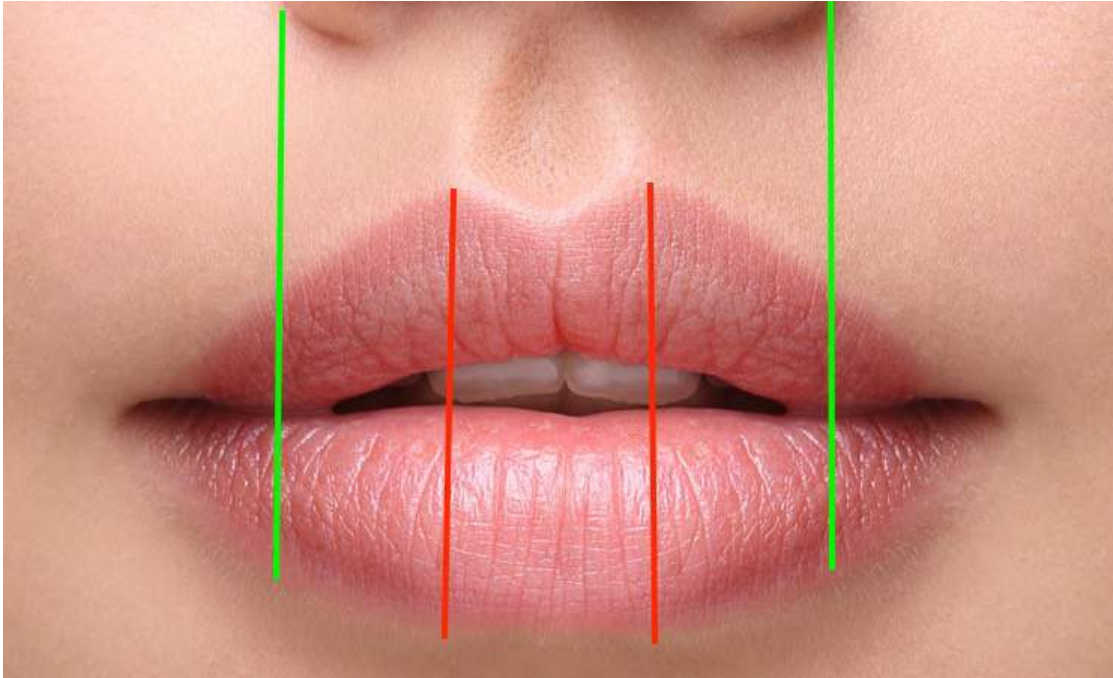
Lip Assessment



Upper lip
Lower lip

40%
60%

Lip Assessment



Look: shape, volume, proportions

Ask: desires and expectation

Feel: always palpate lips before planning or injecting

Tissue type: loose or firm

Note

Asymmetry

Scar tissue

Lumps and nodules

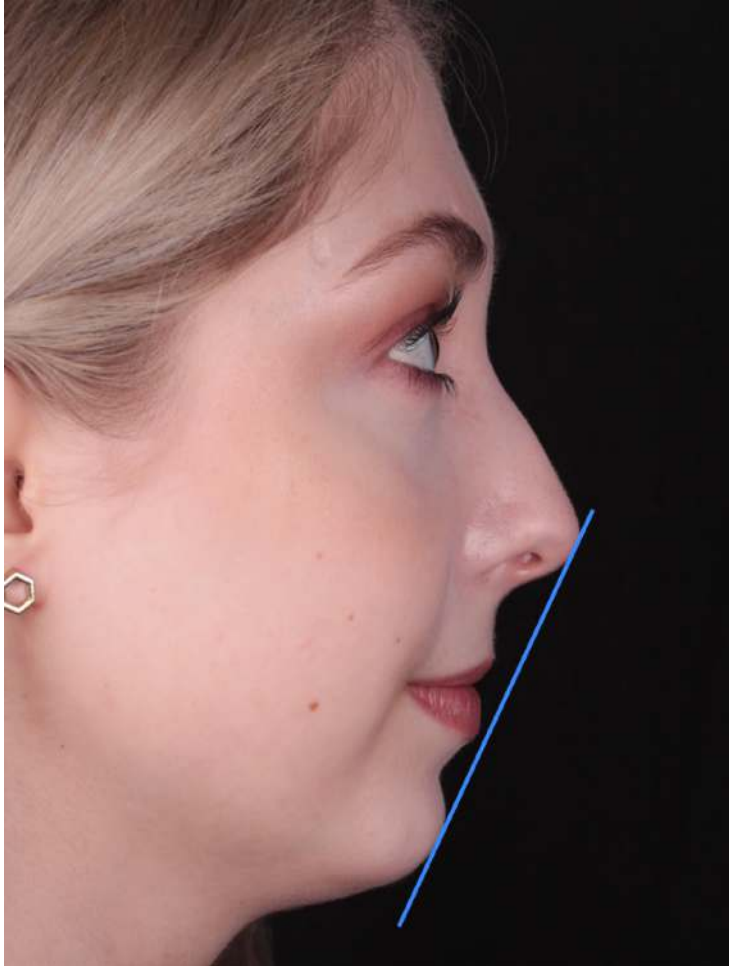
Discolouration

Size and size discrepancy

Previous treatment

Vascular malformations

Lip Assessment



Rickett's E-Line

Who can have treatment?

- **Indications**

- Realistic expectations
- Requirement for shape or volume improvement that can be met with dermal filler treatment
- Patient has capacity

- **Contraindications**

- Acute or chronic skin infections or inflammation, eg Acne, Herpes
- Allergy to components of filler
- Pregnancy or breastfeeding
- Body Dysmorphia / unrealistic expectations
- Patient is under 18

- **Caution in**

- High patient expectations – need careful management
- patients with bleeding/clotting disorders and those on Warfarin
- Aspirin, vitamin E, St Johns Wort
- Bells Palsy
- Recurrent cold sores

Filler type

- **Tissue Product**

- Loose Soft product prevent lumps, better integration
- Firm Soft or firm provide structure

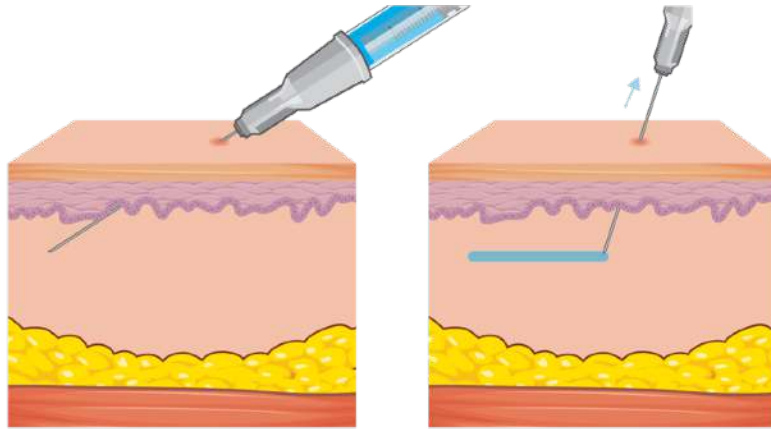
- **Indication**

- Definition Firm product
- Projection Soft or firm (depends on tissue type)
- Volume Soft or firm (depends on tissue type)
- Hydration Very soft product

LA

- Gel: 24% Lidocaine, 4% Tetracaine
- Infiltration
 - 3% Mepivacaine (Scandonest)
 - 2% Lidocaine (Lignospan)

Treatment

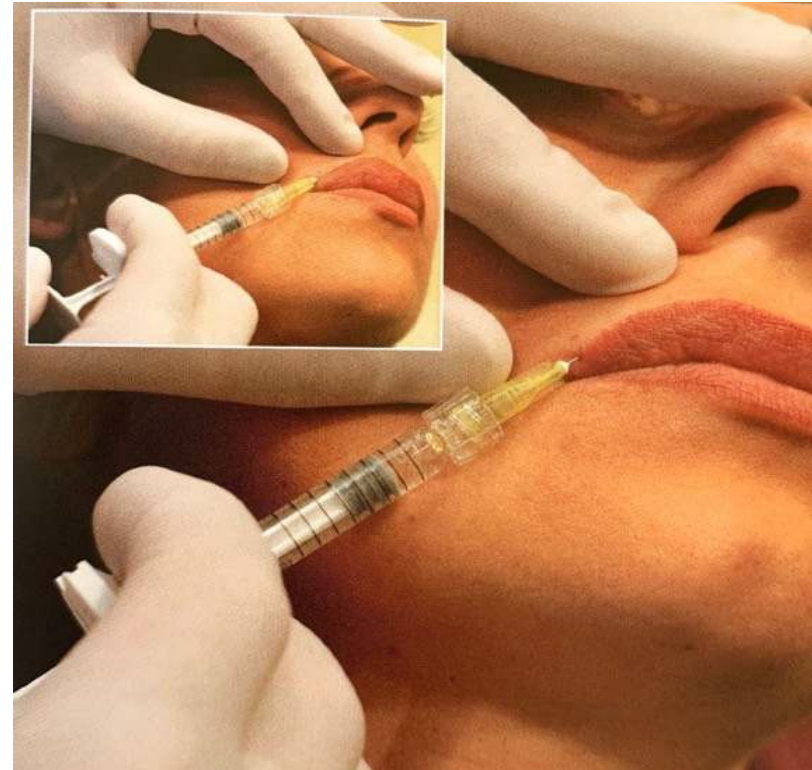
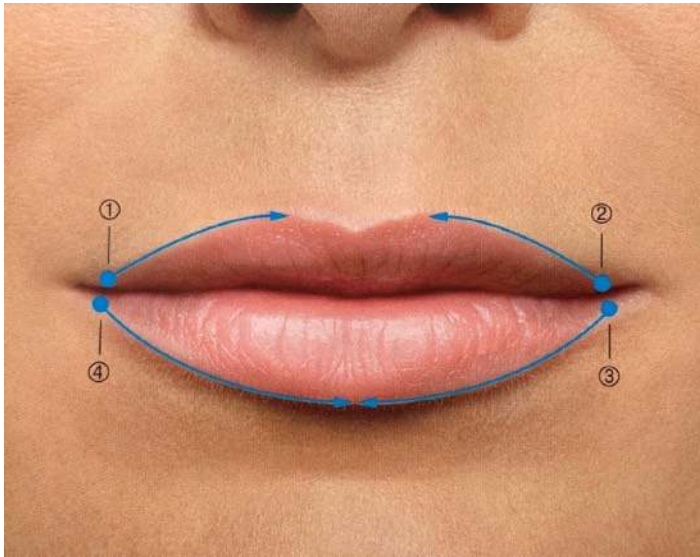


Linear threading

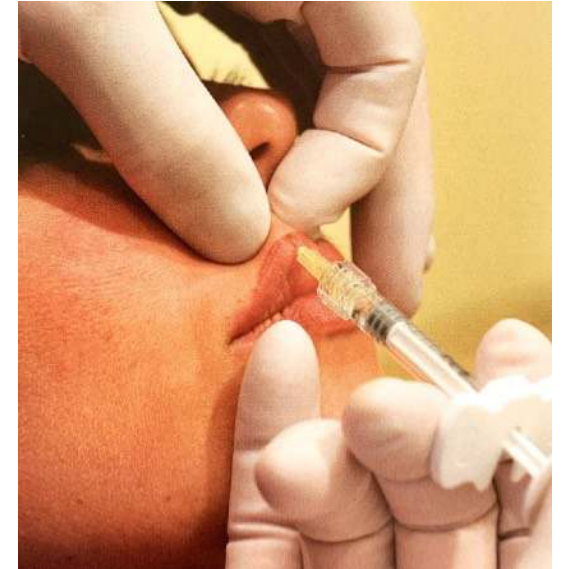
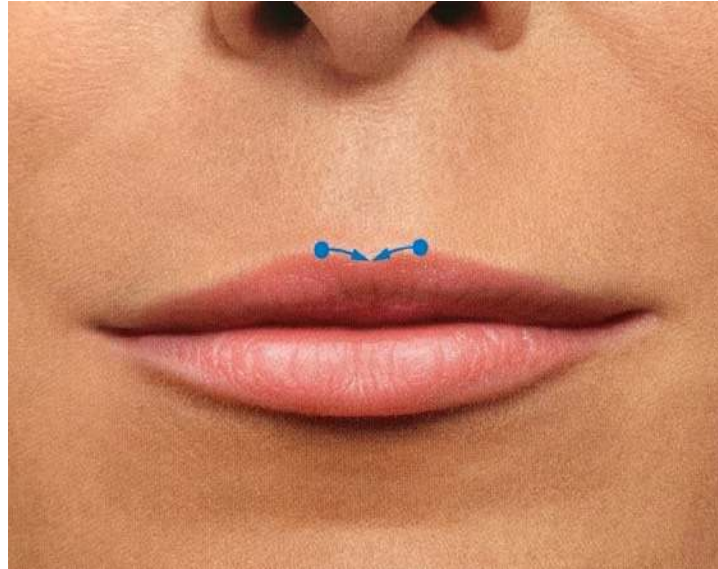
Placement into the dermis

Eyes on the tissue, not the barrel

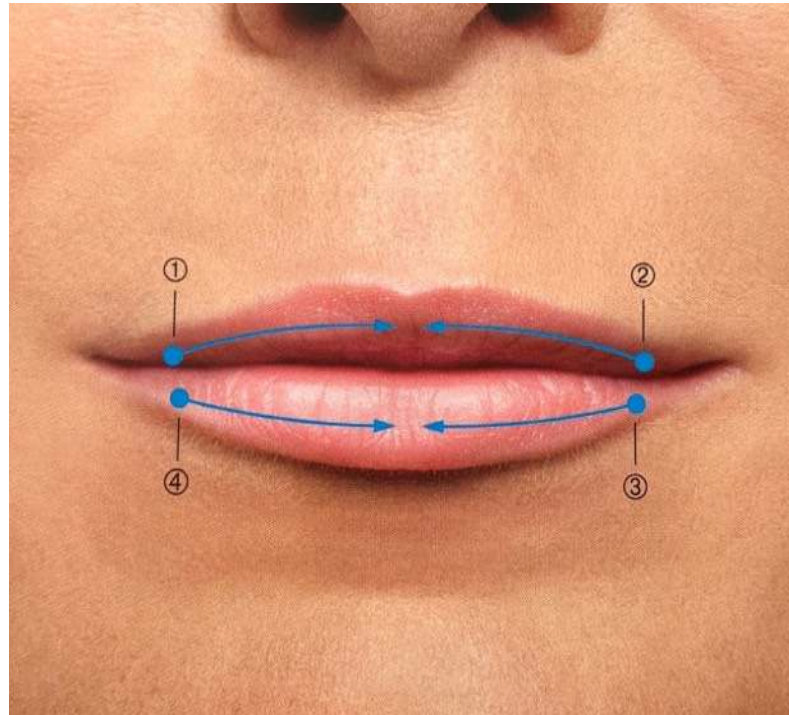
Technique: shape



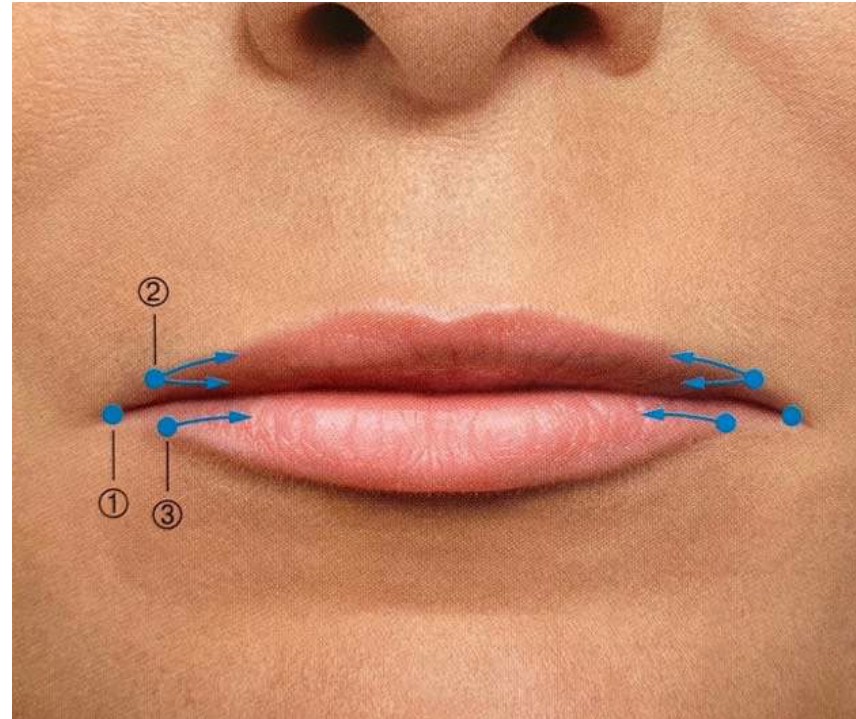
Technique: philtral columns



Technique: volume



Technique: upturn corners



A large, dark, irregular ink blot with splatters on a white background. The blot is roughly circular but has jagged, uneven edges. It is surrounded by numerous small, dark ink droplets and splatters of varying sizes, creating a sense of motion or a recent splash. The overall effect is dramatic and artistic.

Break

Case Assessments

- Tell me about
 - Lip type, shape and description
 - Recommendation for product
 - Expected outcome

Case 1



Case 2



Case 3



Case 4



Case 5



Case 6



Case 7



Case 8



Case 9



Case 10



Case 11



Case 12



Case 13



Case 14



Case 15



Case 16



Case 17



Case 18



Treatment set up



Treatment

- Consult with the patient
- Take photographs and discuss these with the patient
- Brief Dr MJ and the group on your findings, diagnosis and treatment plan including type of filler you wish to use.
- Commence treatment

Post Ops

- Let's go through them
- Why are they important?

Review

- Two week review appointments are for
 - Checking the treatment has had the intended outcome
 - Taking photos
 - Discussion with the patient about the result and their expectation
 - Ensuring that the patient is happy
 - Assess where things haven't gone to plan and learning from them
- NOT a top up!

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Lunch



Complication
management

Unrealistic expectations



Bruises



Swelling



Asymmetry



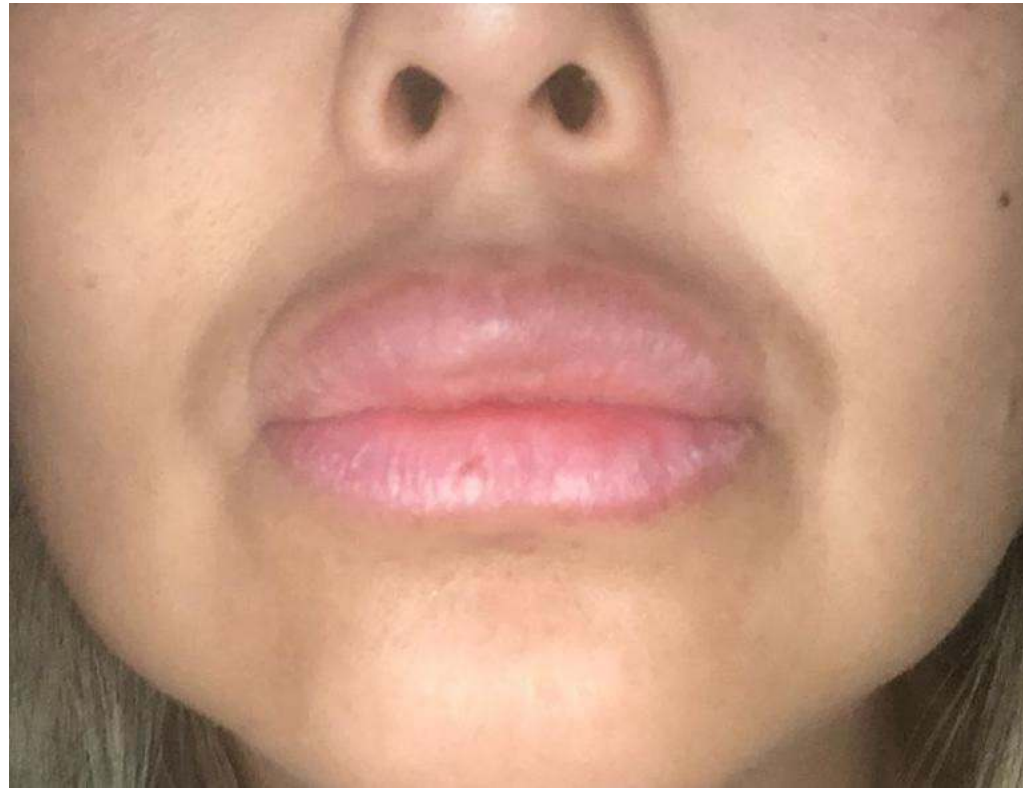
Lumps



Shelf



Delayed Hypersensitivity



Hypersensitivity reaction to Hyaluronic Acid Dermal filler following novel Coronavirus infection – a case report

MJ Rowland-Warmann 

First published: 18 March 2021 | <https://doi.org/10.1111/jocd.14074>

This article has been accepted for publication and undergone full peer review but has not been through the copyediting, typesetting, pagination and proofreading process, which may lead to differences between this version and the Version of Record. Please cite this article as doi:10.1111/jocd.14074

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Abstract

The incidence of hypersensitivity reactions to hyaluronic acid dermal fillers is between 0.3 and 4.25%, mediated by T-lymphocytes. Flu-like illness can trigger immunogenic reactions at the site of filler placement. Cases of SARS-CoV-2 are significant, and pose a possible risk of inducing hypersensitivity. This case report is of a delayed type hypersensitivity after hyaluronic acid dermal filler treatment of the nose and subsequent infection with SARS-CoV-2. Risk factors for the development of such symptoms were identified as the presence of hyaluronic acid combined with flu-like illness and repeated treatment of one area. The case resolved without intervention. Clinicians should be mindful of the risk posed by the interaction of hyaluronic acid dermal filler with SARS-CoV-2 in light of the pandemic.

Nodules

- Non-inflammatory
Non-painful, hard



- Inflammatory
Pain, redness, tenderness

Ref ACE Guidelines

Management of Inflammatory DONs

Patient presents with an inflammatory delayed onset nodule characterised by pain or tenderness, warmth and/or redness. Options discussed with patient including watchful waiting and treatment. Practitioner needs to discuss the risk versus benefit of the treatment options which may include a protracted course of oral antibiotics, intralesional steroids and hyaluronidase. The practitioner should refer to a more experienced practitioner at any point they feel out of their own competency levels.

Mono antibiotic therapy with either a macrolide (e.g. clarithromycin 500mg BD) or a tetracycline (e.g. minocycline 100mg BD or doxycycline 100mg BD) for 2 weeks.

Resolved

Significant improvement

No significant improvement

Continue mono antibiotic therapy for a further 2 weeks

Dual antibiotic therapy with either a macrolide (e.g. clarithromycin 500mg BD), a tetracycline (e.g. minocycline 100mg BD or doxycycline 100mg BD) or a quinolone (e.g. ciprofloxacin* 500mg BD) for 4 weeks

Hyaluronic Acid Filler

Resolved

Non Hyaluronic Acid Filler

Continue mono or dual antibiotic therapy and treat with Hyaluronidase (See ACE Group guidance on Hyaluronidase) and review in 4 weeks.

Continue mono or dual antibiotic therapy and treat with intralesional steroids. Initial treatment should be approximately 0.1ml of triamcinolone acetonide at a dilution of 10mg/ml for the first treatment, 20mg/ml for the second and then 40mg/ml.

Significant improvement

Resolved

No significant improvement

Significant improvement

Resolved

No significant improvement

Repeat until resolved or no significant improvement

Repeat until resolved or no significant improvement for 3 treatments

Consider the addition of allopurinol 300mg BD and repeat for 3 treatments

Consider resurfacing procedures such as spot dermabrasion or laser resurfacing

Consider intralesional anti-mitotics (e.g. 5-fluorouracil) +/- intralesional steroids

Consider surgical excision

Nodule still present
Refer for further treatment

*Ciprofloxacin should be considered 3rd line and be prescribed for a maximum of 60 days (BNF)

Tyndall



Acute Infection



Cold sore



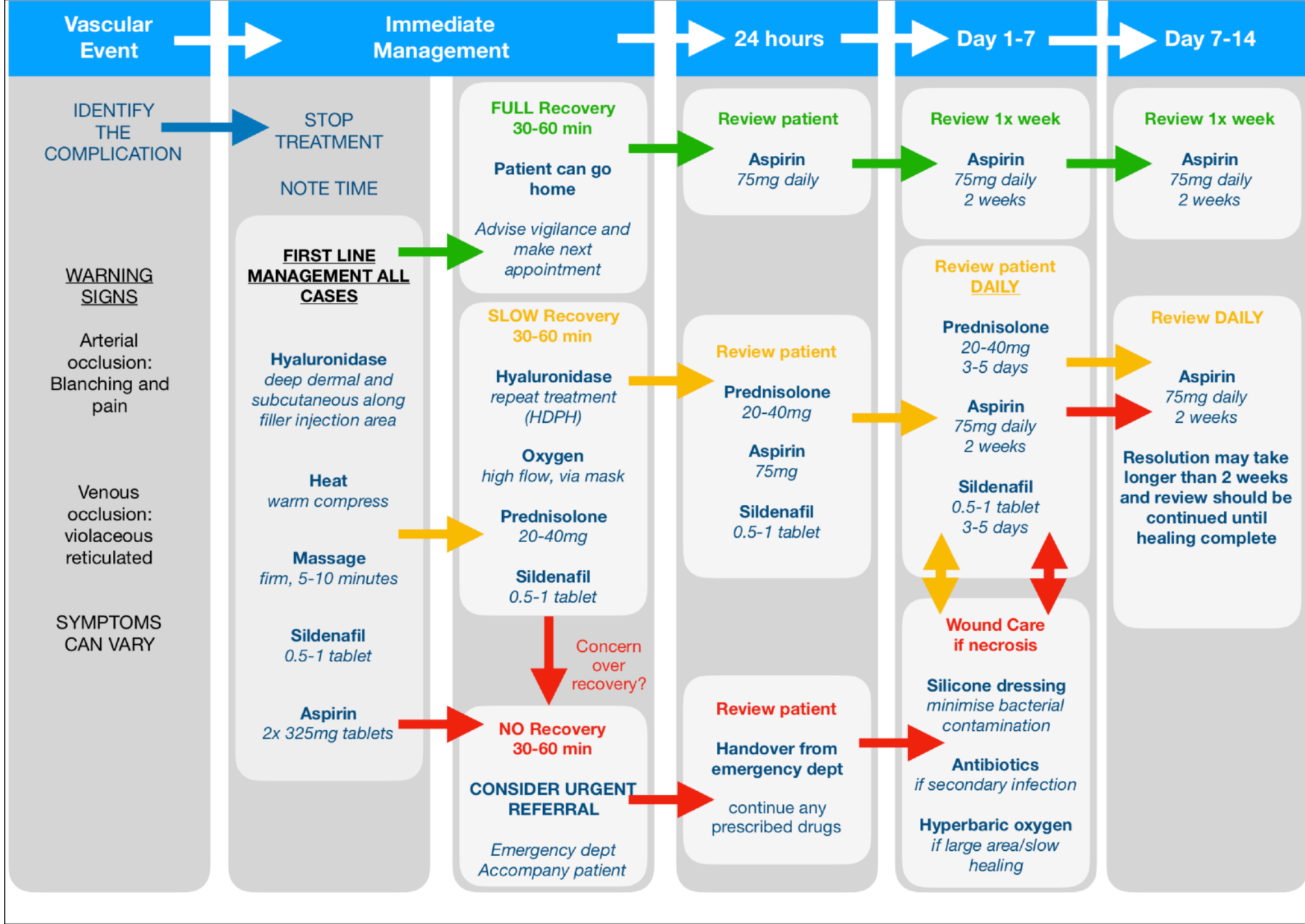
Prophylaxis of herpetic infections	
1 st -line treatment	2 nd -line treatment
Aciclovir 400mg Twice A Day (Three Times A Day if immunocompromised or high risk)	Valaciclovir 500mg Once A Day (Twice A Day if immunocompromised or high risk)

Vessel Malformation

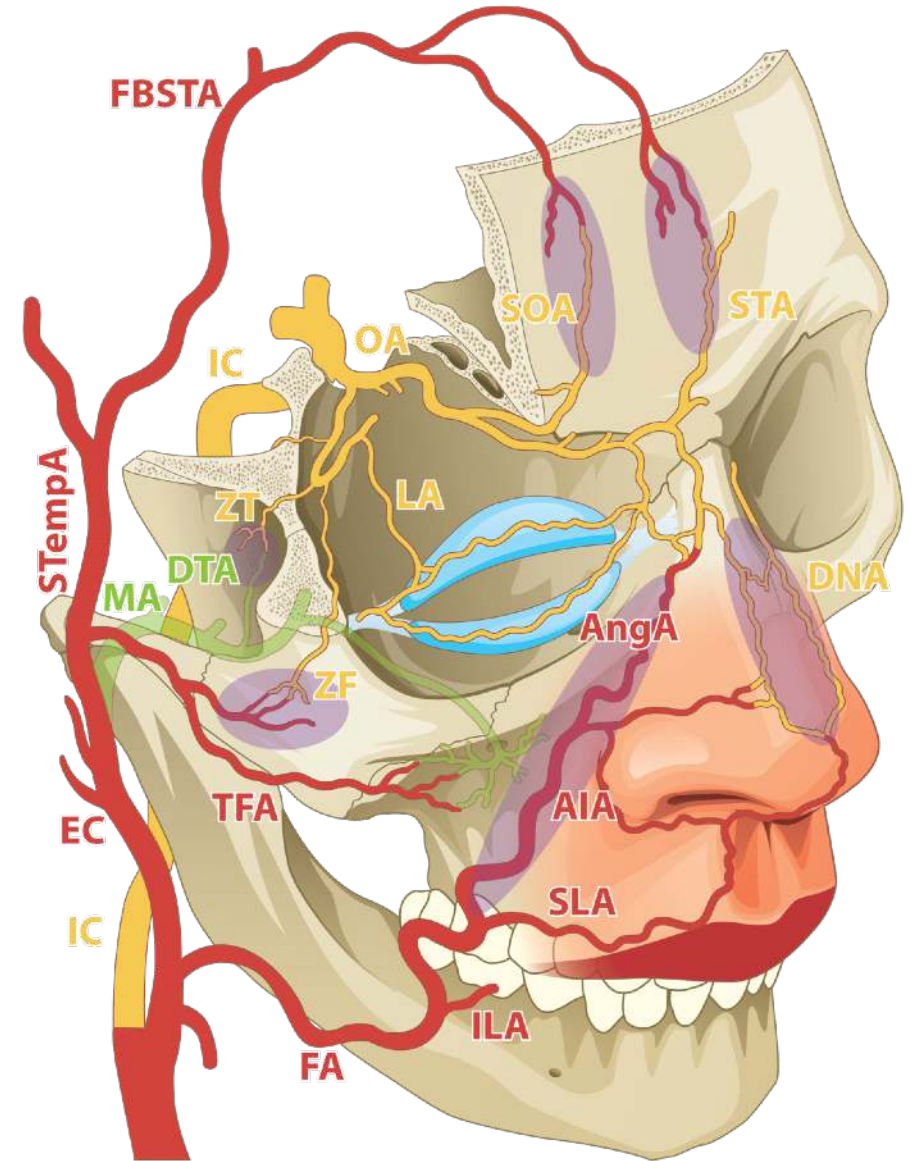


Vascular occlusion

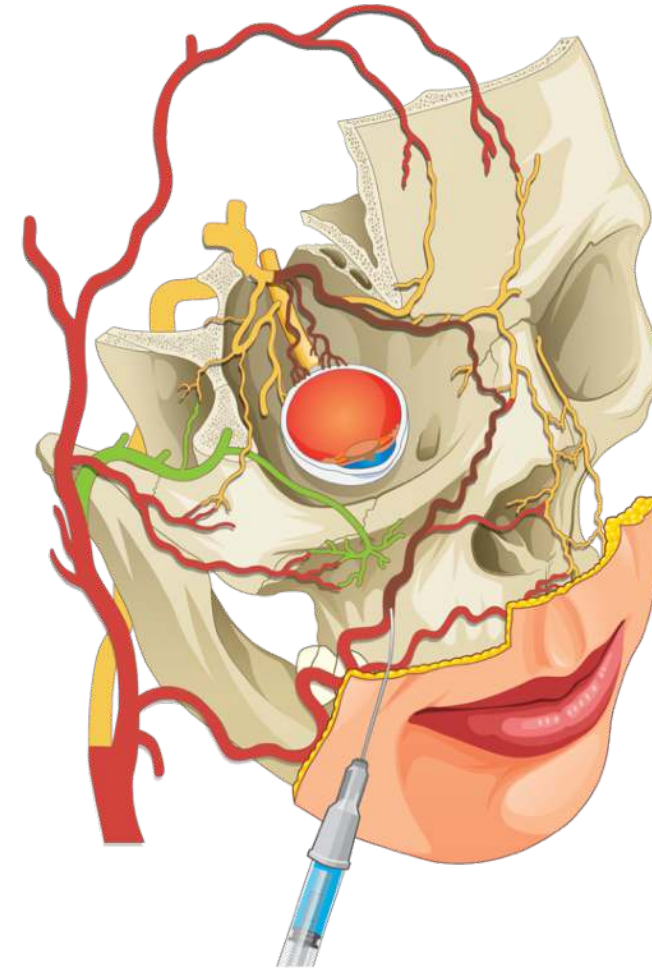
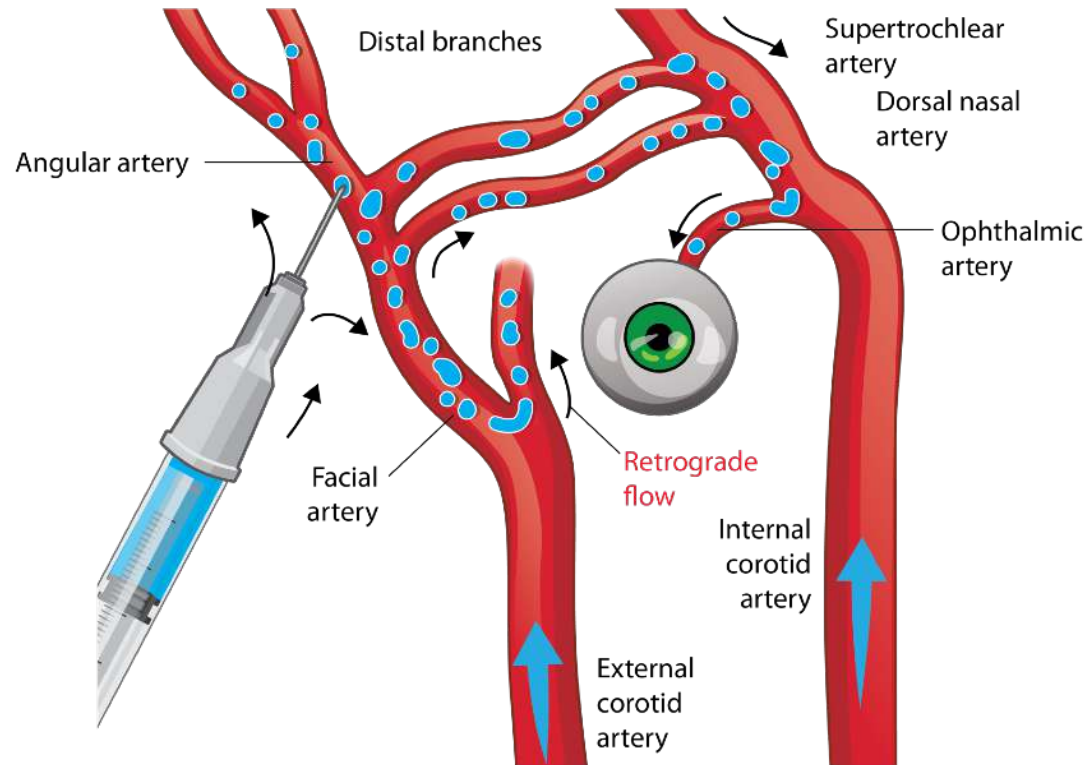


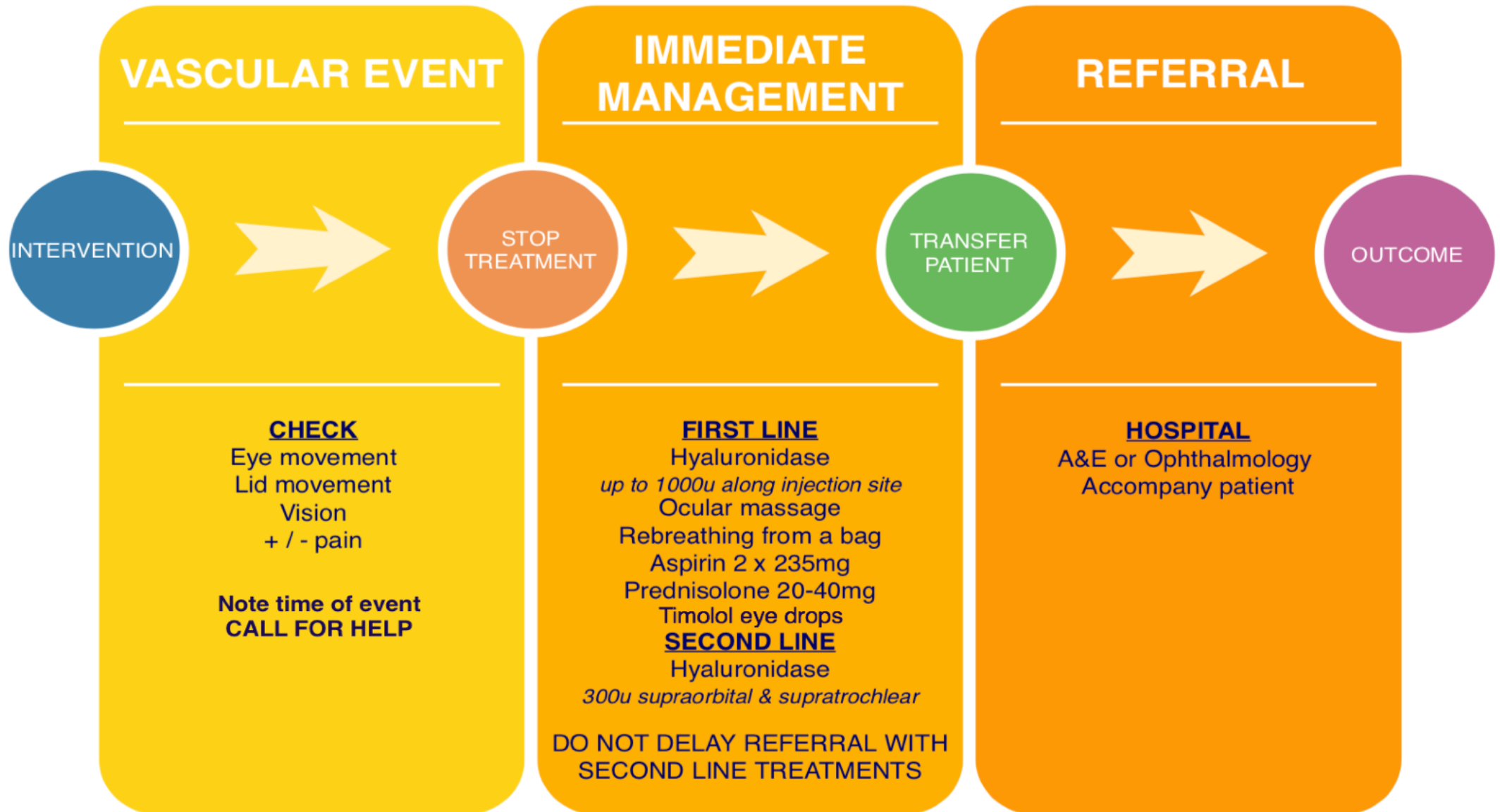


Vision Loss



Blindness – how it happens





Hyaluronidase

- Emergency use

- 1500iU on 1ml saline

- Aesthetic use

- 1500iU on 10ml saline.
- Inject LA prior to Hyaluronidase.

Emergency Filler Protocol

Emergency use

- 1500iU on 1ml saline

How to inject Hyaluronidase

- LA 2% without adrenaline or Scandonest 4% without adrenaline
- Inject into ischaemic area
- Increases vasodilation
- Reduces pain to massage

Emergency protocol HIGH DOSE PULSED HYALURONIDASE

1. Inform patient and make note of time
2. Get help
3. Test capillary refill time on affected and unaffected sides
4. Mark out area of blanching/ischaemia and take picture
5. Clean skin, 0.5ml plain local
6. Draw up 1ml saline to 1500iU Hyaluronidase
7. Inject 1500iU into full area of ischaemia
8. Firm massage with hot compress 5 minutes
9. Aspirin 325mg (only give once)
10. Repeat step 3-8 every hour until resolution

Filler Emergency kit bag

Emergency Kit Bag for Vascular Compromise	
Drug	Action
Hyaluronidase	Dissolution of HA filler
GTN paste	vasodilator
Aspirin	Anti-inflammatory, antiplatelet
Prednisolone 20mg tablets	Anti-inflammatory
Oxygen (sufficient for 15-20 minutes high flow, recommended CD cylinder size)	Improved tissue perfusion
Sildenafil (optional)	vasodilation
Antihistamines	In case of allergy
Adrenaline	In case of allergy

Also: water for injection, saline, lidocaine, syringes (2,5,10ml), needles (blue 23G, grey 27G, yellow 30G, Bd microfine 30G)

Acyclovir 200mg, Fucidine (topical Ab), Hydrocortisone (topical steroid), Oral Ab (Flucloxacillin 500mg, Clarithromycin 500mg), Antihistamine.

Emergency drugs kit.

Criteria

1. History taking
1. Physical examination skills/clinical judgement
1. Demonstrates understanding of indications for treatment, risks and benefits, procedural technique
1. Obtains informed consent
1. Demonstrates appropriate pre-operative preparation
1. Offers/applies appropriate analgesics
1. Demonstrates safe, independent delivery of proposed procedure & overall ability to perform the procedure competently & able to respond to guidance from the trainers.
1. Technical ability. Includes - Able to control injection depth / Able to identify safety margins and boundaries in theory and then apply to practice / Able to aspirate meaningfully-
1. Demonstrate good hand hygiene & cross infection control procedures
1. Post procedure management including a knowledge of potential side effects / risks of treatment
1. Communication skills
1. Professionalism
1. Overall ability to perform the procedure competently



End of Level 1