

# WESTERWOOD HEALTH

Botulinum Toxin Theory

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# Science of Ageing

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Ageing Process - Signs and Causes

Muscle Anatomy and Function

# The Ageing Process

○ **Deepening of wrinkles** due to persistent small muscle contraction

-Treated by Botox

○ **Thinning of the skin** (as skin cells divide more slowly)

○ **Dryness of Skin**

(loses its ability to retain moisture and repair itself as we lose Hyaluronic acid)

○ **Loss of Volume** (fat)

○ **Sagging** –

Laxity of skin and change of facial contours (network of collagen and elastin

fibres loosen and unravel losing elasticity)

○ **Telangiectasia**

○ **Pigment changes** i.e. age spots

} Botox

} Skincare

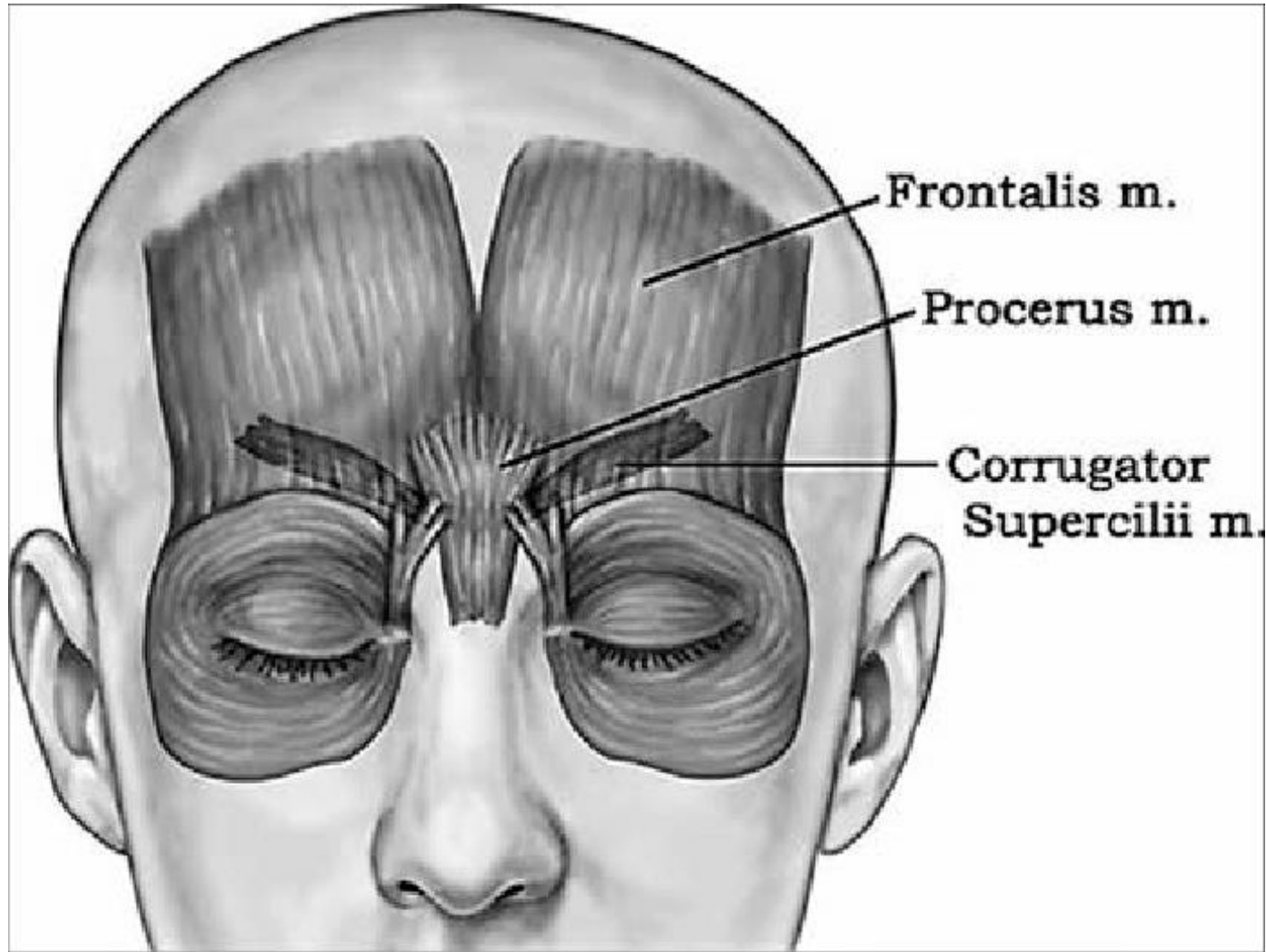
} Derma Fillers

} Laser

# Extrinsic causes Precipitating/exacerbatory?

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- Extrinsic –
  - Environmental Factors including UV exposure, smoking, alcohol, pollution, diet and nutrition, sleep patterns, stress, lack of vit D (Vitamin D deficiencies slows the production hydroxyproline and stops the construction of new collagen)



# Anatomy of muscles

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# Anatomy and function

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## Facial Muscles

## Actions

Frontalis

Brow elevator



Brow elevator

Corrugators

Pulls eyebrows medially

Depressor Supercilli

Brow depressors esp. laterally

Procerus

Pulls inwards

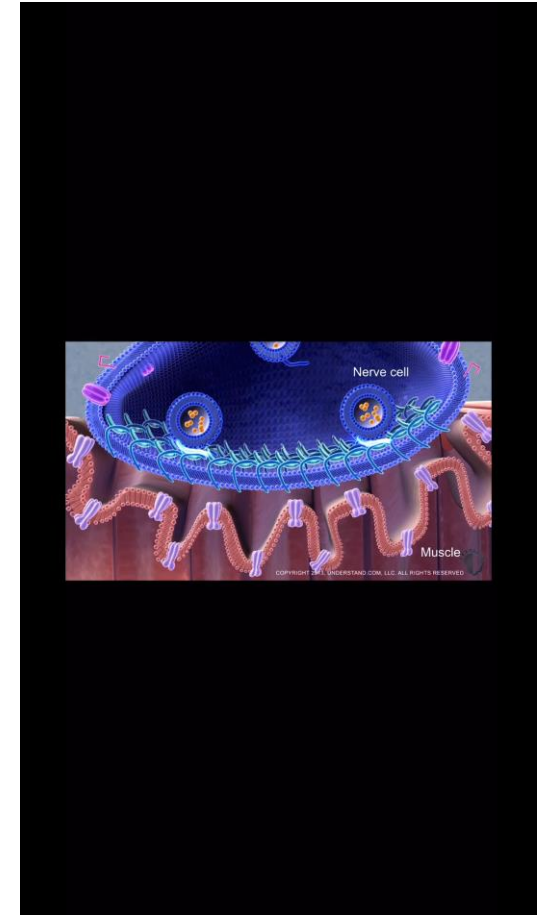
Orbicularis oculi



Brow depressor

# Video of Botox

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# Botulinum Pharmacology

## - benefits of stopping muscles moving

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Botulinum Toxin, prevents the release of acetylcholine in the nerve endings thus preventing any movement in the muscle. Preventing the muscles from moving and causing wrinkles

# What is Botulinum Toxin (Botox)?

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Muscle relaxant prescription only medicine.

Comes as a powder (injectable). Different Brands;

- Botox
- Azzalure (Dysport)
- Bocoture (Xeomin)

It works by partially blocking the nerve impulses to any muscles that have been injected and reduces excessive contractions of these muscles.

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Wrinkles

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Strabismus

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Cervical dystonia

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Cerebral Palsy

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Hemifacial Spasm

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Hyperhidrosis

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Migraine

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Blepharospasm

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Many more...

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# Botulinum Licences

# 3 Main Cosmetic Indications

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- Forehead
- Frown lines (glabellar region)
- Crow's Feet lines



# Administration techniques reconstruction

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Botulinum toxin units are different depending on the medicinal products. Azzalure-Speywood units unlike Botox and Bocoture.

Aseptic as possible

Azzalure has to be reconstituted with a sodium chloride 9 mg/ml (0.9 %) solution for injection. Use bacteriostatic where possible.

Amount of solvent added  
to a 125 U vial

0.63ml

Resulting dose  
(Units per 0.05 ml)

10 U

# Administration Techniques

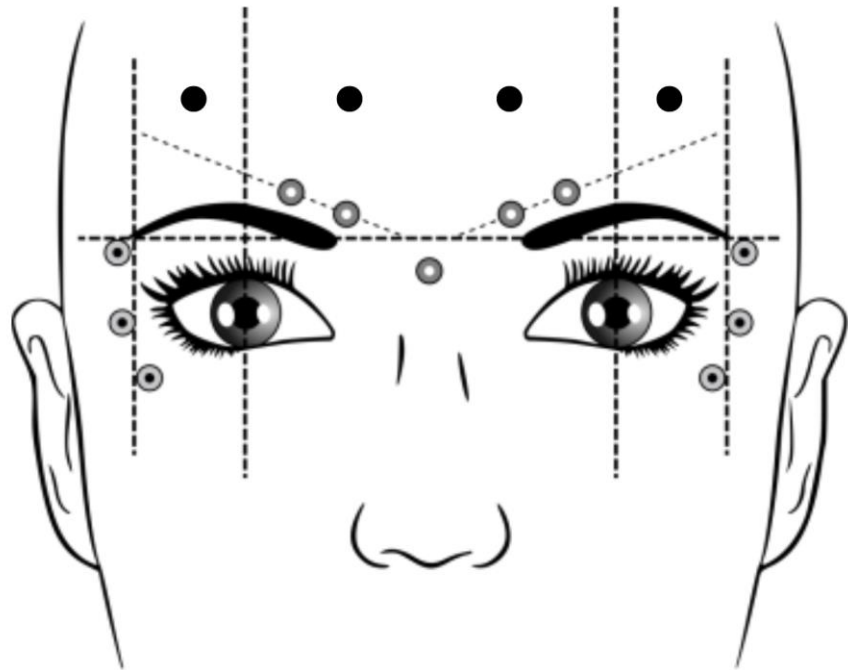
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Once reconstituted, Azzalure should only be used to treat a single patient, during a single session.

Remove any make-up and disinfect the skin with antiseptic.

Intramuscular injections should be performed using a sterile 30/32 gauge needle.

The recommended injection point for glabellar lines and lateral canthal lines are described below:



- Glabellar line injection point
- Lateral Canthal line injection point
- Forehead injection point

# Administration Techniques

# Administration techniques

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## ***Post-injection***

### RECOMMENDATIONS FOR THE DISPOSAL OF CONTAMINATED MATERIALS

Immediately after use and prior to disposal, unused reconstituted Azzalure (in the vial or in the syringe) should be inactivated with 2 ml of dilute sodium hypochlorite solution at 0.55 or 1 % (Dakin's solution).

Used vials, syringes and materials should not be emptied and must be discarded into appropriate containers and disposed of in accordance with local requirements.

### RECOMMENDATIONS SHOULD ANY INCIDENT OCCUR DURING THE HANDLING OF BOTULINUM TOXIN

Any spills of the product must be wiped up: either using absorbent material impregnated with a solution of sodium hypochlorite (bleach) in case of the powder, or with dry, absorbent material in case of reconstituted product.

The contaminated surfaces should be cleaned using absorbent material impregnated with a solution of sodium hypochlorite (bleach), then dried.

If a vial is broken, proceed as mentioned above by carefully collecting the pieces of broken glass and wiping up the product, avoiding any cuts to the skin.

If the product comes into contact with the skin, wash the affected area with a solution of sodium hypochlorite (bleach) then rinse abundantly with water.

If product enters contact with the eyes, rinse thoroughly with plenty of water or with an ophthalmic eyewash solution.

If product enters into contact with a wound, cut or broken skin, rinse thoroughly with plenty of water and take the appropriate medical steps according to the dose injected.



# Injection sites continued ...

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## **FOREHEAD : 4 injections- Straight line.**

- Alternatively 8 “half dose” injections zigzag shape.
- Should get visible lumps in this area.
- Avoid danger zones in lateral brow.

## **FROWN LINES: 5 injections (5 x 10units)- V shape**

- 1 injection in Procerus and 2 injections in each of the Corrugators.
- Almost full length of needle- no lumps.
- Place the thumb or index finger firmly below the orbital rim in order to prevent extravasation below the orbital rim.

## **CROWS FEET: 3 x10 unit C- shaped injections –Orbicularis Oculi**

- Safety margin- 1cm out with orbital rim.
- Most superficial- 20-30 degrees to skin; should get blebs under skin.
- Care to avoid zygomaticus major/minor to avoid mouth drop/asymmetrical smile.

# Safety measures

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## ***Pre-injection***

- Full History including PMH (to rule out contraindications/cautions)
- Full Assessment including capacity and consent
- Access to emergency equipment; lupidone - defib pads, adrenaline, pocket mask etc.

## ***During injection***

- Use single use disposable gloves, clean area, disinfect, mark up, drawing up
- Botulinum - never re-sheath. Clean again prior to administration.
- Avoid areas of active infection/redness.
- Avoid vessels to minimise bleeding/bruising.

# Cautions

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- Aspirin and other NSAIDS
- Ginkgo Biloba, St Johns Wort, Vitamin E
- PMH inc. Bells palsy
- Patient on anticoagulant therapy

# Contra-indicators Absolute – careful of these patients!

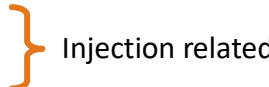







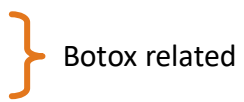
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- **Allergy** to Botulinum ingredients.
- Existing infection at site of injection
- Bleeding disorders
- **Pregnancy and breast feeding**
- Disorders of muscle activity e.g MG
- Patient taking aminoglycosides (thus interfering with neuromuscular transmission)
- **Dysmorphia**
- **Recent GA**



# Adverse effects

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- Bruising (minimise anticoagulants. Use arnica to treat) 
- Eyebrow Ptosis (inject depressors or reassure 4- 6 weeks) 
- Eyelid Ptosis (Iopidine and reassurance) 
- Double Vision 
- Headaches (simple analgesia- don't hit periosteum) 
- Infection (antibiotics - flucloxacillin 500mg qds for 1 week (erythromycin if penicillin allergy) 
- Local swelling and erythema (antihistamines and anti-inflammatories) 
- Nausea (reassurance) 
- Antibody development (rare) 

# TIMESCALES

## Factors affecting botulinum duration.

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Botox normally takes 2 days - 2 weeks for full effect and lasts 3-6 months however some of the factors (below) can affect this.

Dependant on:

1. Extent of wrinkles. Those with deep frown lines tend to have stronger muscles thus toxin may not last as long. However, arguably they will appreciate the greatest benefit.
2. Age- Older people will not have as long-lasting effects.
3. Botulinum Mixture- High concentrations aid better results
4. Storage of Botulinum- If not stored correctly may affect potency
5. Individual unexplainable factors. Some may be immune to Botulinum completely. Rare, but does occur!

# Storage

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- Refrigerate at 2-8 degrees Celsius
- Do NOT freeze once vial has been made up
- Used vials should be autoclaved
- Storage after reconstitution

# Client Consultation and Consent

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Consultation is key

- Rapport
- Will negate the chances of an unhappy client/legal proceedings
- Principles are the same as any other consult
- Subtle differences
  - Private treatment
  - Elective
  - Visible results



# Client Consultation

Patient Name: \_\_\_\_\_ DOB: \_\_\_\_\_ Referred By: \*

**Practitioner to complete**  
Presenting Complaint/ Cosmetic history

Medical/Medication History

**Social History**  
Occupation \_\_\_\_\_ Drugs (recreational) \_\_\_\_\_  
Alcohol Consumption \_\_\_\_\_ Smoking Status \_\_\_\_\_  
Relationship/children \_\_\_\_\_

**Examination:**

**Diagnosis & Clinical Options :**  
For each concern: Diagnosis, Treatment options such as Botulinum toxin, dermal fillers & IPL.  
Defer/refer Concern to Surgical, Psychiatric or Psychology Colleagues. Product used including



Date \_\_\_\_\_

Product name \_\_\_\_\_

Volume used \_\_\_\_\_

Additional notes \_\_\_\_\_

**Reception**

Toxin	B1	B2	B3	B4	F
Lips		0.5ml	1ml		
Filler Other					
	Total: Review Y / N				

## HISTORY

General and Cosmetic History and Consent forms

REFERRAL How did you hear about us?

PRESENTING COMPLAINT Hi! How can I help you? What bothers you? How does it make you feel?

## MEDICAL HISTORY

Autoimmune diseases? Blood thinners?

Previous filler/Botox? Where, what and when?

# Client Consultation

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- Give the client the mirror and ask them what they would want treated
- Assess at rest for static lines
- Assess Dynamic wrinkles (Glogau Wrinkle Scale)
- Frown, raise eyebrows, smile (or close eyes and scrunch tight)
- Assess eyebrow position/eyelid hooding
- Manipulate skin to simulate toxin result to assess suitability/expectation

## Explanation/Exploration of Options

After history and examination

Decide if this patient is suitable, if not explain why they are not

If they are suitable, decide if you want to treat them

Explore all options with the patient including doing nothing and surgery!

## Managing Expectation

Be honest/borderline pessimistic- “may soften”.

Refer/signpost if you can't treat them

If you decide they are suitable, are happy to treat them and patient is amenable

Start with the explanation of what toxin is and how it will help including costs

Sign post.

Pictures.

Carry out the procedure.

Discuss aftercare whilst carrying out the procedure.

Arrange follow up – emergency contact information.

# Client consultation - examination

# Consent Form

## Botulinum Toxin Type A Consent Form

**Treatment Primary Purpose:** To address patient concerns and manage the psychological and physical features associated with those concerns. The treatment plan is formulated in conjunction with the primary responsibility and purposefulness of protecting, maintaining and improving the patient's psychological health and well being.

**What is Botulinum Toxin A?** Botulinum Toxin Type A is a toxin produced by bacteria which comes in the form of a powder. Sterile water is added in order to be able to inject it.

**How does the treatment work?** The toxin temporarily weakens the muscle that leads to skin damage, excessive sweating and migraines. Although advances have been made to license this medication for treatment it is commonly used off license to achieve these results. This should be considered by patients when undergoing treatment.

**Benefits:** Treatment may temporarily improve symptoms by addressing the activity of the underlying muscles. Results are seen within 2 weeks of administering the medication and can last approximately 3 months.

**Risks:** Although most patients suffer no side effects, there are some you should be made aware of which include, mild bruising, mild redness, swelling, numbness, stinging, bleeding and asymmetry in facial expressions. Less common risks include allergic reaction, eyelid or brow ptosis (which is the partial or complete drop of the eyelid or brow which can occlude vision), dry eyes, blurred vision, eye muscle weakness and infections at sites around or near the needle entry points. The products contain small amounts of albumin which comes from human blood. It is very unlikely that this could pass on infection, but it cannot be entirely ruled out. You are not suitable for this treatment if you are pregnant, breast feeding, undergoing IVF or suffer from Myaesthesia Gravis, Neuromuscular disease, coagulation problems or have an allergy to Botulinum Toxin. Although the procedure discussed with your practitioner usually has favourable results, we cannot guarantee the outcomes of any procedures. This may include the procedure not having the desired effect, therefore resulting in more product being required.

**Complications:** We take every precaution possible to minimise the risks of complications but due to the nature of these procedures they may still occur. Please ask your clinician any questions prior to commencing treatment. If you experience any of the noted above, contact your treating clinician or if you feel uncomfortable returning to them contact the clinic and we will allocate you another clinician. Your normal GP is not trained in the management of these complications and therefore failing to contact ourselves may result in worsening complications.

**Alternative treatment options** include, no treatment, other non-surgical modalities (such as prescription skincare, laser, IPL or dermal filler). Surgical treatment or psychological and psychiatric treatments/referrals.

**Cost:** The cost of treatment will be confirmed by you clinician prior to commencing treatment.

**Procedure:** A full medical history and examination (physical and mental) will be taken by your clinician prior to any treatment being carried out. Clinical photographs will be taken for medical records, educational purposes and for advertising, if you do not consent to this please inform your practitioner prior to treatment. The skin will be cleaned and disinfected, this will result in the removal of creams and make up. Medication is administered into the muscles via a needle by your clinician. Post-operative care/instructions will be given verbally and in writing, a review appointment will be arranged to check your results are satisfactory.

Initial.....Page 1 of 2

**Aftercare:** After initial administration of the medication keep upright for 4 hours. The product has been placed in specific muscle groups and remaining upright prevents the spread of this to neighbouring muscle groups which results in complications. Avoid drinking alcohol for the next 4 hours. Avoid excessive exercise, make up and facials as these increase the risks of complications

noted above for 2 days post treatment. Avoid sun beds, saunas and steam rooms for 2 weeks as this can reduce the efficacy of the treatment resulting in altered results.

**Cooling off period:** As clinicians we understand that you may require a period of time to think about your options. As such we are happy for you to have a consultation and a cooling off period to make your decision. As these are medical procedures, we can inform your GP should you wish.

PRINT  
NAME.....

SIGNATURE.....

DATE.....

SIGNATURE.....DATE.....

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# Aftercare instructions

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May be lumpy bumpy for up to 20 mins. Up to 4 hours post procedure:

- No stooping, straining or lying flat

Up to 12 hours post procedure:

- XS alcohol, extreme facial movements
- Make up is fine if mineral.

Up to 48 hours

- No touching/rubbing of the area or gym

Up to 2 weeks

- Sunbeds/saunas/facials massages



# Correction and complications

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## Follow up corrections

- At 2 weeks carry out an assessment (max 4 weeks)
- Correct for undertreatment and over treatment

## Complications

- Eyebrow Ptosis (inject depressors or reassure 4-6 weeks)
- Eyelid Ptosis (Iopidine and reassurance)

# Q&A

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Teams' session will be on Tuesday 27<sup>th</sup> June – Kirsty will send out link. Please bring any questions you may have to this session!

Thank you for watching and see you on the 27<sup>th</sup>

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