Introduction to Facial Cosmetic Surgery: Review of the Aging Process and Rejuvenation Procedures for the Face and Neck

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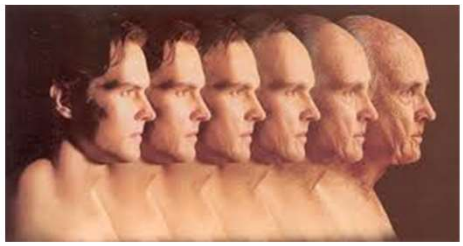
- No disclosures

ABFCS/ABCS Prep

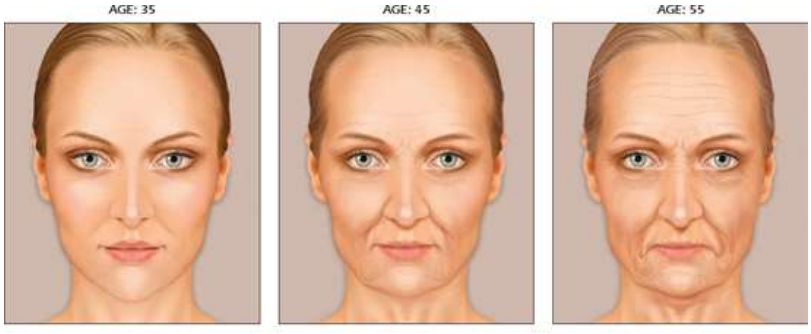
1. Diagnosis, evaluation, pre-operative assessment
2. Treatment, surgical management
3. Treatment variations, complications
4. Bonus question(s). YOU WANT TO BE HERE!!!

What happens when we age?

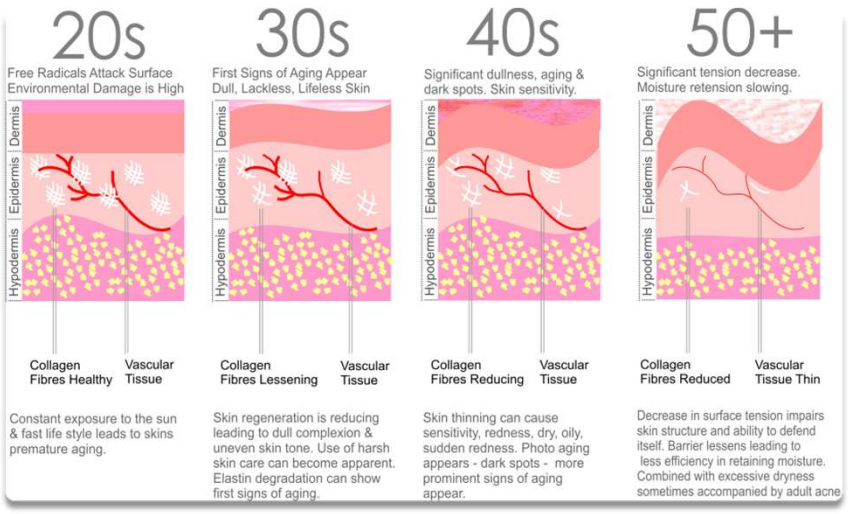


- Skin aging
- Muscle ptosis
- Fat redistribution and atrophy
- Skeletal resorption

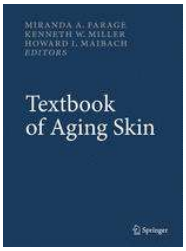
Skin changes with age

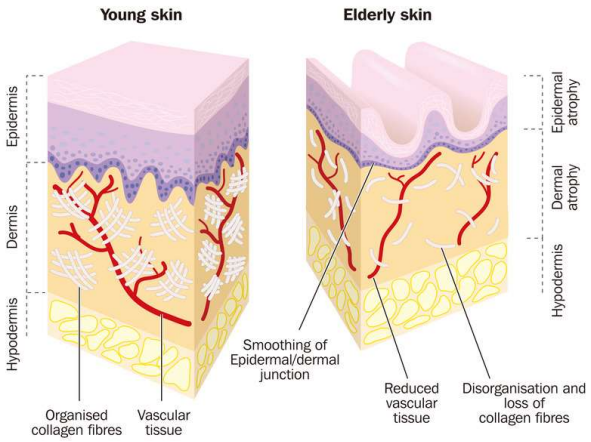


Skin Changes

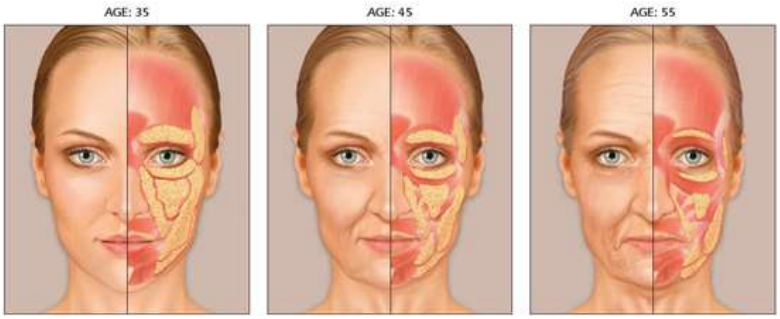


Histology of aging skin

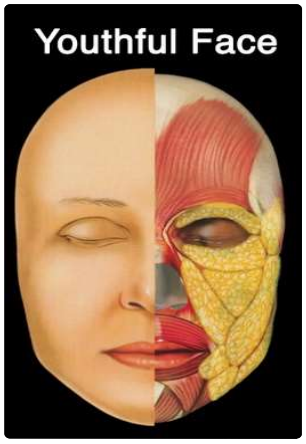




Soft Tissue

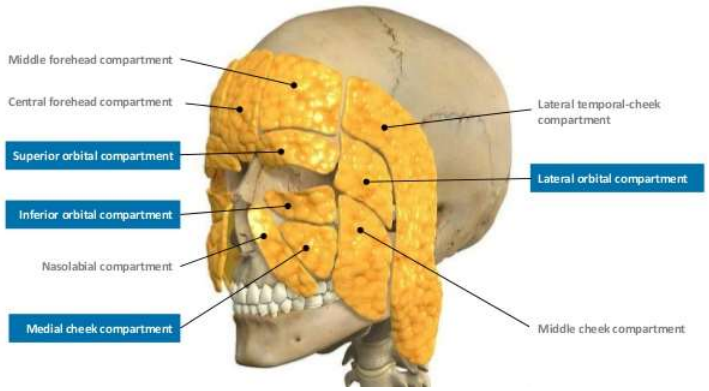


- Redistribution, accumulation, and atrophy of fat lead to facial volume loss
- Fat pads deflate unevenly
- Descent of malar soft tissue
- Fat pseudoherniation
- Infraorbital hollowing, Tear trough deformities
- Nasolabial Folds, Jowling, Marionette lines

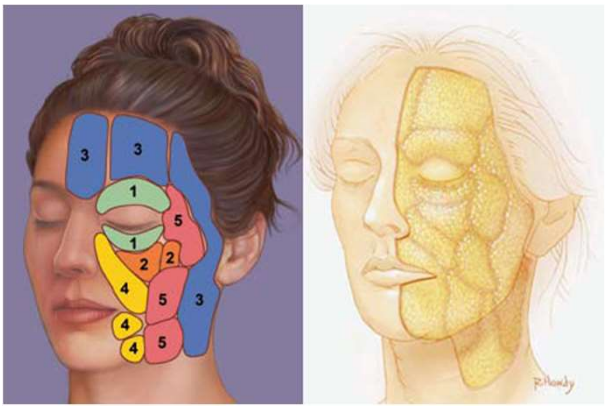


Where is the fat in youthful faces?

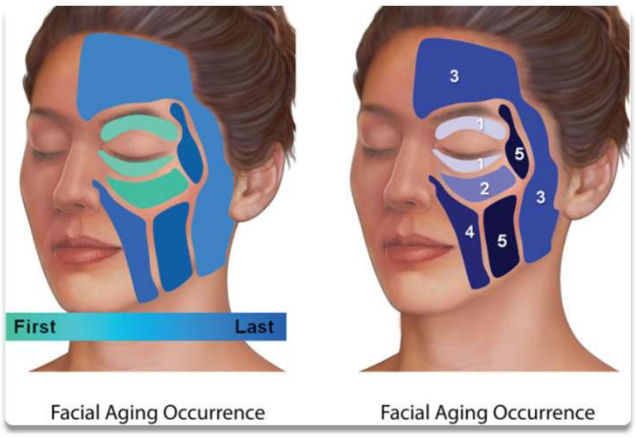
Distinct fat compartments of the face

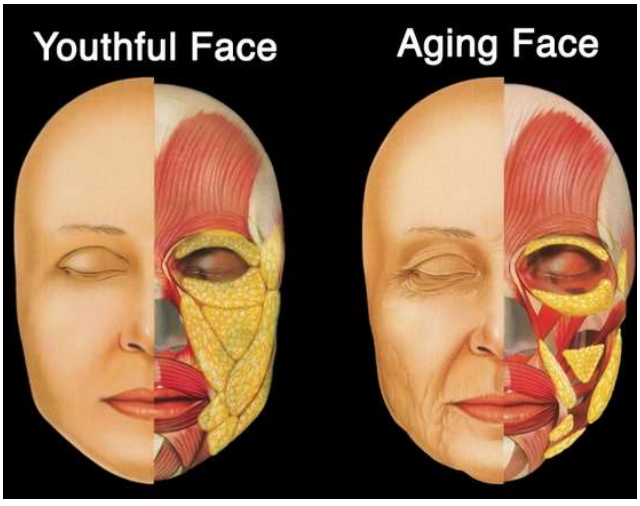


Fat compartments of the face

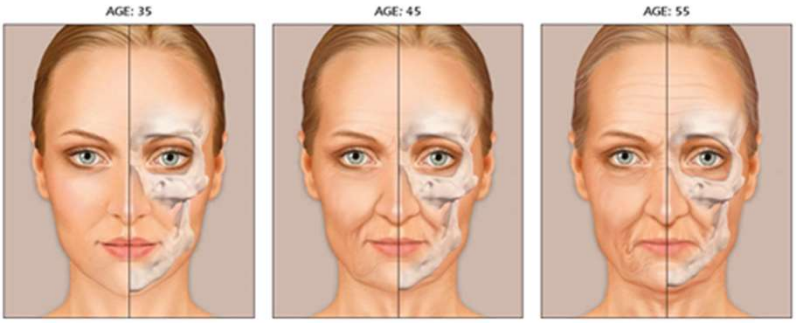


Sequence of fat compartment deflation with aging

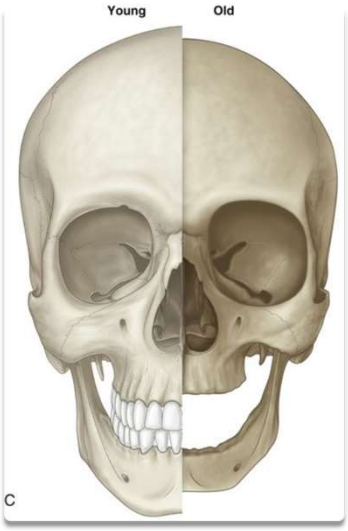




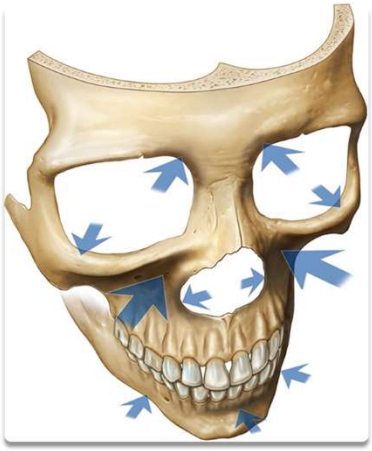
Bony Resorption



Split face image of 24 yo vs 75 yo

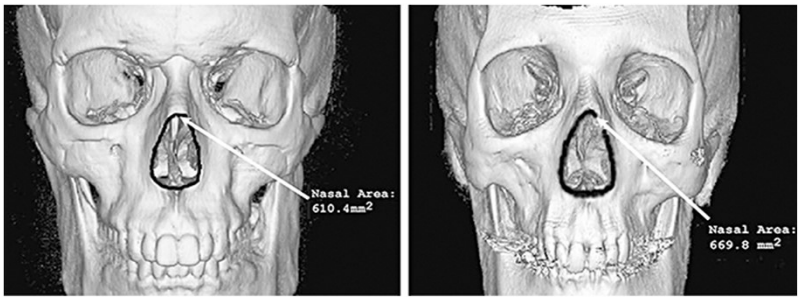


Bone Resoprtion

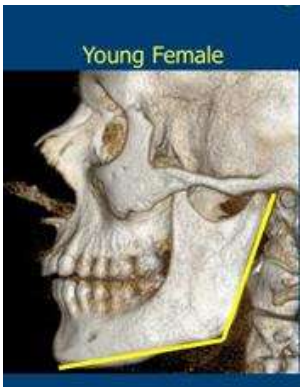


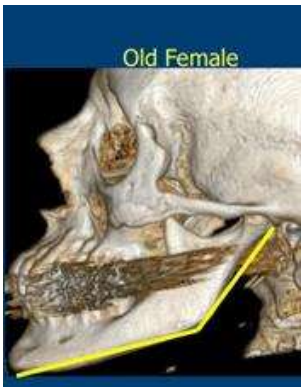
- Pyriform and midface most severe
- Orbit enlarges
- Nasal aperature enlarges

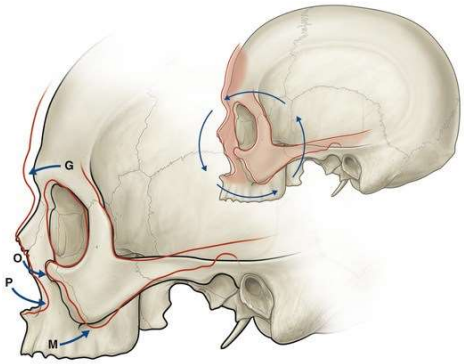
Skeletal Changes with Aging



Skeletal Changes with Aging







Counter-clockwise rotational changes result from advancement of the brow and recession of the maxilla.

Factors Contributing to Aging

Intrinsic factors

- Cellular senescence
- Decreased proliferative capacity
- Decrease in cellular DNA repair capacity
- Hormone reductions
- Oxidative stress
- Gene mutation
- Fat and muscle changes
- Bone and cartilage remodeling
- Loss of dental structures

Extrinsic factors

- Ultraviolet radiation
- Environmental factors
- Smoking
- Alcohol
- Gravitational effects
- Emotional stress

Pre-Operative Eval

- Diabetes
- Smoking
- Collagen-vascular disease
- Psychiatric history
- Steroid use
- Hypertension
- Prior surgery
- ASA/NSAIDS
- Herbal meds

Fitzpatrick Scale

SKIN TYPE	SKIN COLOR	CHARACTERISTICS
I	White; very fair, red or blonde hair; blue eyes; freckles	Always burns, never tans
II	White, fair, red or blond hair; blue, hazel or green eyes	Usually burns, tans with difficulty
III	Cream white; fair with any eye or hair color (common)	Sometimes mild burn, gradually tans
IV	Brown; typical Mediterranean Caucasian skin	Rarely burns, tans with ease
V	Dark Brown; mid-eastern skin types	Very rarely burns, tans easily
VI	Black	Never burns, tans very easily



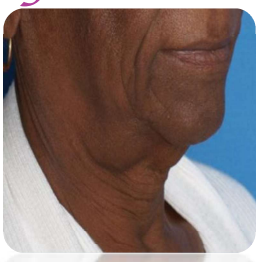



Glougau Scale

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

Pre-Operative Eval

Submental Adiposity

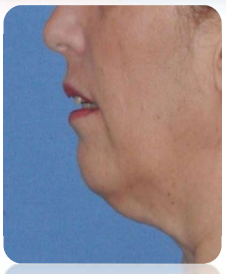


Submandibular Gland Ptosis

Cervical Skin Laxity

Platysmal Banding

Jowling



Deficient Genial Projection

Dedo Classification

Normal

A **Class I** normal younger patient with a well defined mental angle, little fat, and good skin and platysma tone.

Skin Only

Class II laxity of the cervical skin without significant fat deposition or muscle pathology. The skin must be redraped so wide undermining is required but a submental incision is usually not needed. A standard rhytidectomy with plication of the SMAS-platysma complex is usually all that is required.

Fat

Class III pathologic layer of subcutaneous fat, which is either genetic or acquired and liposuction is usually required to improve the cervical contour.

Platysma

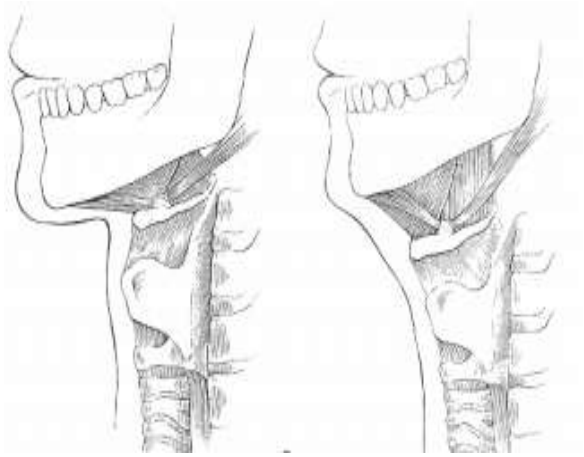
Class IV varying degrees of platysma pathology, which must be diagnosed by voluntary facial grimacing preoperatively. This is usually evident as anterior cervical cording, but it may be difficult to asses the platysma due to fat accumulation. These patients require some form of surgical manipulation of the platysma.

Bone (chin)

Class V retrognathia that contributes to their neck pathology and may require chin augmentation or mandibular osteotomies.

Hyoid

Class VI patients have an abnormal hyoid position. The hyoid is either too low or the mandible-to-hyoid distance is too low, limiting the effect of submental surgery. Patients with abnormally low hyoids (normal is at C4) need to be counseled preoperatively because there are currently no effective procedures to elevate the hyoid and their surgical results will likely be less than optimal.



Ideal hyoid is high and posterior for optimal cervicomental angle

Approach to Neck and Face

- Sub-mental Liposuction
- Platysmaplasty
- Isolated Neck Lift
- Short Scar Facelift
- Facelift

Submental Liposuction

- Face Tumescent
  - 500 ml Normal Saline
  - 25 ml of 2% Lidocaine (500 mg)
  - 1 ml of 1:1000 epi (1 mg)
- Body Tumescent
  - 1000 ml Normal Saline
  - 25 ml of 2% Lidocaine (500 mg)
  - 1 ml of 1:1000 epi (1 mg)

- Maximum Volume Range
  - 35-55 mg per kg

Patient weight (kg) x $\frac{35mg}{kg}$ = ___mg Lidocaine

___mg Lidocaine x $\frac{Liter}{500\ mg\ Lido}$ = ___Liters

MATH!

- How to calculate Lidocaine in mg
  - 25ml of 2% Lido
  - 2/100 = 0.02g Lidocaine
  - $\frac{0.02g}{ml} \times \frac{1000mg}{g} = \frac{20mg}{ml}$
  - $25ml \times \frac{20mg}{ml} = 500mg$
- Quick tricks
  - 25ml of 2% Lido =
  - "of" means multiply
  - 25ml x 2% Lido
  - % multiply by 10
    - 2% = 20
    - 1% = 10
  - 25ml x 20 = 500mg
  - Voila!

Lidocaine Toxicity

- Early/Mild symptoms:
  - Headaches
  - Visual disturbances
  - Confusion
  - Metallic taste
  - Perioral numbness
  - Hypotension
  - Sleepiness
  - Nausea/Vomiting
- Later Symptoms:
  - Muscle twitching
  - Seizures
  - Unconsciousness
  - Bradycardia
  - Significant hypotension
  - Arrythmias
  - Asystole/Cardiac Arrest

Lidocaine Toxicity Treatment

- Airway Maintenance
- Oxygen
- IV Fluids
- Benzodiazepines to control seizures
- Vasopressors
- 20% Intralipid Infusion

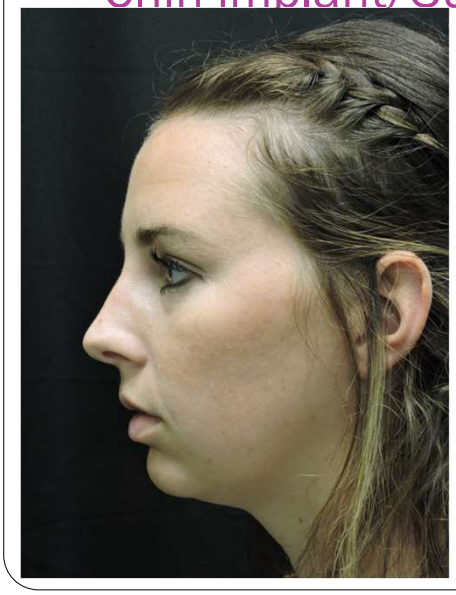
Lidocaine Toxicity

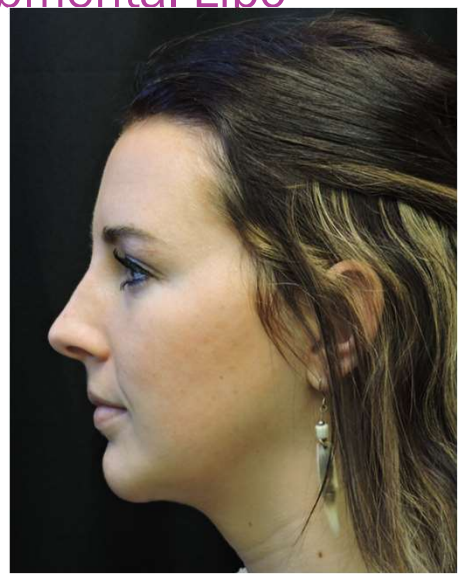
- 20 % Lipid Emulsion (Intralipid 20)
  - 1.5ml/kg bolus (can repeat 1-2 times for persistent asystole)
  - 0.25 ml/kg/min for 30-60 min (can increase if BP declines)

MORE MATH!

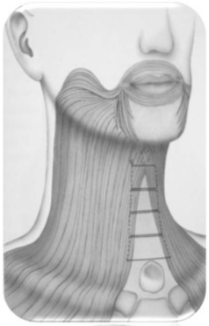
- How to calculate epi to mg
  - 1:1,000 means
  - 1g in 1,000 ml solvent
  - $\frac{1g}{1,000ml} \times \frac{1,000mg}{1g} = \frac{1mg}{ml}$
- Quick Trick
  - Remove 3 zeros and then divide
    - 1:1,000
      - 1:1
      - 1/1 = 1mg
    - 1:100,000
      - 1:100
      - 1/100 = 0.01 mg
    - 1:200,000
      - 1:200
      - 1/200= 0.005 mg

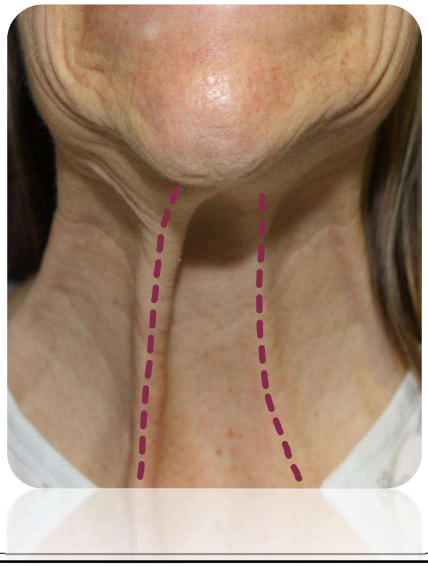
Chin implant/Submental Lipo



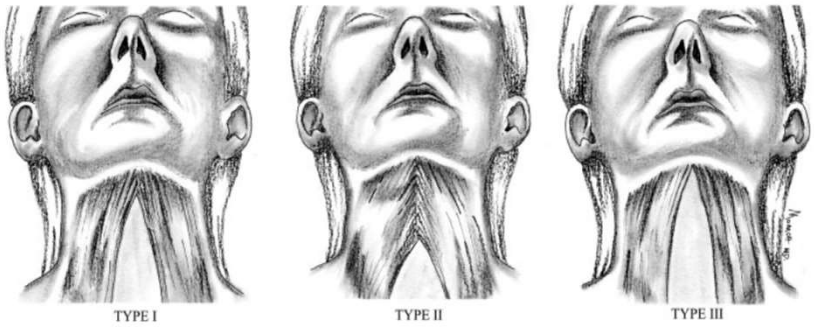


Platysmaplasty





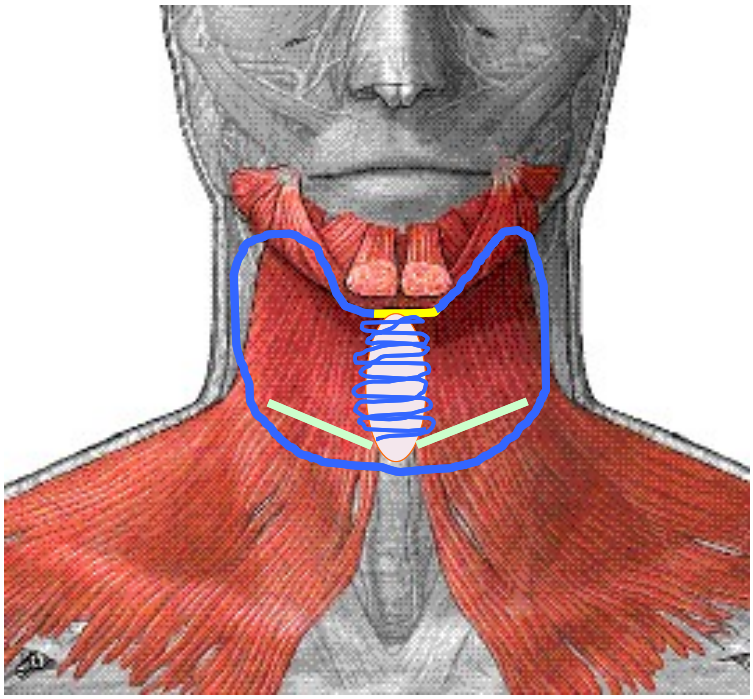
Cardoso de Castro's anatomic classification

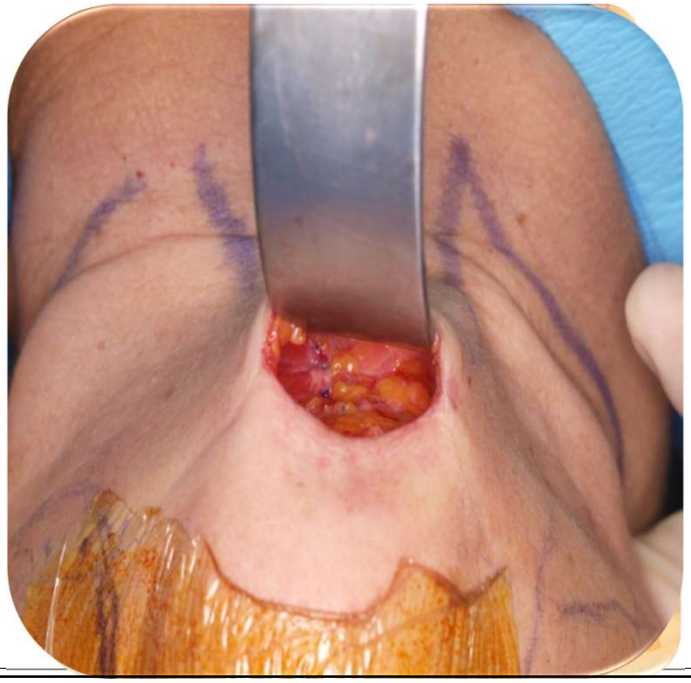


Most common (75% of population)
Limited decussation of the platysma muscles, extending 1 to 2 cm below the mandibular symphysis

15% of the population
Decussation of the platysma from the mandibular symphysis to the thyroid cartilage

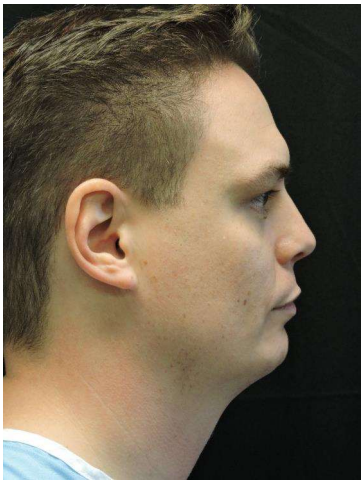
Least common (10%)
No decussation of the platysma muscles at the midline

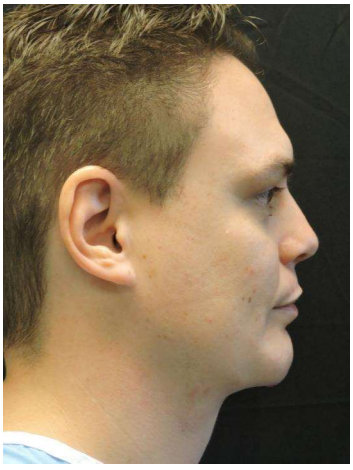




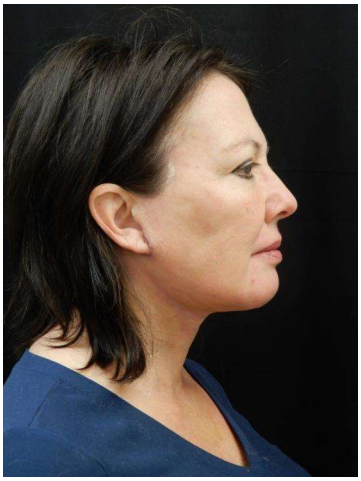
9 months – Chin Implant and Plastymaplasty

Chin Implant/Platysmaplasty



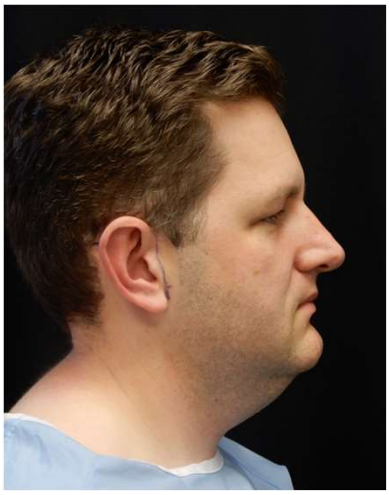


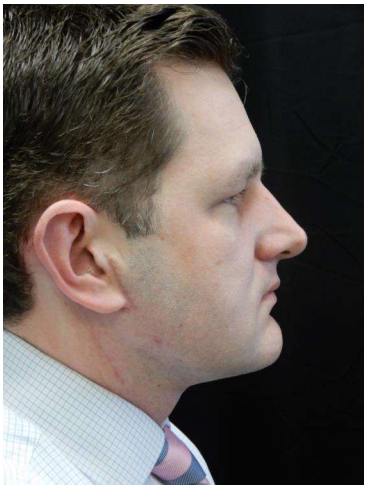
1 week



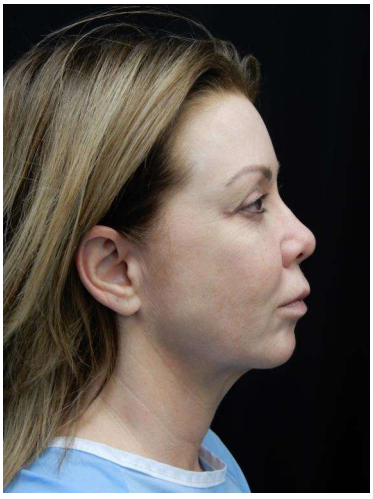
1 week – Isolated Neck Lift

Isolated neck lift



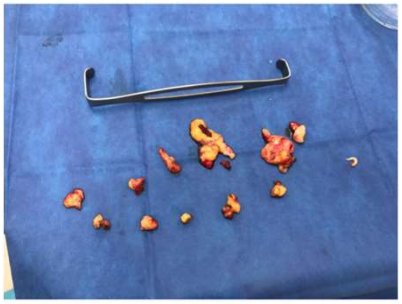


1 month- Neck Lift with Chin Implant

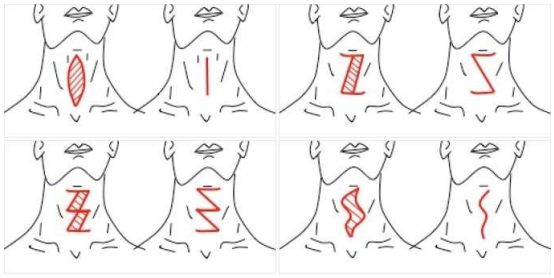


1 week – Isolated Neck Lift

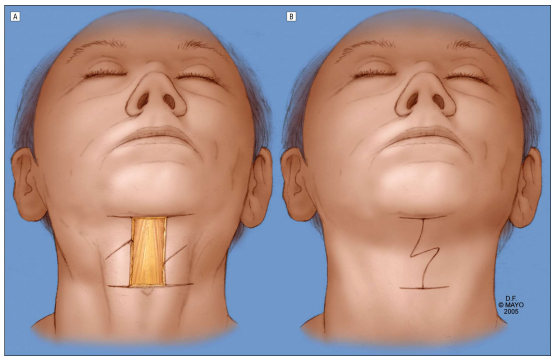
1 year – gained 15 lbs and wants more defined again!

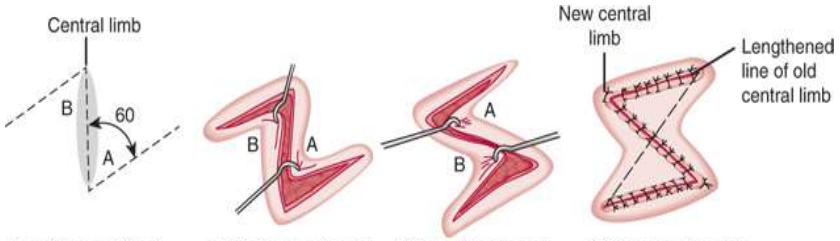


Direct Incision Necklift

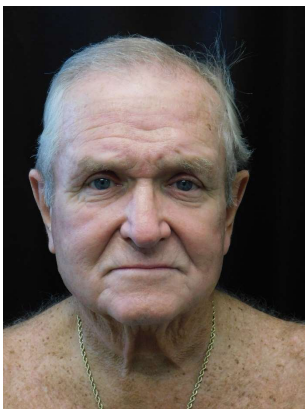


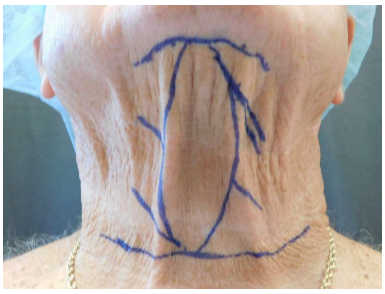
Z-plasty Necklift





A Incisions outlined. B Incisions made and flaps undermined. C Flaps transposed. D Completed closure.





Condensed History of the Facelift

- (1901) Hollander is credited with originally describing a surgical "Lift" of the face
- (1910) Lexer suggested skin flaps be dissected in a subcutaneous plane
- (1968/1974) Skoog described undermining and elevating the platysma
- (1976) Mitz & Peyronie defined the SMAS
- (1979) Tessier described the subperiosteal facelift
- (1994) Ramirez endoscopic facelifts and Saylan & Hopping S-lift
- (2000) Coleman volume replacement
- (2002) Tonnard and Verpaele MACS (minimal access cranial suspension) lift

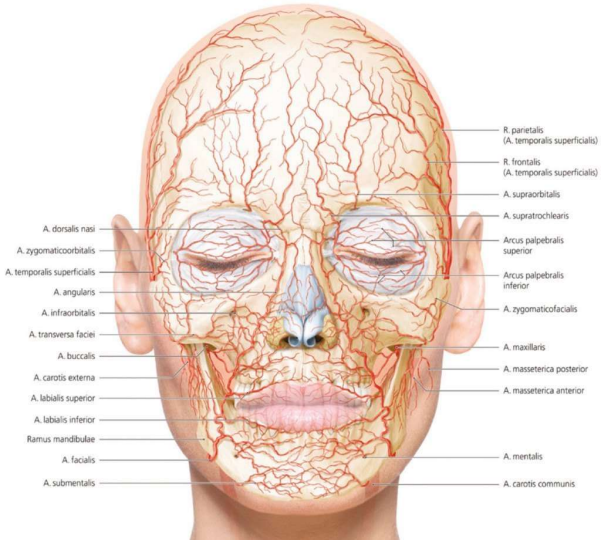
Relevant Anatomy

- Vascular supply
- Innervation
- Muscles
- Danger zones

Vascular supply for the facelift

- Transverse Facial Perforating Artery provides the major direct blood supply to the lateral cheek and preauricular area
  - Constant anatomic location 3.1 cm lateral and 3.7 cm inferior to the lateral canthus with 95 percent tolerance limits of +/- 1.1 cm
- Submental Perforating Artery
  - More variable location
- Collateral flow from the pedicle of the face lift flap
- The skin is separated from up to 80% of its blood supply during a facelift

Blood supply to the flap



Some References

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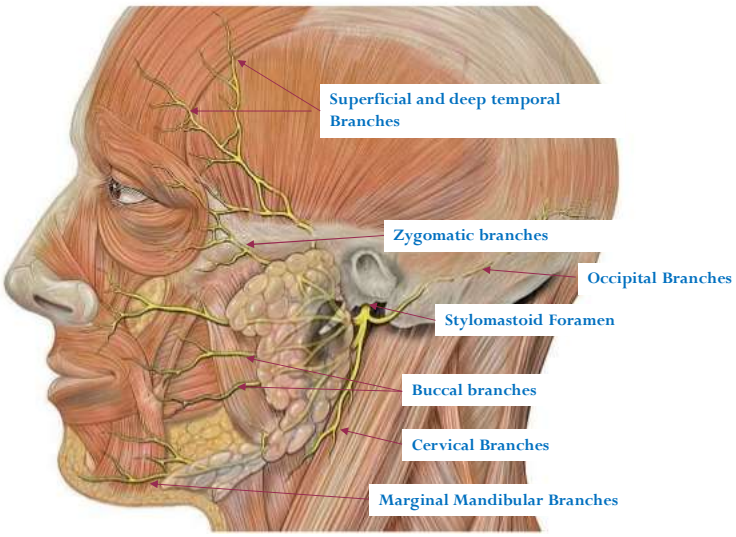
The Facial Nerve (CN VII)



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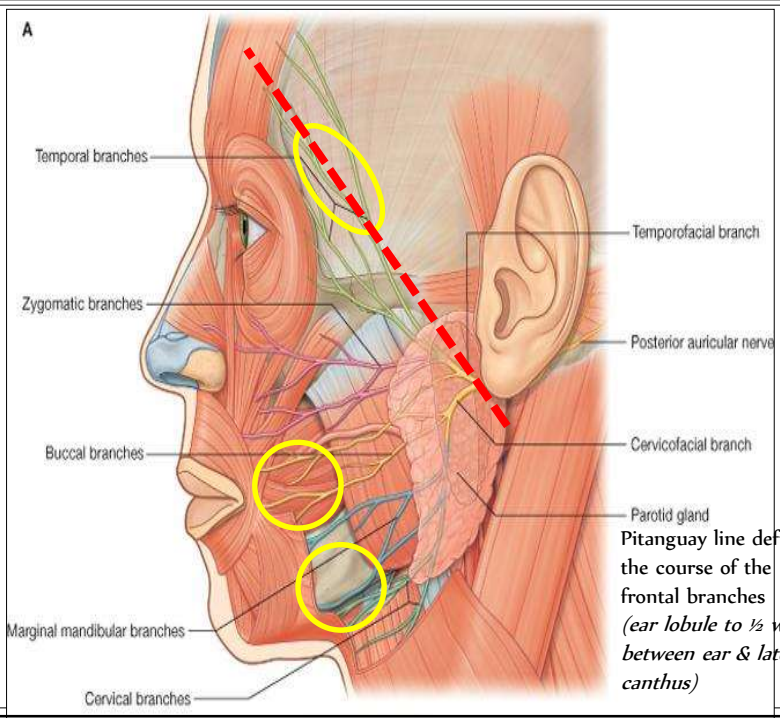
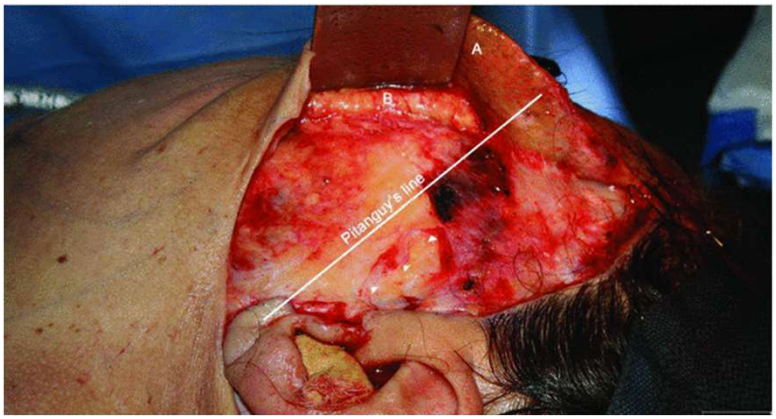
- Trussler AP, Stephan P, Hatef D, Schaverien M, Meade R, Barton FE. **The frontal branch of the facial nerve across the zygomatic arch: anatomical relevance of the high-SMAS technique**. Plast Reconstr Surg. 2010;125:1221-9.

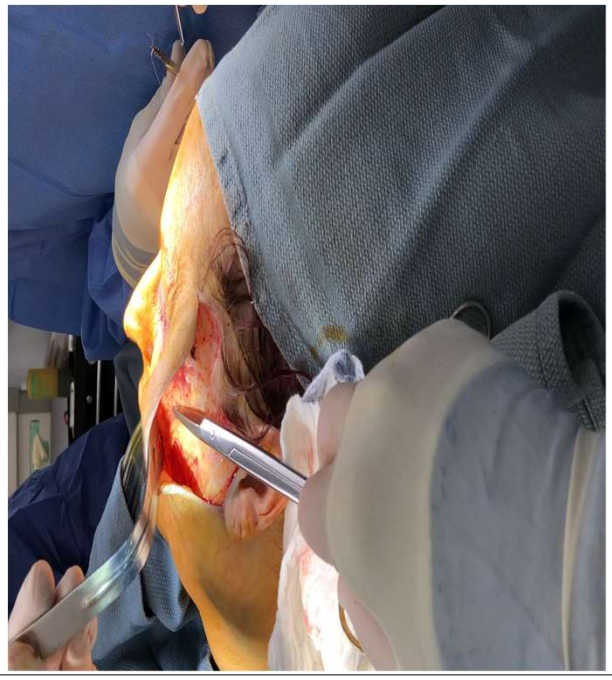
Pitanguy's Line

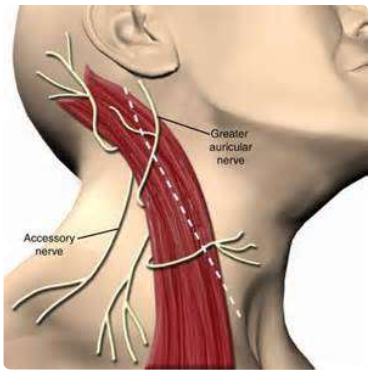
- Pitanguy and Ramos 1996
  - Courses between a point 0.5cm below the tragus and a point 1.5cm above the lateral eyebrow
- Invested with the temporal-parietal fascia
- Widely criticized by numerous authors due to is reliance on soft tissue landmarks that variable between individuals and its inability to predict nerve distribtion



Pitanguay line defines the course of the frontal branches *(ear lobule to ½ way between ear & lateral canthus)*



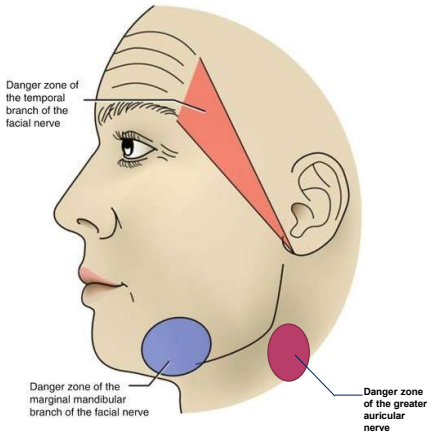


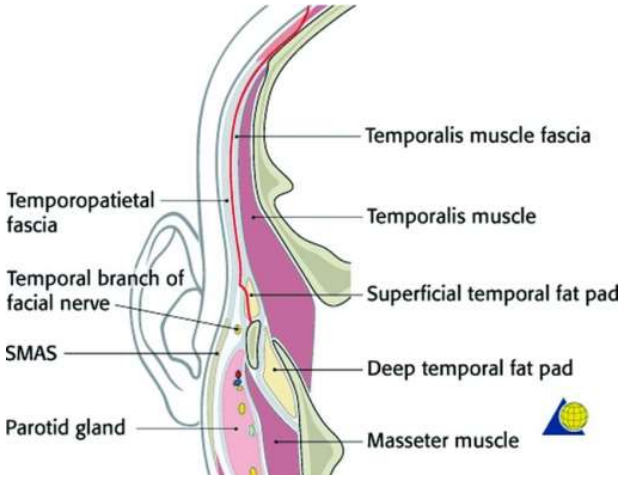


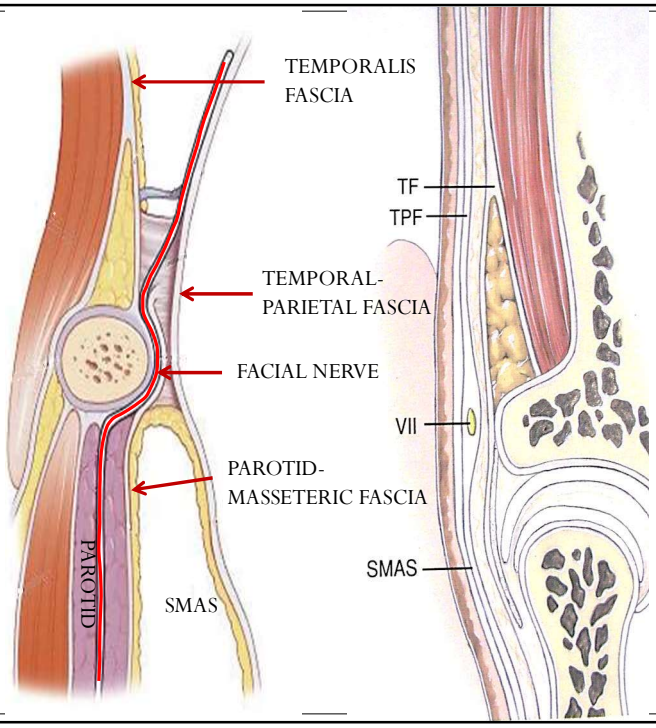
Greater auricular nerve (C2, C3)

Danger Zones

- Temporal
- Marginal mandibular
- Greater auricular



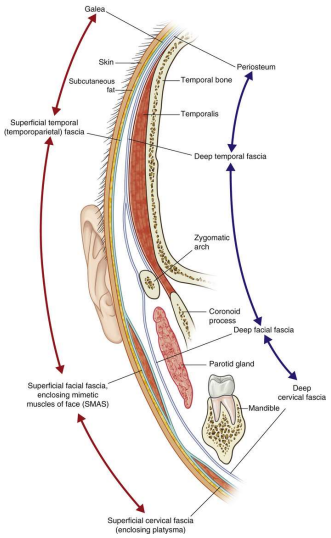




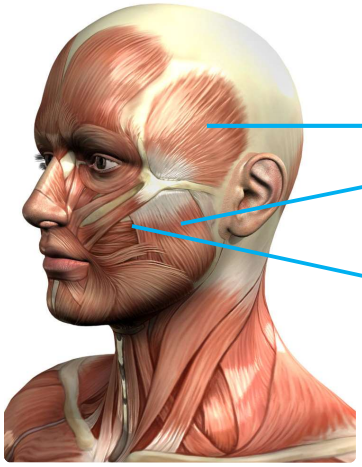
The SMAS is a contractile fibromuscular fascia that envelops the muscle of facial expression.

Contiguous with the platysma below and the temporoparietal fascia above the zygomatic arch.

Temporal branch most commonly injured as it crosses the arch



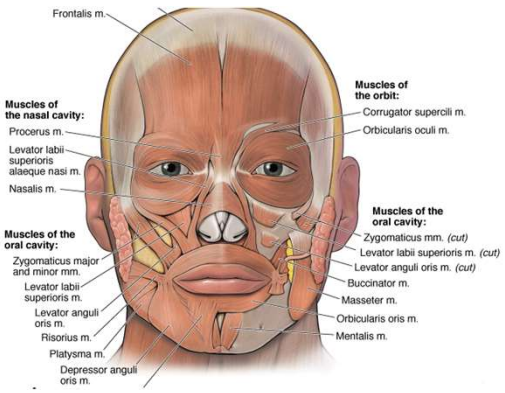
Muscles of Importance to Facelift Surgery



Temporalis
Masseter
Zygomaticus Major
Platysma

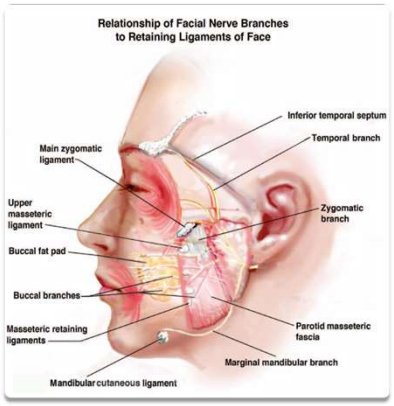
Innervation of the Facial Muscles

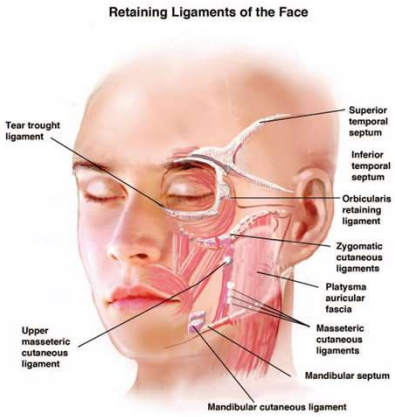
- The Facial Nerve innervates 14 of the 17 paired muscle groups of the face from the deep side
- Innervated on the superficial surface:
  - Mentalis
  - Levator Anguli Oris
  - Buccinator



Muscles Innervated on Surface

The Osteocutaneous Retaining Ligaments of the Face





Retaining ligaments of the face

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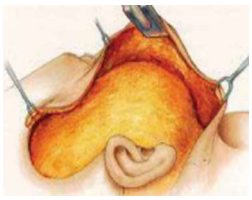
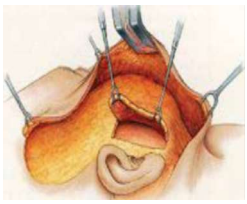
- Shi H, Yang N, Wang Z. **Viscoelastic Properties of the Facial Retaining Ligaments.** Plast Reconstr Surg. 2017 Mar;139(3):815e-816e
- Alghoul M, Codner MA. Retaining ligaments of the face: review of anatomy and clinical applications. Aesthet Surg J. 2013 Aug 1;33(6):769-82.
- Mendelson BC. **Anatomic study of the retaining ligaments of the face and applications for facial rejuvenation.** Aesthetic Plast Surg. 2013 Jun;37(3):513-5

Types of Facelifting Procedures

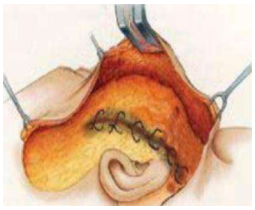
- Skin Only
- Purse String Suspension
- Sub-SMAS
- Sub-periosteal
- Composite
- Fat augmentation/ grafting



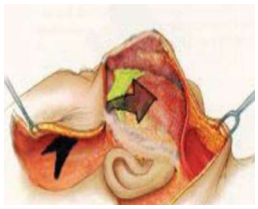
Skin Flap



Sub SMAS



Skin Flap with Plication

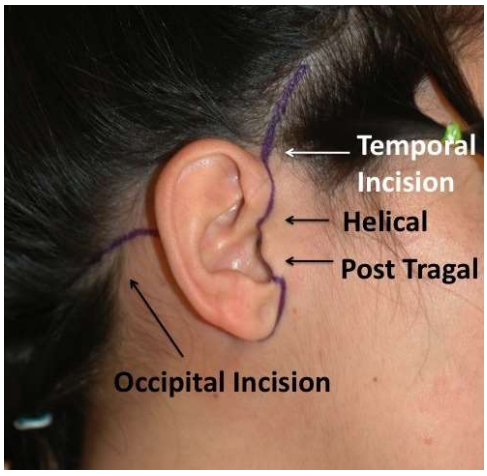


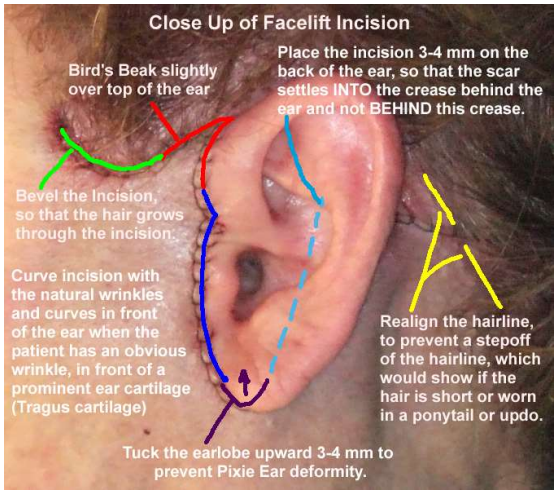
Subperiosteal

Skin Only Facelift

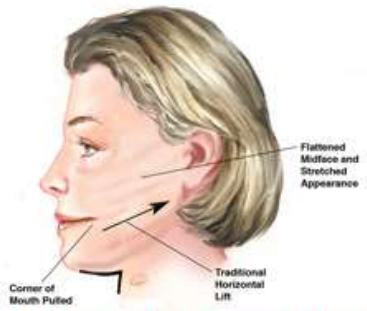
- The anatomic problem should be limited to skin only.
- No subcutaneous structural modification
- Poor candidate would be an overweight patient
- Skin flaps require high tension closure.
- Blood supply is less robust.
- **May be appropriate for repeat or touch up procedures**.

Skin Incisions

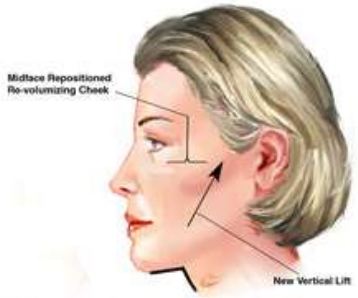




Vector of Pull

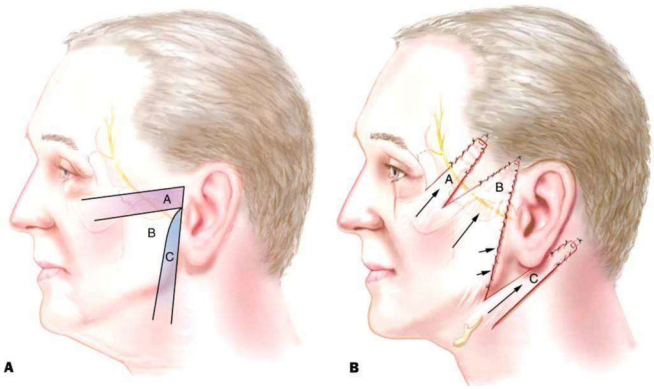


Traditional Horizontal Facelift

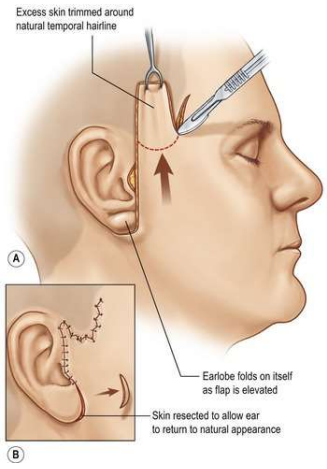


New More Natural

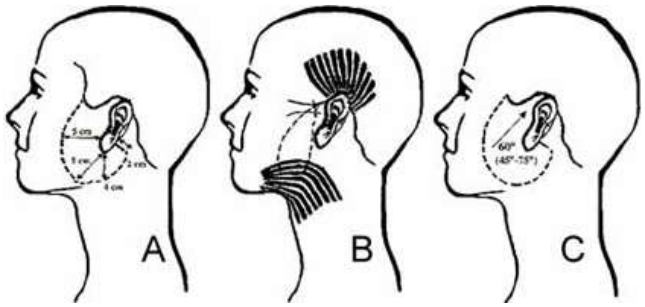
Multi-vector SMAS



Short Scar



Mini-Facelift Aplenty (S-Lift, Lifestyle, Quick, Smart, Swift, etc.)



The S-Lift (1927 to today)

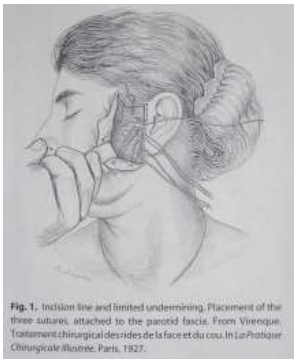
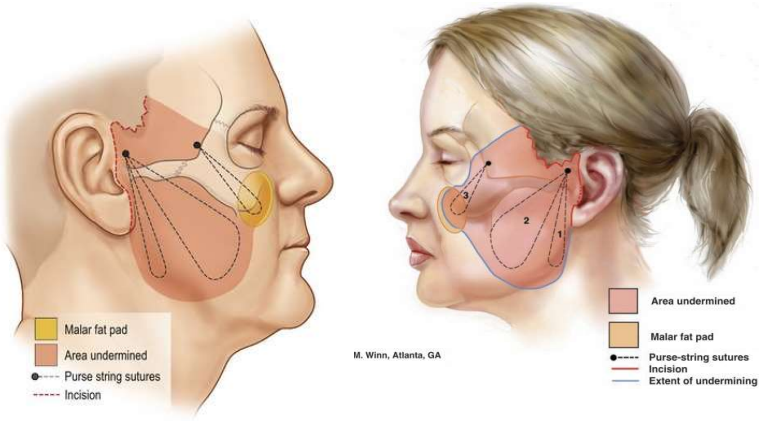
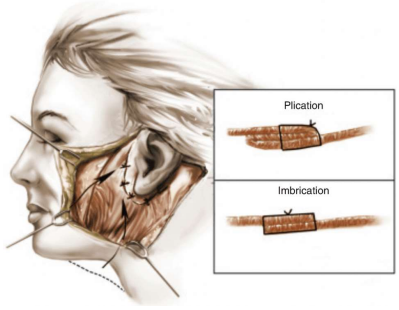


Fig. 1. Incision line and limited undermining. Placement of the three sutures, attached to the parotid fascia. From Vireneque. Traitement chirurgical des rides de la face et du cou. In *La Pratique Chirurgicale Illustrée*. Paris, 1927.

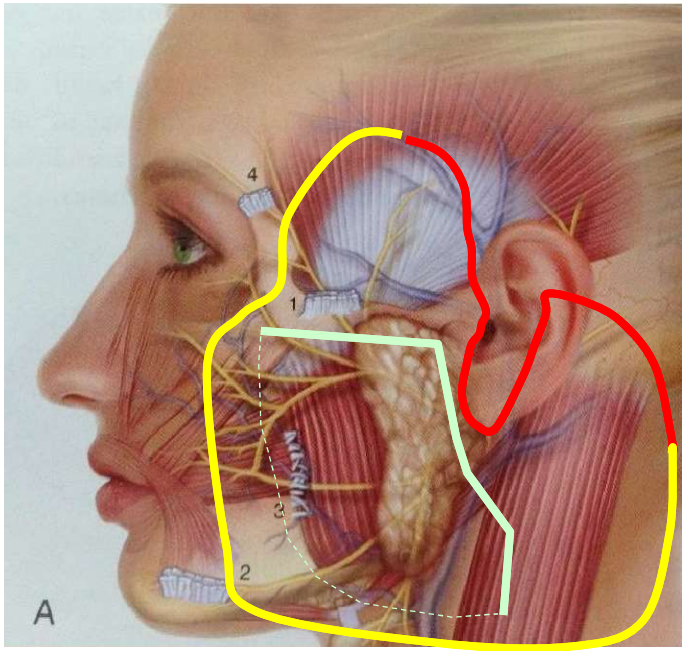
Plication Options



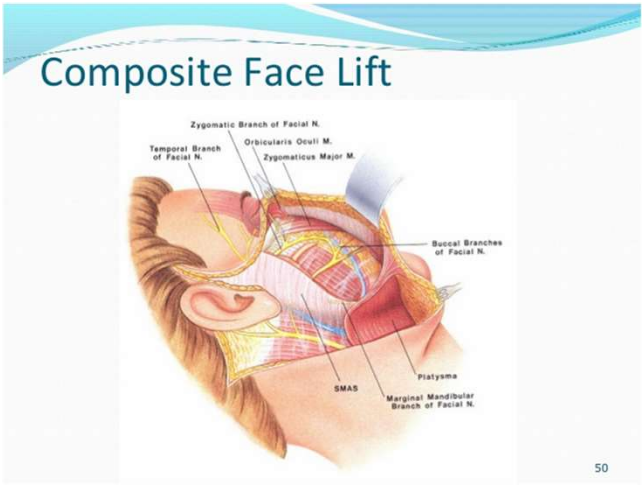
Plication vs Imbrication



- Plication is the folding of the SMAS with subsequent suturing
- Imbrication is the removal of a segment of SMAS with overlapping of the cut edges and closure of the defect serving to resuspend the tissue.



Composite Face Lift



Subperiosteal Lift

- **Advantages:**
  - Less vascular plane, less bleeding
  - Below innervation, less neural injury
  - Vertical elevation of tissues
  - Retains vascularity of soft tissues
- **Disadvantages:**
  - No significant removal of skin
  - Prolonged edema
  - Transient frontal branch weakness reported (41-71 days)
  - Cicatricial contracture may be more common

Does it make any difference?

- Gamble WB; Manson PN; Smith GE; Hamra ST. **Comparison of skin-tissue tensions using the composite and the subcutaneous rhytidectomy techniques.** Ann Plast Surg. 1995; 35(5):447-53; discussion 453-4
- Chang S[1], Pusic A, Rohrich RJ. **A systematic review of comparison of efficacy and complication rates among face-lift techniques**. Plast Reconstr Surg. 2011 Jan;127(1):423-33.
- Antell DE, May JM, Bonnano MJ, Lee NY. **A Comparison of the Full and Short-Scar Face-Lift Incision Techniques in Multiple Sets of Identical Twins.** Plast Reconstr Surg. 2016 Jun;137(6):1707-14.
- Prado A, Andrades P, Danilla S, Castillo P, Leniz P. **A clinical retrospective study comparing two short-scar face lifts: minimal access cranial suspension versus lateral SMASectomy.** Plast Reconstr Surg. 2006 Apr 15;117(5):1413-25; discussion 1426-7.

MACS vs. SMAS-ectomy (n=82)

- There were **no differences in cosmetic results** between the two techniques at 1-month and 2-year follow-up.
- At 2 years, more than 50 percent of the sample needed a tuck procedure to correct jowling and redundant skin.

Identical twin studies (n=16 pairs)

- Short-scar and full-incision techniques yield comparable results.
- The full incision may offer a superior long-term result in the neck.
- No one face lift technique performed in this study produced a superior result.

Deep plane vs. SMAS plication (n=40)

- Becker FF[1], Bassichis BA. **Deep-plane face-lift vs superficial musculoaponeurotic system plication face-lift: a comparative study.** Arch Facial Plast Surg. 2004 Jan-Feb;6(1):8-13.

- Deep-plane face-lift does not seem to offer superior results over SMAS plication face-lift in patients younger than 70 years old

What are the limitations of the mini lift?

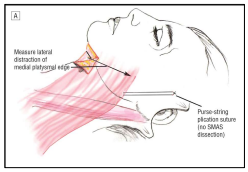
- Verpaele A, Tonnard P. **Lower third of the face: indications and limitations of the minimal access cranial suspension lift**. *Clin Plast Surg*. 2008;35(4):645-659.
- Jacono AA, Parikh SS. **The minimal access deep-plane extended (M.A.D.E.) vertical facelift.** *Aesthet Surg*
- Owsley JQJ Jr. **SMAS-platysma face lift.** *Plast Reconstr Surg*. 1983;71(4):573-576
- Baker DC. **Lateral SMASectomy, plication and short scar facelifts: indications and techniques.** *Clin Plast Surg*. 2008;35(4):533-550

Conclusions of Neck Research

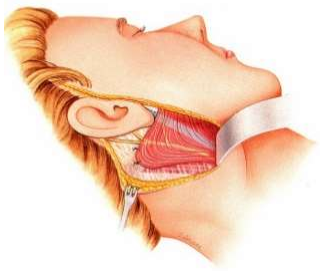
- SMAS plication techniques do not adequately release the fascial attachments (cervical retaining ligaments)of the platysma to allow for re-draping and lateral motion of the midline platysma in the aging neck.

*Midline platysmal plication is necessary except in cases of no or minimal platysmal laxity.

The Neck

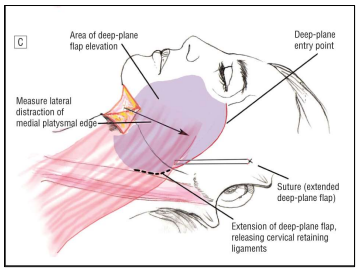


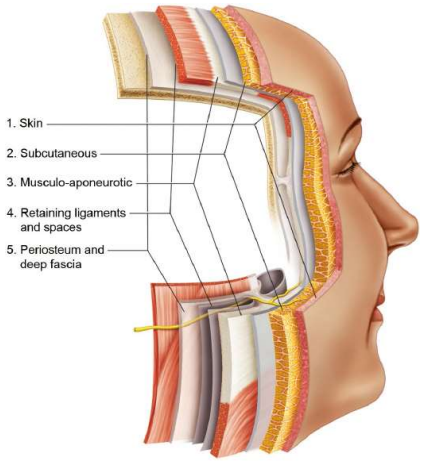
- **Without release** (SMAS plication alone), midline advancement is limited to **2.0mm**



You must do more to get more!

- Clinical studies support this, over and over… (n=153)
  - less than 3% tuck-up rate necessary to correct recurrent platysmal banding at 1 year for patients with moderate platysmal laxity.
  - 554% greater lateral distraction of the medial edge of the platysma muscle compared with SMAS-platysmal plication ($P < .001$).
  - **With Release** of cervical retaining ligaments, the platysma advances **1.2 cm on each side** of the neck.

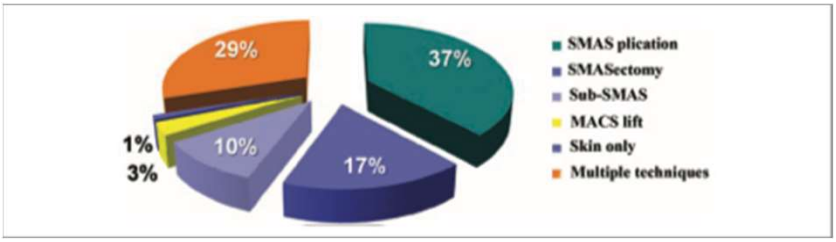




The ideal plane of dissection varies

- Skin thickness
- Risk factors for necrosis (smoking, steroids)
- Skin resurfacing is being performed simultaneously
- Degree of laxity/ ptosis
- Surgeon experience

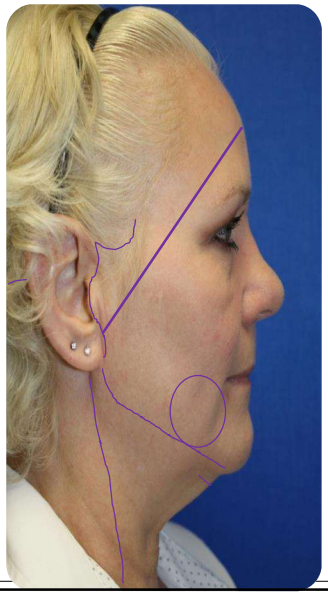
Who is doing what?

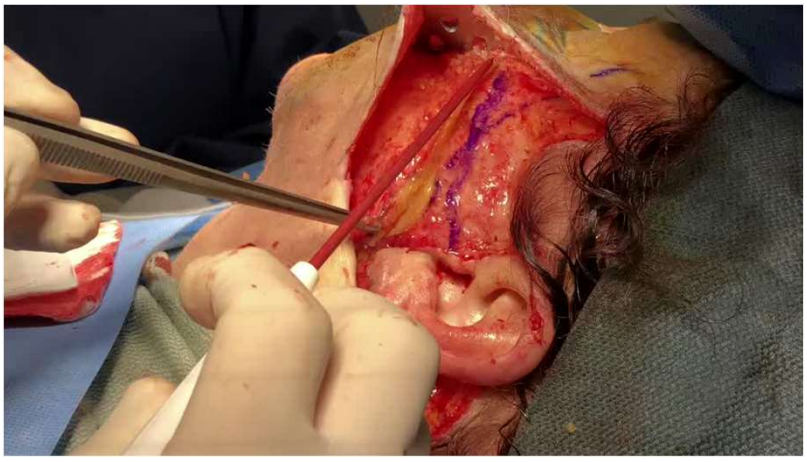


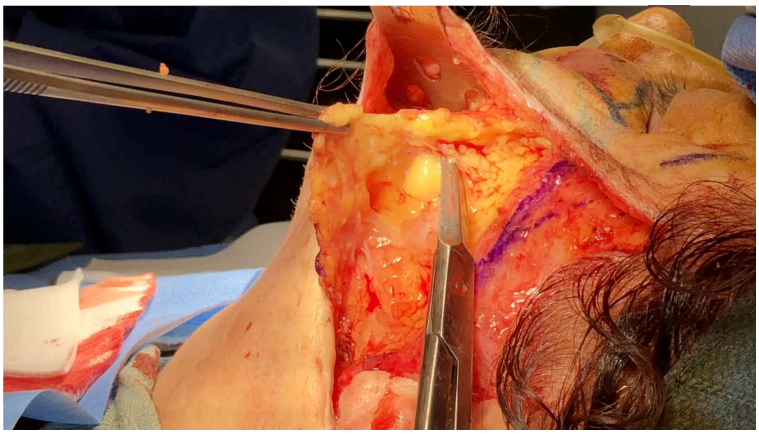
1776 surveys were mailed to ASAPS members,

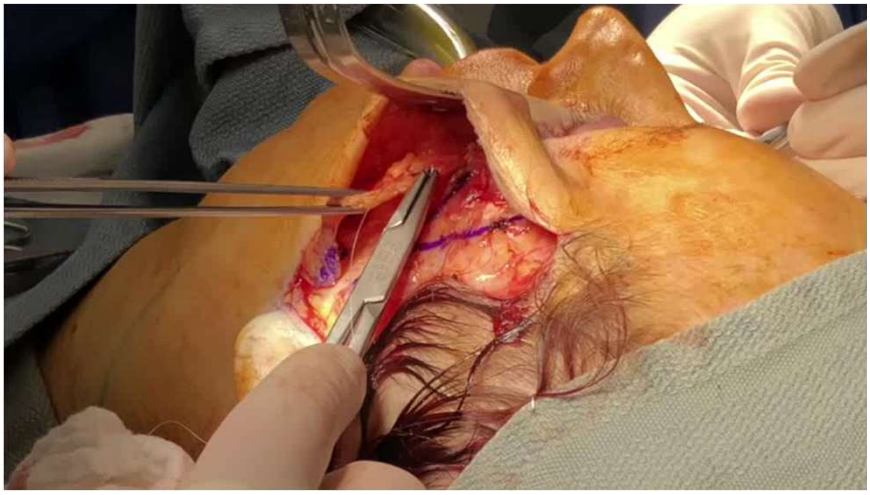
Sequence

1. Consent
2. Mark the patient
3. To the OR to prep and drape
4. Tumescent anesthesia
5. Submental liposuction
6. Platysmaplasty
7. Face lift incision
8. Subcutaneous dissection
9. Skin cutbacks
10. SMAS work (plication, imbrication, SMASectomy, Bi-plane, deep, etc.)
11. Hemostasis
12. Drains?
13. Closure
14. Home



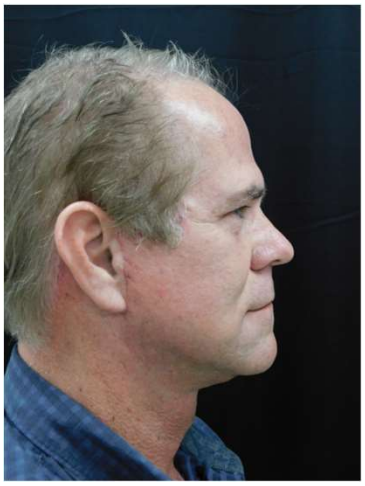






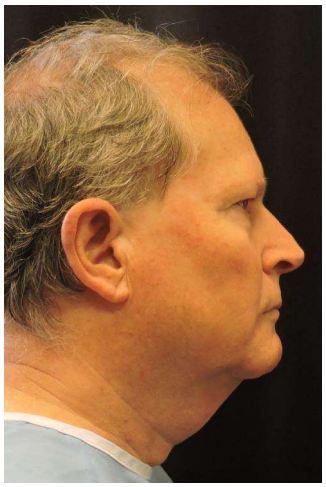
1 month

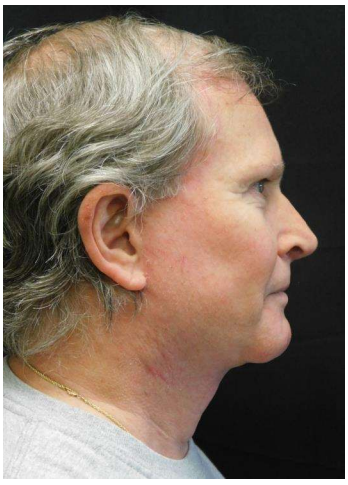
Rhytidectomy/Neck Lift



Face and Neck Lift

Brow, Face, Neck Lift





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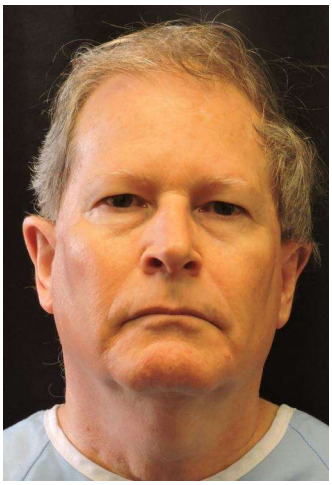
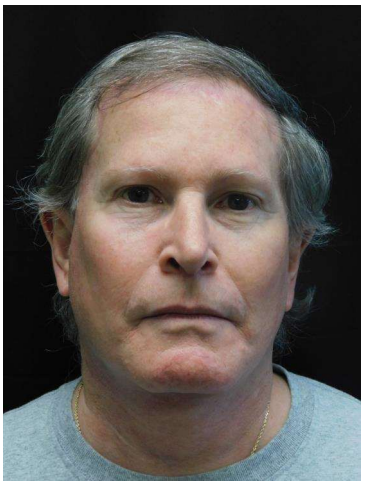




Complications after Facelift

- Hematoma
- Nerve Damage
- Sialocele
- Pixie Ear Deformity
- Tissue Necrosis
- Poor Aesthetic Result
- Scarring
- Elevated Temporal Tuft
- Allopecia
- Stepped Hairline
- Blunted Tragus

Hematoma

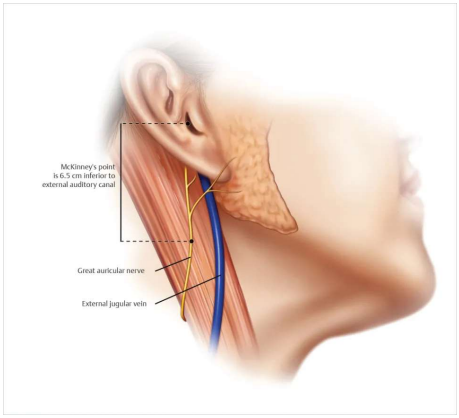
- Minor
  - Less than 10 ml
  - Needle aspiration or manual expression
  - Pressure dressing
  - Skin necrosis possible
- Major
  - Excessive facial pain/swelling
  - Expanding
  - Take back to OR to find the causative vessel
  - Can cause airway embarrassment
  - Pressure dressing
  - Greater risk of skin necrosis

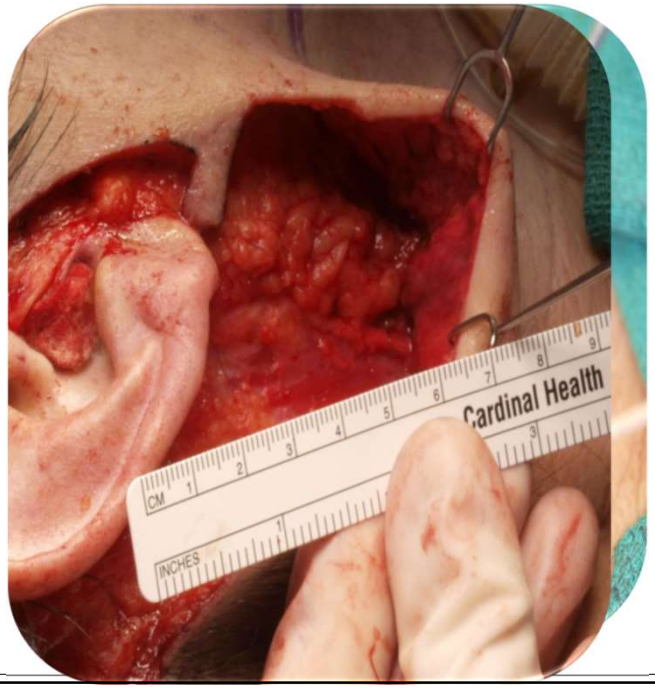
Hematoma prevention

- Medical History
- Medications
- Tumescent
- Meticulous hemostasis at the time of surgery
- Compressive head wrap post surgery
- Dietary Supplements to avoid prior to surgery:
  - Echinacea
  - Garlic
  - Ginko Biloba
  - Ginseng
  - St. John's Wort
  - Vitamin E

Greater Auricular Nerve

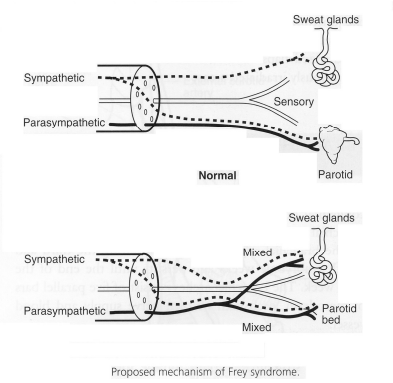
- Most common nerve to be damaged during a facelift?
  - The Greater Auricular Nerve (C2,C3)
    - 1-7%
  - Crosses the middle of the SCM at McKinney's point
    - 6.5 cm inferior to the external auditory meatus
  - Sensation to skin to back of ear, mastoid region, and angle of the mandible
  - Treatment
    - Time & Reassurance
    - Most resolve within 6 months





Nerve Damage

- Frey Syndrome
  - The auriculo-temporal branch of the mandibular (V3) branch of the trigeminal nerve
    - carries parasympathetic fibers to the parotid salivary gland
    - sympathetic fibers to the sweat glands of the scalp.
  - As a result of severance and inappropriate regeneration, the parasympathetic nerve fibers may switch course to a sympathetic response, resulting in "gustatory sweating" or sweating in the anticipation of eating, instead of the normal salivary response.



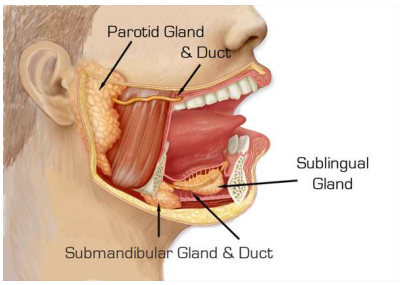
Proposed mechanism of Frey syndrome.

Nerve Damage

- Facial Nerve Damage
  - Typically transient
    - 0.7% incidence, only 0.1% permanent
  - Temporal most common
    - If affects orbicularis oculi may need globe protection
  - Marginal Mandibular 2nd
- Treatment
  - Time
  - Camouflage with neurotoxin to opposite Depressor Anguli Oris
  - Facial Reanimation Consultation

Sialocele

- From Parotid or Submandibular gland
- Drainage
  - Can test fluid for amylase
- Pressure Dressing
- Antisialogoues
- Botox in the gland
- Patience



Pixie Ear Deformity

- Inferior traction of earlobe due to pull of skin.
- Avoided by leaving cuff of tissue around earlobe.
- Surgical treatments include undermining the skin and reinforcing the SMAS or a triangular wedge (V-Y closure) is removed and the lobe is reattached in a superior and posterior position.

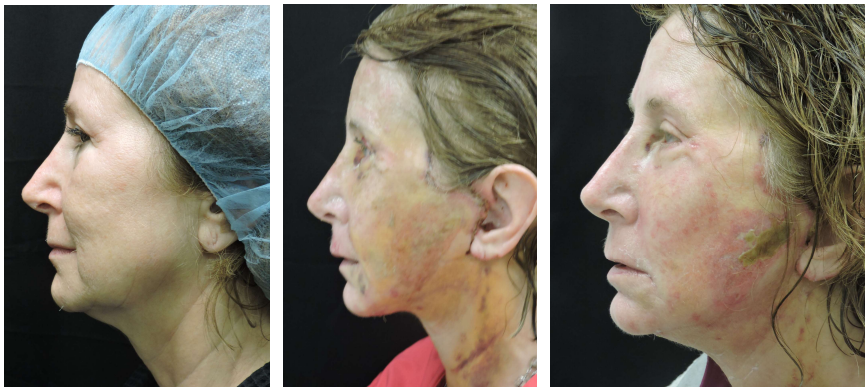
Tissue Necrosis

- Most affected areas:
  - mastoid and pre-auricular regions
  - thin skin and distance from vascular supply.
- Cleanse area with hydrogen peroxide and maintain moisture
- Some clinicians recommend nitropaste to encourage vasodilatation.
- Hyperbaric oxygen may be used to encourage wound healing and revascularization in large affected areas.

Scarring

- Scarring
  - Steroid injections such as triamcinolone 3 mg every 6 weeks for 3 months.
    - Overuse may cause dermal atrophy, depression, and spider telangiectasia.
  - Carbon dioxide laser resurfacing and microneedling may help reduce visibility of scar.
  - Scar revision surgery may also be considered.

65 year old female, non smoker.



Flap Necrosis/ microwave heating pad

CO2 laser X 7 treatments

Scar excision

Hair Complications

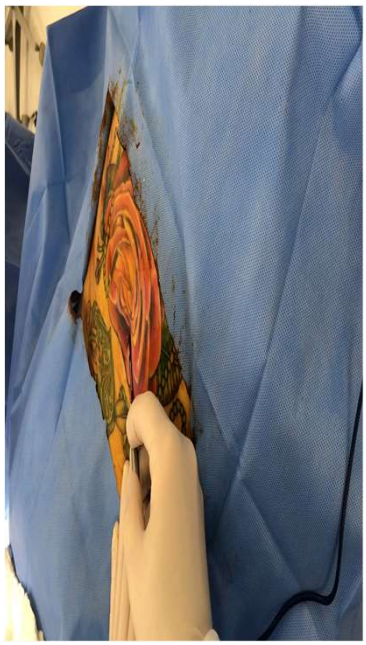
- Allopecia
  - Tension alopecia
    - avoided by adequate wound support without excessive tension.
  - Telogen effluvium
    - reversible hair loss due to stress, allow 6 months for observation and consider steroid injections.
  - Permanent alopecia may be treated with topical minoxidil (Rogaine ®), hair follicle transplant, PRP injections, local flap, or resection with primary closure
- Elevated Temporal Tuft
  - Hair Transplant
- Stepped Hairline
  - Rotational Flap
  - Hair Transplant

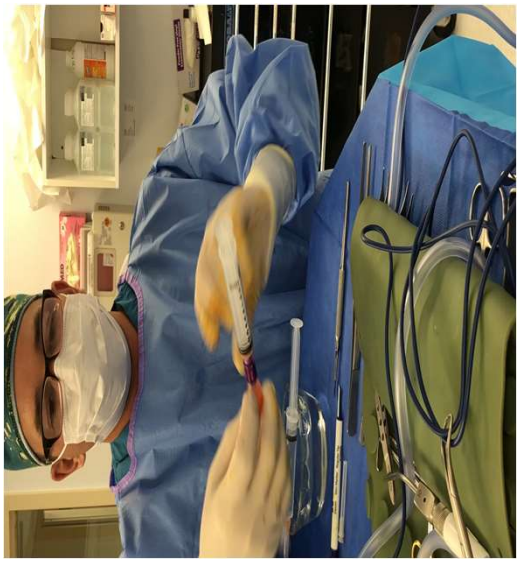
Fat Grafting

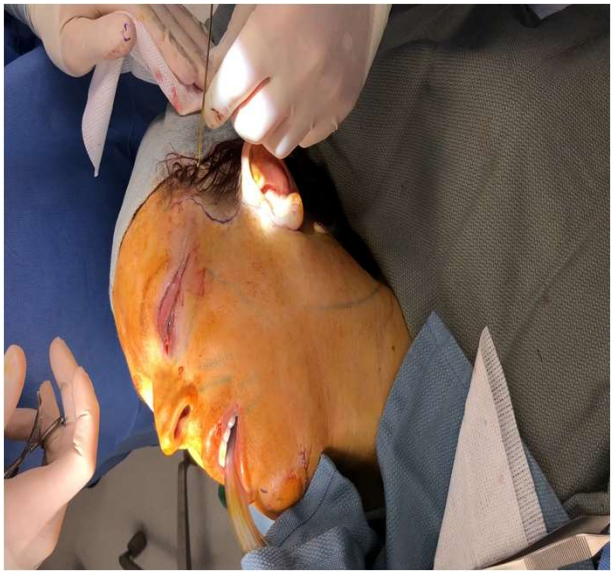
Fat Grafting Technique

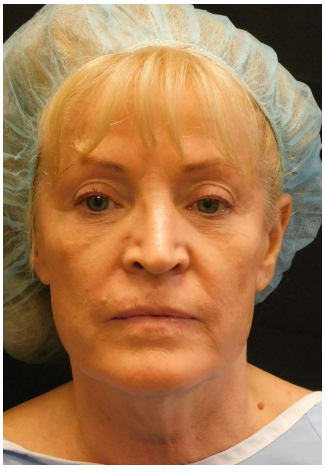
1. Less manipulation the better to produce high yield adipocytes
2. Harvested from flanks, thighs, buttocks, adbomen (peri-umbilical)
3. Prepped/draped/local anes/Tusmescent
4. Harvested with low suction and handheld syringe w/ harvest cannula
5. Fat is separated
6. Infranatant removed
7. Transferred to smaller (1-5ml) syringes leaving supernatant
8. Small ribbons or pearls into sub-periosteum, muscular, sub-q, superficial fat layer
9. Overcorrected in cross-hatch pattern (debatable)

Tulip Nano Transfer









Keys to patient satisfaction with fat

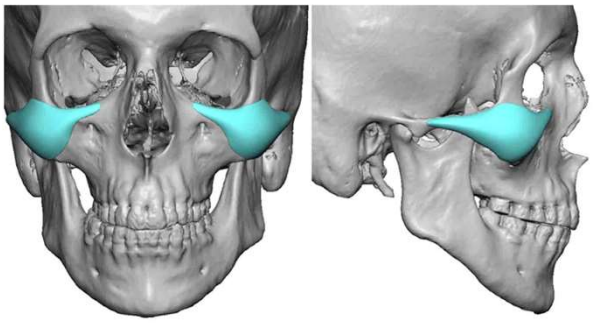
- Micro fraction or Nano-fat grafting prevents lumps.
- Use of PRP or PRF may speed recovery and improve skin quality scores.
- Overcorrect by approximately @50%
- The procedure should be repeated in 3 months for optimal longevity.

Complications

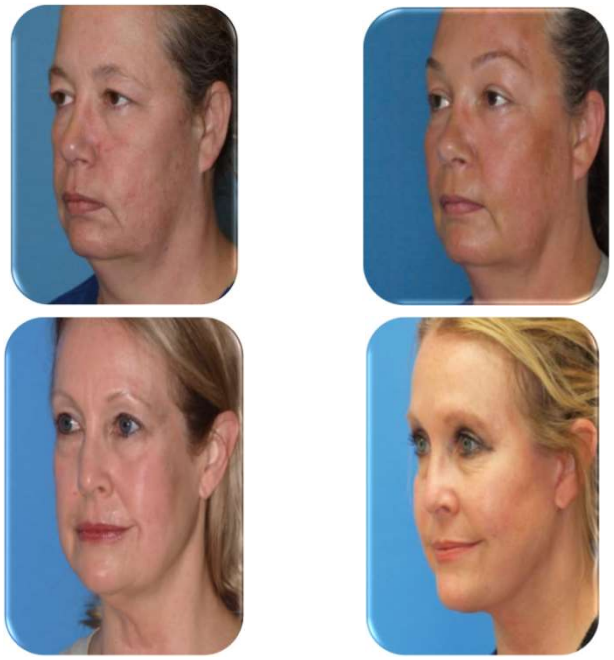
- Embolization leading to blindness, necrosis, stroke
- Resorption (debatable)
- Lumpiness
- Dissipation
- Trauma at harvest site
- Poor esthetic results
- Learning curve

Malar/Submalar Implants

Custom Implants



Complications: Migration, Bone resorption, Impingement of the infraorbital neurovascular bundle



Case Study

- 52 yo Caucasian presents interested in facial rejuvenation.
- CC: Excess skin and wrinkling in her face and neck
- HPI: No history of prior facial cosmetic surgery; points to jowls and neck and reports she noticed "sagging" over the last 3 years.

H&P - continued

- PMH/Meds:
  - Htn controlled with Lopressor
  - Aspirin 81 mg for carioprotection
- PSH: none
- PSH:
  - Denies smoking/nicotine
  - Social drinking 1-2 drinks/week
  - Denies illicit drug use
- Peri-operative Blood pressure control important for prevention of hematoma
- Asa intereferes with platelet fxn – will need to be stopped prior to surgery
- All nicotine should be stopped 4-6 weeks prior; or consider less invasive options

Exam

- Fitzpatrick 1
  - Fair, blue eyes, burns easily
- Glogau 3:
  - moderate photo-aging with wrinkles at rest
- Symmetric bony support with likely resorption around pyriform rim
- Soft tissue:
  - Lateral hooding
  - Nasolabial folds/descent of malar tissue
  - Loss of volume
  - Moderate jowling
  - Platysmal banding

Assessment/Plan

- Assessment: 52 yo Caucasian female with significant skin laxity and mild platysmal banding; Class II Dedo
  - **laxity of the cervical skin without significant fat deposition or muscle pathology.**
- Plan: Proceed with face and neck lift (rhytidectomy with platysmaplasty)
  - Offered blepharoplasty and skin resurfacing but patient denied.

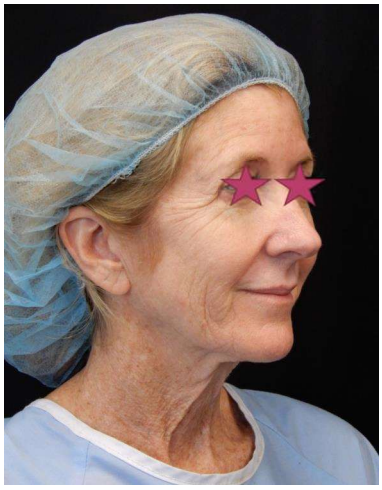
Treatment

1. Consent, Photos and Markings
2. To OR: MAC induced
3. Tumescent anesthesia
4. Submental liposuction
5. Platysmaplasty
6. Face lift incision
7. Subcutaneous dissection
8. Skin cutbacks
9. SMAS plication
10. Hemostasis
11. Closure
12. D/C Home

Complication

- Presents to 24 hr follow up appointment, reporting increased pain and swelling on left side
  - Reports forgot to take blood pressure medication
- Hematoma:
  - Immediate return to the OR for drainage and confirmed hemostasis and pressure dressing

1 year later



Thank you!

- Good Luck!
- Courtney Caplin MD, DMD
- drcourtney@csaok.com