BACKGROUND
Blepharoplasty is performed for both functional and aesthetic reasons.

Functional issues include ptosis, floppy eyelid syndrome, blepharochalasis, dermatochalasis, herniated orbital fat, and visual field obstructions.

Aesthetic reasons include a desire for a more youthful and less fatigued appearance or improvement in aesthetic appearance of the eyes.

Blepharoplasty can be performed in combination with other procedures such as a browlift, facelift, or facial resurfacing. This may be done to restore or improve function or facial expression as well as for aesthetic reasons.

Blepharoplasty, blepharoptosis repair, or brow lift is considered cosmetic and not medically necessary when performed to improve an individual’s appearance in the absence of any physical signs and symptoms of functional abnormalities.

DEFINITIONS
Blepharoplasty is a procedure on the eyelid or eyelids to improve or correct functional deformity or deficit. The procedure can also be performed to improve or change the aesthetic appearance of the eyes.

Cosmetic Blepharoplasty is performed to improve a patient’s appearance in the absence of any signs and/or symptoms of functional abnormalities.

Reconstructive Blepharoplasty is performed to restore function by transforming abnormal eyelid structures to a more normal state.

Blepharochalasis is a rare condition due to inflammation of the eyelids. During and after the periodic episodes, the eyelids can swell and stretch asymmetrically. The disease tends to occur more during adolescence or young adulthood and less frequently during adulthood.

ANATOMY
The upper eyelid is comprised of skin, orbicularis muscle, orbital septum, orbital fat, eyelid elevating/retractor muscles, tarsus and conjunctiva. The orbicularis muscle is divided into orbital and palpebral portions with the palpebral portion further divided into pretarsal and preseptal segments. The orbital septum divides the eyelid into anterior and posterior segments and keeps the orbital fat in its posterior location. The upper eyelid has two fat pads, one nasal and one middle. The eyelid elevating/retractor muscles include the levator palpebrae superioris and Müller’s muscle. The tarsus and conjunctiva constitute the most posterior layers, respectively. The medial canthal tendon attaches anteriorly to the frontal process of the maxilla in front of the lacrimal groove, and posteriorly to the lacrimal bone.

Laterally, it is attached to the tarsus of the upper and lower eyelids. The lateral canthal tendon is attached to the margin of the frontosphenoidal process of the zygomatic bone, and passes medial to the lateral commissure of the eyelids, where it divides into two slips, which are attached to the margins of the upper and lower tarsi. The lacrimal glands are paired, almond-shaped glands, one for each eye, that secrete the aqueous layer of the tear film. They are situated in the upper-outter portion of each orbit, in the lacrimal fossa of the orbit formed by the frontal bone.

The lower eyelid is comprised of skin, orbicularis muscle, orbital septum, capsulopalpebral fascia, tarsus, and conjunctiva. The orbicularis has the same divisions as the upper eyelid. In the lower eyelid, the orbital septum serves the same purpose. There are three lower eyelid fat compartments: nasal, central and temporal. The temporal compartment may have more than one component.
Dermatochalasis is a common condition of aging characterized by deficient elastic fibers of the skin. Skin redundancy and/or muscle laxity involving the eyelids can obstruct the visual field and thus impair vision.

Ptosis or blepharoptosis is a weakness or dysfunction of the eyelid elevating/retractor muscle or muscle complex. This will lead to an eyelid droop that can impair or obstruct the visual field.

Visual Field Impairment can be caused by ptosis, dermatochalasis or blepharochalasis. When the visual field is obstructed by ptosis, the eyelid margin/gray line is resting on or near the pupil upon a normal forward gaze. When the visual field is obstructed by dermatochalasis or blepharochalasis, the eyelid margin/gray line is resting well above the pupil upon a normal forward gaze. However, the skin (in the case of dermatochalasis) or the skin, muscle, and lymphatic fluid (in the case of blepharochalasis) will hang over the pupil and obstruct the visual field. This is also sometimes known as “pseudoptosis.”

DIAGNOSTIC CRITERIA

Preoperative Consultation: Preoperative consultation should evaluate the patient’s reasons for seeking surgery. Patients may present with a variety of symptoms or combination of symptoms including edema, visual field defects, hypertrophy of the obicularis oculi, conjunctival inflammation, keratitis, malar festoons, blepharochalasis, dermatochalasis, lagophthalmos, protrusion of orbital fat, eyelid ptosis, and eyebrow ptosis. Medical history should include other illnesses, history of dry eye, lagophthalmos, all medications, allergies, history of eyelid swelling, thyroid disease, heart failure, and bleeding tendencies.

Physical Examination: The initial examination should include an evaluation of the amount of skin on the upper and lower lids; distribution of orbital fat; vector of the lower eyelid; and physical characteristics of the skin including degree of elasticity and pigmentation. It may be necessary for patients with a history of dry eye to undergo a Schirmer’s test (tearing or dry eye test). Ptosis of the upper eyelid is determined by measuring the palpebral fissure vertical width and margin reflex distance (MRD-1). The definition of ptosis is an upper marginal reflex distance below 2 mm or an asymmetry of more than 2 mm between the eyes. Levator excursion is also assessed. Tropicaine (apraclonidine) drops can be used to discern between Horner’s syndrome and other types of ptosis. Visual field assessment is required for functional blepharoplasty. The forehead and eyebrow should be evaluated for brow ptosis.

Photography: Preoperative photographs may be used in patient assessment. Preoperative photographs may be taken to meet the requirements of both the insurers and surgeons. Additional photographs may include upward and downward gaze as well as oblique views.

Laboratory Tests: Laboratory tests, when indicated, should include CBC/SMA-7, bleeding and clotting studies, thyroid function tests, cardiac evaluation and other tests as indicated.

Additional Testing: Consultation with an optometrist or ophthalmologist can be arranged for field of vision examination. Functional impairment due to upper eyelid dermatochalasis can be demonstrated when visual field testing confirms visual field obstruction, which improves with taping (or similar intervention).

MANAGEMENT

Non-Operative

Patients with thyroid disease or allergies may be treated medically and may not require surgery. Patients primarily concerned with wrinkles around the lateral eye (crow’s feet) can be treated with Botox and/or resurfacing procedures (laser/peel).

Please Note: Surgery may not be appropriate if the patient’s expectations cannot be met by the operative procedure desired.

Operative

Goals: Operative treatments include various surgical techniques directed at correcting the abnormality found on physical exam. When there is visual field impairment, blepharoplasty procedures are considered to be reconstructive. If, however, blepharoplasty is solely for enhanced appearance, then it is considered cosmetic. One of the most commonly performed cosmetic procedures is blepharoplasty (ASPS statistics 2015).

Preoperative Instructions: The treating physician should inquire about the patient’s use of medications that affect bleeding, bruising, or anesthesia. The treating physician and patient should discuss appropriate discontinuation of these drugs prior to surgery.

Anesthesia: Blepharoplasty may be performed under local anesthesia, local with intravenous sedation, or general anesthesia. The surgeon and anesthesia provider will determine which is appropriate for the individual patient’s condition.

In operative cases, insurance may pay for the indicated procedure(s). This will depend on the individual insurance and the procedure(s) selected/completed. Please look at the CPT Coding at the end of this article for further assistance.
In non-reconstructive cases, where the blepharoplasty procedure(s) are used for cosmetic correction or cosmetic enhancement, insurance should not be billed as the operative correction is for a purely aesthetic purpose. CPT codes as listed should be used for identification and/or reporting purposes only. They should not be used for billing purposes in purely aesthetic cases.

Operative Techniques

**Upper Eyelid:** Blepharoplasty is performed to remove excess eyelid skin, muscle and/or protruding orbital fat. When the brow position does not need to be raised and only the eyelid skin and fat are to be addressed, the patient may be marked prior to surgery. The upper lid markings are placed such that the final scar will fall in the supratarsal fold or just under the brow.20

The CO2 laser or other heat delivery application can be used as the incisional tool as well as for orbicularis tightening and periorcular skin resurfacing.3, 8

Asian eyelids may warrant different surgical approaches depending on the desired result due to anatomic differences.9,21

Transconjunctival approach as well as brow stabilization, various ptosis repair methods, and lacrimal gland suspension have been described.10,11,22 Depending on a given patient’s anatomy, either fat resection or autologous fat grafting may be employed.

Blepharoplasty can be performed utilizing a variety of suturing techniques: interrupted sutures, continuous sutures, and subcutaneous running sutures. These sutures can be absorbable sutures or nonabsorbable sutures. In addition, a tissue adhesive glue can also be utilized for incision closure.

**Lower Eyelid:** Lower eyelid blepharoplasty is performed to remove excess eyelid skin, muscle and/or protruding fat, and to adjust the position of the lower lid and/or orbital septum.12 If there is redundant skin to be removed, the lower eyelid may be marked prior to the procedure and may extend laterally into the skin crease.

When there is skin and muscle excess, the subciliary incision is marked and either a skin or a skin muscle flap is raised. Eyelid retractor advancement or resection, and orbital septal reset procedures have been described.

Depending on a given patient’s anatomy, either fat resection or fat grafting may be employed. Either canthopexy or canthoplasty may be used to reposition and/or tighten the eyelid. A tarsal strip procedure can be used in cases of excessive lid laxity. Laterally the orbicularis muscle can be re-approximated with fine sutures and the skin can be closed in a variety of ways (similar to the upper lid). If there is only protruding fat and no excess skin in the lower lid, a transconjunctival approach may be utilized.

**POST OPERATIVE**

Dressings, such as tapes, can be applied to external incisions or surrounding skin. Ophthalmic ointment with or without antibiotic can be used as well. Iced saline gauze or cold compress packs may be used for the first 48-72 hours. The patient should keep their head up and avoid straining or strenuous activity for 7 days. The patient can get the incision wet in 24 hours and reapply ointment to their eyes and/or incision 2-3 times daily. A mild non-aspirin containing analgesic can be prescribed and the patient should be instructed to call immediately if pain occurs which is not relieved with this mild analgesic or if the patient has any visual disturbance.

**POSSIBLE SEQUELAE AND COMPLICATIONS**

Possible sequelae

- Chemosis
- Suture tunnels/inclusion cysts
- Persistent rhytids
- Asymmetry
- Dry Eye
- Excessive Tearing
- Temporary lagophthalmos

Complications

- Corneal abrasion
- Inferior oblique injury
- Inferior rectus injury
- Retrobulbar hematoma
- Diplopia
- Blindness
- Infection
- Eyelid malposition – ectropion/entropion
- Proptosis
- Hypertropic scars/keloids
- Fat necrosis
- Permanent lagophthalmos

**PROVIDER QUALIFICATIONS**

The individual performing this procedure, regardless of the location of the surgical facility, should have approved hospital privileges for the procedure and be qualified for examination or be certified by the surgical board recognized by the American Board of Medical Specialties, such as the American Board of Plastic Surgery.

**DISCLAIMER**
Practically parameters are strategies for patient management, developed to assist physicians in clinical decision making. This clinical practice guideline/practice parameter, based on a thorough review of the scientific literature and relevant clinical experience, describes a range of generally acceptable approaches to diagnosis, management or prevention of specific diseases or conditions. This clinical practice guideline/practice parameter attempts to define principles of practice that should generally meet the needs of most patients in most circumstances.

However, this clinical practice guideline/practice parameter should not be construed as a rule, nor should it be deemed inclusive of all proper methods of care or exclusive of other methods of care reasonably directed at obtaining appropriate results. It is anticipated that it will be necessary to approach some patients’ needs in different ways.

The ultimate judgment regarding the care of a particular patient must be made by the physician in light of all the circumstances presented by the patient, the diagnostic and treatment options available, and available resources.

This practice parameter is not intended to define or serve as the standard of medical care. Standards of medical care are determined on the basis of all the facts or circumstances involved in an individual case and are subject to change as scientific knowledge and technology advance and as practice patterns evolve. This clinical practice guideline/practice parameter reflects the state of knowledge current at the time of publication. Given the inevitable changes in the state of scientific knowledge and technology, periodic review, updating and revision will be done.

CODING

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<th>Diagnosis</th>
<th>ICD-10</th>
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<tr>
<td>Encounter for Cosmetic Surgery</td>
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<td>Dermatochalasis of right upper eyelid</td>
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<td>With extensive herniated fat pad</td>
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<td>Blepharoplasty, upper eyelid;</td>
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<td>Excessive skin weighting down lid</td>
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<td>Temporary closure of eyelids by suture</td>
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<td>Repair of brow ptosis(supraciliary, mid-forehead or coronal approach)</td>
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<td>Repair of blepharoptosis; frontalis with suture or other material</td>
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REFERENCES


Approved by the ASPS EC in July 2008.
Re-approved by the EC in December 2020.