Keep Your Eyes Open

Understanding More About Ptosis - Drooping of the Eyelid

Have you frequently or constantly encountered a tired feeling around your eyes, or received comments that you have a sleepy appearance? Do you ever feel that there is partial obstruction on the top portion of your vision? If your answer is "Yes" to any of these questions, you may be experiencing ptosis (droopy eyelids), also known as blepharoptosis.

SYMPTOMS OF PTOSIS

Besides the signs indicated above, there are other symptoms which you may notice if you have ptosis. They include:

1. Tired sensation around the upper eyelids and eyebrow, or forehead region.
2. Forehead wrinkles.
3. Frontal headache.
4. Visual obstruction (top and sides of visual field).
5. Head and chin subconsciously tilted upwards.

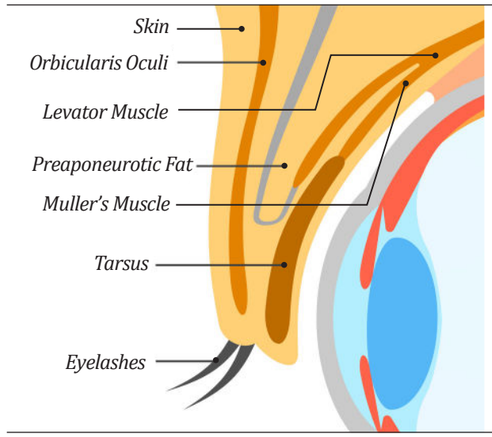
Normal eyelid *Droopy eyelid (Ptosis)*

Because there is a subconscious feeling that the top part of your vision (visual field) is slightly obstructed, an involuntary compensatory mechanism to lift the droopy eyelid (using the eyebrow muscles) develops. This would lead to a tired sensation around the forehead area, which can result in a frontal headache in more severe cases.

Some people develop forehead wrinkles as a result of subconsciously compensating for the droopy eyelids by using their forehead muscles to lift their eyelids. For those who are affected by more severe ptosis, they may gradually develop a compensatory chin-up position without realising it. In other words, a person with ptosis may not realise that he/she has the condition.

STRUCTURE OF OUR EYELIDS

Our eyelids are made up of several layers of connecting structures from the front (anterior) to the back (posterior). Starting from the external front layer, the structures include the **skin,** the main muscle **(levator muscle)** responsible for lifting the eyelid, and an internal layer of **(preaponeurotic) fat** pads which sits just in front of this main muscle, separating it from the skin.



Behind the main levator muscle is another muscle called the **Muller's muscle,** which also contributes partially to the lifting of the eyelid. However, the main structure responsible for properly lifting the eyelid is the levator muscle. This muscle needs to be properly attached to its supporting cartilage **(tarsus)** so that the eyelid would not become droopy.

TYPES OF PTOSIS

There are two common types of ptosis. They are:

- **Aponeurotic Ptosis:** Eyelid drooping due to ageing/ degenerative process. This can also be caused by long-term contact lens wear, previous eye surgery, and eyelid infections.
- **Congenital Ptosis:** Droopy eyelid(s) from birth.

The commonest scenario for development of droopy eyelid is aponeurotic ptosis, where eyelid drooping occurs due to an ageing or degenerative process of the eyelid's supporting anatomical structures, namely the separation of the levator muscle from its original insertion site on the supporting eyelid cartilage. Aponeurotic ptosis can also be caused or accelerated by long-term contact lens wear, previous eye surgery, eyelid infection, previous eyelid injury, or even habitual vigorous eye rubbing. In some cases, one could have been born with ptosis (congenital ptosis).

Aponeurotic ptosis can involve one or both upper eyelids. It is usually a gradual process. If there is a sudden occurrence of ptosis, it would be prudent to see your eye specialist urgently for further assessment to rule out more sinister causes such as a brain nerve compression or a nerve-muscle junction disorder.

Congenital ptosis can also involve one or both upper eyelids. An affected child is usually noted to have eyelid ptosis from birth, and it may become more apparent as he/she grows older. In cases of congenital ptosis, the levator muscle is usually abnormal and infiltrated with fats, resulting in abnormal levator function and reduced ability to lift the eyelid.

Congenital ptosis is when severe enough, the droopy eyelid(s) could even obstruct the central visual axis of either or both eyes. This can result in greater degrees of lazy eye which could interfere with normal visual development of one or both eyes. This may result in devastating damage to the child's eventual vision. Management of severe eyelid drooping in congenital ptosis is more complicated, and would necessarily require a prompt and early diagnosis to aid the visual development process. Spectacles and/or patching, and even taping up of the severely droopy eyelid in a young child may be needed to assist in visual development before ptosis surgery can be planned at a more suitable age.

Most cases of congenital ptosis are mild and do not adversely affect visual development of the child. Therefore, in mild cases of congenital ptosis, ptosis correction surgery may or may not be performed until the child reaches an appropriate age for undergoing ptosis surgery to improve his/her cosmetic appearance.

However, in cases where there is moderate to severe drooping in a young child, the ptotic eyelid would then be more likely to exert an effect on the shape of the cornea. This would in turn result in a significantly increased astigmatic power of the eye. The abnormal astigmatic power could then lead to a lazy eye (amblyopia) if it is not corrected early during the child's development of the brain.

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OTHER CAUSES

Other less common causes of ptosis include:

- **Trauma:** Previous injury to the eyelid area.
- **Brain Nerve Disorder:** This involves either the third cranial nerve or the sympathetic innervation of the central nervous system. This is usually a suspected cause in a situation where there is sudden onset of ptosis.
- **Nerve-Muscle Junction Disorder:** Commonly, this is caused by myasthenia gravis, which can be a debilitating condition if it is of the systemic variant. Less commonly, it is caused by myotonia dystrophy or chronic progressive external ophthalmoplegia.

TYPES OF SURGERY FOR APONEUROTIC PTOSIS

If a person has droopy eyelid(s) from aponeurotic ptosis, he/she will likely benefit from ptosis (droopy eyelid) correction surgery. There are two methods of ptosis surgery. They are:

1. Incisional method (where the stitching is external).
2. Transconjunctival method (done by flipping the eyelid where the incision and stitching are internal).

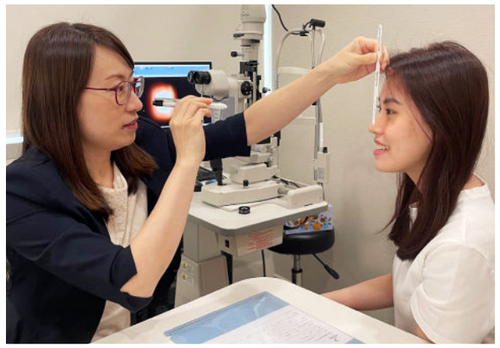
The incisional method of ptosis surgery is useful for those with moderate to severe degrees of ptosis. It is usually combined with blepharoplasty (using the same incision), which is the removal of excess eyelid skin and fat from the eyelid. The stitches will be placed on the intended area of the double eyelid crease where the incision is made. The incisional method involves tightening of the levator muscle.

On the other hand, the transconjunctival technique is usually reserved for those who have very mild degree of ptosis, and do not require removal of excess skin and fat. It involves a resection of the Muller's muscle.

For both techniques, double eyelids can also be deliberately created as part of the surgery. However, if one prefers not to have the double eyelid crease, the double eyelid crease can be omitted. If you are curious about whether you can just go for double eyelid surgery, it should be advised that a pure double eyelid surgery does not include ptosis correction.

If you already have ptosis, doing just a double eyelid surgery alone without a ptosis correction would make the droopy eyelid appear even more droopy.

PTOSIS CORRECTION SURGERY



- Day surgery procedure.
- Moderate sedation.
- Tests will be done to determine the severity of ptosis. Consult your eye specialist for this condition.

PLANNING FOR PTOSIS SURGERY

The degree of ptosis is measured based on the height of the eyelid with respect to the cornea.

Marginal reflex distance measurements

Depending on the degree of ptosis and the strength of the levator muscle, the type of surgery required may be different.

RISKS FROM PTOSIS SURGERY

The risks from ptosis surgery are generally very low. The most common risk is that of dry eye after surgery. Lubricating eye drops will be prescribed to protect your eyes from dryness during the first two months after surgery. Other potential risks may include the following:

- **Bleeding/Bruising:** It is advisable to avoid pro-bleeding supplements four weeks prior to surgery, including some traditional Chinese medicines, vitamin E, omega oils and garlic pills.
- **Infection:** Avoid soap on the wounds immediately after surgery.
- **Swelling/Puffiness:** You can place ice packs around the eyelids to reduce swelling/puffiness as much as possible in the first few days after surgery. The swelling will subside over the next four weeks to six weeks.

PROCEDURE

Ptosis correction surgery can be done simultaneously with double eyelid creation. The surgery is performed under local anaesthesia with sedation to make you feel more comfortable and relaxed during the procedure. The duration of the procedure depends on the nature and severity of the ptosis.

Ptosis surgery procedure

DOWNTIME

There would be post-operative swelling around the eyelids which gravitate downwards towards the upper cheek area in the first one to two weeks. The remaining puffiness will gradually subside over the next six to eight weeks. You may expect more swelling if there is brow lift surgery performed at the same surgical sitting.

It is necessary to keep the wound as clean and dry as possible to aid in quicker recovery of the skin wounds. You should also avoid direct sun exposure to avoid abnormal pigmentation at and around the skin wounds. Further to these, it is advisable to not apply cosmetics on the operated eyelids/brow areas in the immediate three weeks after surgery. Hence, it is best to plan the timing of the surgery around your social events as it is an elective surgery.

POST-OPERATIVE CARE

There will be post-operative oral and topical medications to reduce post-operative swelling. Specific post-operative care of the wounds will be given. Most people do not require any pain relief medications. Follow-up reviews are usually on the first day, first week, and six weeks after surgery.

Most people who underwent ptosis surgery wonder why they did not have the surgery earlier. If you do have ptosis, you will likely benefit from ptosis correction surgery. Ptosis correction surgery is done as a day surgery procedure under moderate sedation. You may wish to consult your eye specialist for this condition. PRIME

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Dr Eugenie Poh is a Senior Consultant Ophthalmologist and Oculoplastic Surgeon practising at Eye Max Centre. She sub-specialises in Oculoplastic Surgery with a special interest in Ptosis Correction Surgery, Eye Reconstruction and Lacrimal Surgery. She completed her advanced training fellowships in Oculoplastic Surgery and trained with some of the top oculoplastic experts in the world. She was awarded the Health Manpower Development Plan (HMDP) Fellowship by the Ministry of Health in 2010, and went on to complete a 12-month clinical and surgical fellowship in Oculoplastics, Orbital and Lacrimal Surgery at the South Australian Institute of Ophthalmology, University of Adelaide, Australia. She has frequently been invited to give expert symposium lectures, and talks both locally and overseas. She has been a regular invited speaker in Seoul, South Korea at the Congress of Korean Society of Aesthetic Surgery since 2016.

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