

**Lagophthalmos:
The Inability to Fully Close
the Eyelids**



**Treatment Options
using MedDev
Eyelid Weights**

What is Lagophthalmos and what are its causes?

Lagophthalmos, derived from the Greek word for hare, refers to the appearance of the hare, which sleeps with its eyes open. In the human patient, lagophthalmos refers to the inability of the eyelids to fully close. The condition is frequently a result of a form of facial paralysis affecting the facial nerve (7th cranial nerve) which controls the eyelid's closing muscle (orbicularis oculi). The paralysis, which can be permanent or transitory, arises from such causes as Bell's palsy, trauma, stroke or can be surgically induced during the removal of certain types of tumors in close proximity to the facial nerve.

Can Lagophthalmos be a serious condition?

Lagophthalmos can be a serious condition. The ability of the eyelids to close and blink is crucial to the distribution of the tear film necessary to maintain a healthy, lubricated eye. When the muscle that closes the eyelids becomes paralyzed, the blink mechanism no longer functions and the eye becomes dry, painful and irritated. Prolonged dehydration to the eye can lead to serious problems including a decrease in, or even loss of, vision.

Is there a temporary treatment for Lagophthalmos?

Your physician may begin by recommending that you use eye drops and ophthalmic ointments to keep your eye well lubricated. An external eyelid weight worn on the outside of your upper eyelid may also be prescribed (see figure 1). The weight would simply use earth's gravitation to gently pull



Figure 1: Patient wearing an External Eyelid Weight



Figure 2: External Eyelid Weight Treatment Kit

your upper eyelid down when you look down, or when your eyelid opening muscles relax. The weight would be provided in a skin tone that matches your own eyelid complexion. Your prescribed treatment kit for the external eyelid weight would include a supply of double-sided hypoallergenic adhesive strips, a mirror and instructions (see figure 2).

As always, if you experience any sensitivity or discomfort while wearing your external eyelid weight, or if the prescribed weight is no longer effective, contact your physician.

What if my paralysis does not improve?

If your paralysis does not improve or is not expected to improve after a period of time, your physician may suggest other treatments, including the surgical placement of a gold eyelid implant. The gold eyelid implant functions similarly to the external eyelid weight to close the upper eyelid; however, the implanted gold weight is less conspicuous and easier to manage.

MedDev offers two implant designs that are differentiated by the thickness of the implant (see figure 3). Your physician will determine which implant design is best suited for use in your procedure.

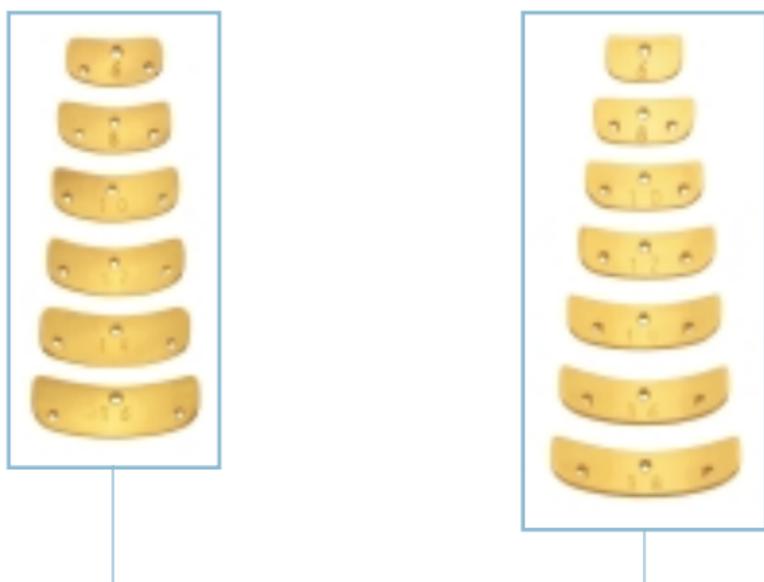


Figure 3: MedDev Gold Eyelid Implants. Left: ThinProfile™ Design (0.6 mm thickness). Right: Contour™ Design (1.0 mm thickness).

Why are the eyelid implants made of gold?

Gold is preferred because it is a heavy, inert metal that does not corrode or cause irritation to the eyelid tissues. Gold is also preferred because its color closely matches that of the eyelid's fat, making the implant less conspicuous in the eyelid even in patients with thin skin.

For over 30 years, MedDev gold eyelid implants have undergone rigorous testing to assure the gold meets MedDev's purity standard of 99.99%.

What happens before the procedure?

If you have been wearing an external eyelid weight, your physician will have a good indication of the weight of the implant to use in the procedure.

If you have not been wearing an external eyelid weight, your physician will need to test various sized weights on your eyelid to determine the optimal weight to pull your eyelid down and restore your blink function. Since the muscle that elevates your eyelid (levator oculi) strengthens over time, the optimal weight will be the weight that closes your eyelid slightly lower than your other (normal) eyelid when you look down. Once this weight is determined, your physician will order the corresponding gold eyelid implant to use in the procedure.

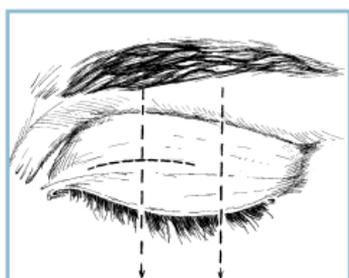


Figure 4: Location of Incision in Eyelid



Figure 5: Surgeon Dissecting Space for Implant

What happens during the procedure?

The gold eyelid implant procedure usually takes less than one hour and is done on an outpatient basis under local anesthesia. The surgery is frequently combined with other minor procedures to tighten the lower eyelid, or major facial procedures to improve the facial palsy.

During the procedure, your physician makes an incision on the outside of your upper eyelid in the groove above the lashes (see figure 4). A small pocket is created in which the eyelid implant rests (see figure 5). The eyelid implant will be held in position inside the pocket with sutures. Additional sutures are then used to close the incision and an antibiotic ointment is applied to the wound. A protective pad is sometimes used to cover the eye.

What happens after the procedure?

A follow-up appointment will be scheduled, usually a few days after the procedure, to remove the sutures and check on your progress. You should now have improved eyelid closure and blink function. After the swelling subsides, you will notice a small thickness in your eyelid where the eyelid implant was placed. You may experience minor discomfort, swelling, bruising and a slight redness near the incision line. Over time, this discomfort will resolve and the incision lines will fade and become less discernable (see figure 6). Excessive swelling, inflammation or increased pain after your procedure is very rare. In the unlikely event that such a problem should occur, notify your physician promptly.

For further information and clarification about this procedure, please consult your physician.

How safe are gold eyelid implants?

MedDev Corporation's gold eyelid implants are an accepted eyelid closure device that has been commercially available worldwide for over 30 years. Rapid recovery from the procedure permits better function of the eyelid resulting in the improved distribution of tear film to the eye.

Gold eyelid weight implantation can provide both aesthetic and functional improvement with minimal risk of serious problems and is easily reversible if normal eyelid function is regained. Complications, which are rare, include an allergic reaction to the 99.99% pure gold MedDev uses in its implants. For these patients, platinum eyelid implants are available. In extremely rare cases, the eyelid implant may become displaced or the implant may erode through the skin. Such complications can be readily corrected but may require additional minor surgery.

How can I get more information?

A list of medical articles discussing the treatment of lagophthalmos using eyelid weights is available from MedDev Corporation.

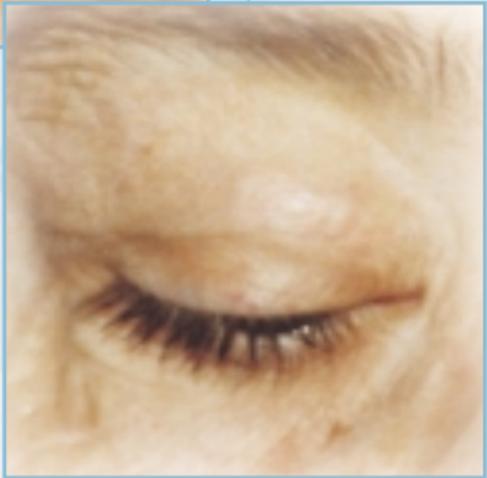
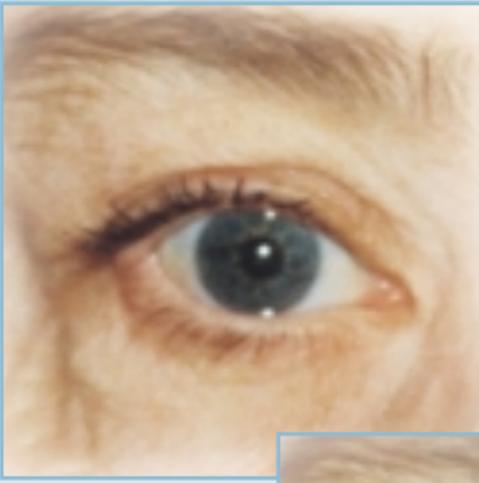
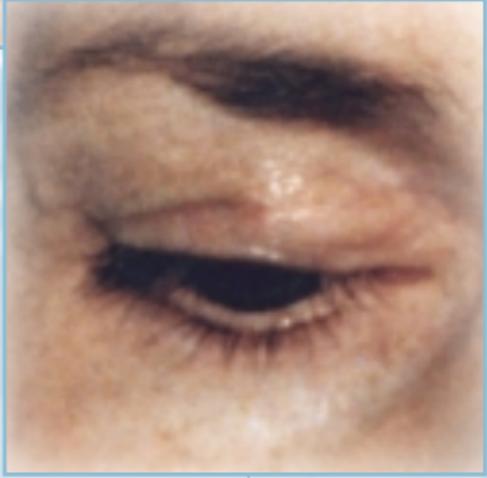


Figure 6: Patients following Gold Eyelid Weight Implantation

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