

## Monocular Elevation Deficiency/Double Elevator Palsy

### **What is monocular elevation deficiency (Double Elevator Palsy)?**

Monocular Elevation Deficiency, also known by the older term Double Elevator Palsy, is an inability to elevate one eye in all fields of gaze, usually resulting in one eye that is pointed downward relative to the other eye (hypotropia) [See figure 1].



**Fig. 1:** Patient with left-sided monocular elevation deficiency/double elevator palsy attempting to look upward.

### **What is the cause of Monocular Elevation Deficiency (Double Elevator Palsy)?**

The restriction to elevate the eye can be caused by paralysis of 1 or both elevator muscles (superior rectus or inferior oblique). However, the inability to elevate the eye most commonly results from restriction of the inferior rectus muscle on that side. Since the cause may be paralysis or restriction, the term “monocular elevation deficiency” is used most often.

### **Is Monocular Elevation Deficiency hereditary?**

This entity is not known to be hereditary (inherited). It is a rare condition, and can be congenital (present at birth) or acquired after birth.

### **Is Monocular Elevation Deficiency associated with ptosis (droopy eyelid)?**

Yes. The eyelid on the involved side is droopy ([ptosis](#)) 25-75% of the time while most of the remaining cases have pseudoptosis. In this case, the pseudoptosis is the appearance of ptosis caused by the eye being hypotropic (downward deviation).



## **Is Monocular Elevation Deficiency associated with jaw winking?**

25-50% of those with Monocular Elevation Deficiency and Congenital Ptosis have a phenomenon called Marcus Gunn jaw-winking. This is a condition in which the cranial nerve that controls eyelid movement is mis-wired with the cranial nerve that controls chewing or sucking thus creating a "wink" when chewing or sucking.

## **Is Monocular Elevation Deficiency associated with other diseases or developmental problems?**

There is no known association between Monocular Elevation Deficiency and systemic or neurological diseases. Other disorders can occur in conjunction with Monocular Elevation Deficiency, but they are not directly related.

## **What are the treatment options for Monocular Elevation Deficiency?**

The treatment of Monocular Elevation Deficiency is surgery, which is indicated if there is a significant hypotropia and/or a chin-up head posture. The type of surgery depends on the cause of the elevation deficit. Surgery is usually performed on the affected eye but may sometimes be necessary in the opposite eye to fully correct the deficit.

## **Do exercises or Vision Therapy help to fix Monocular Elevation Deficiency?**

No.

## **Should eye patching be performed for Monocular Elevation Deficiency?**

Patching is sometimes necessary to treat [amblyopia](#) (weak vision) that can result from misalignment of the eyes. Patching will not realign the eyes; it is done to help strengthen the vision in the eye that has amblyopia.

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