Diplopia

Commonly known as double vision, is the simultaneous perception of two images of a single object that may be displaced horizontally, vertically, diagonally (i.e., both vertically and horizontally), or rotationally in relation to each other.

It is usually the result of impaired function of the extraocular muscles (EOMs), where both eyes are still functional but they cannot converge to target the desired object.

Problems with EOMs may be due to mechanical problems, disorders of the neuromuscular junction, disorders of the cranial nerves (III, IV, and VI) that stimulate the muscles, and occasionally disorders involving the supranuclear oculomotor pathways or ingestion of toxins.

Diplopia is often one of the first signs of a systemic disease, particularly to a muscular or neurological process, and it may disrupt a person's balance, movement, and/or reading abilities.

see Abducens nerve palsy.

see Vertical diplopia.

A clear and comprehensive history is the single most useful evaluation in treating patients with diplopia. The patient typically presents with a history of double vision, where single objects appear as double. Specific inquiry as to onset, progression, and variability with head posture or gaze direction, as well as previous similar episodes (especially if associated with other neurologic symptoms) and/or spontaneous resolution, is very helpful in the diagnosis and management of diplopia. Three important symptoms should be elicited, as follows:

Does covering either eye make the diplopia disappear? This test helps to rule out monocular diplopia, which persists in one eye even if the other eye is covered.

Is the deviation the same in all directions of gaze or by tilting and rotating the head into different positions? This suggests a comitant deviation, with no difference in separation of the images in all directions of gaze. When the extent of deviation changes (and indeed possibly disappears in a given direction), then the deviation is incomitant and suggests a problem with innervation, most likely a paretic muscle.

Is the second object displaced horizontally (side-by-side images) or vertically (images above each other)? Oblique diplopia (images separated horizontally and vertically) should be considered as a manifestation of vertical diplopia.