1. Diseases affecting the parts of the brain that control movement.
2. Faulty transmission of signals between the nerve and the eye muscles. An incomplete or incorrect message is sent from the nerve to the muscle.
3. Disease that affects the nerves to the muscles causing them to weaken.
4. Diseases of the muscle itself.
5. Disease of the eye socket causing restriction of movement.

Eye movement disorders are usually characterised specifically by double vision, blurry vision and unstable or “shaky” vision. The vision in each eye when tested separately is often normal, but these visual disturbances become apparent when both eyes attempt to work together.

Eye movement disorders that occur suddenly require urgent medical attention to rule out serious conditions such as the rupture of blood vessels leading to the brain.

@The information provided is not exhaustive. Further discussion with your physician is strongly recommended.

Contact Us
17c - Eye Surgery Centre
NUH Medical Centre, Level 17
Tel/Appointment: 6772 2002/ 6772 2414/ 6778 2015
Fax: 6734 3965
Email: eye_surgery@nuhs.edu.sg
Website: www.nuh.com.sg/eye
Opening Hours: 8.30am - 6.00pm (Mondays - Fridays)
8.30am - 12.30pm (Saturdays)

National University Hospital
5 Lower Kent Ridge Road
Singapore 119074
Tel: (65) 6779 5555 Fax: (65) 6779 5678
Website: www.nuh.com.sg
Business Registration No. 198500843R

Information provided is not exhaustive and is correct at time of printing (May 15) and subject to revision without notice.
The optic nerve is the only nerve in the body that can be directly examined by a doctor. Similar to an electrical cable, it connects the eye to the brain, bringing visual information for processing.

The optic nerve can be affected by:
1. Inflammation – swelling and redness
2. Ischaemia – inadequate blood supply
3. Compression – external pressure on the nerve, usually from a lesion
4. Raised intracranial pressure – pressure within the skull on the brain
5. Trauma – a blow to the head

Common optic nerve diseases

Inflammation
Inflammation of the optic nerve is difficult to attribute to an underlying cause. In cases where its cause can be identified, it is often the result of multiple sclerosis.
- It is indicated by rapid loss of vision, frequently affecting colour vision as well.
- Occasionally it can cause pain behind the eyes, especially during eye movements.

Ischaemia
Ischaemia is often known as “a stroke of the optic nerve”. The optic nerve receives inadequate blood supply and is starved of oxygen.
- It usually presents itself with rapid visual loss without pain.
- It is most commonly related to other vascular diseases such as hypertension and diabetes.
- Treatment is usually directed at controlling risk factors such as hypertension, diabetes, high cholesterol and smoking.

Compression
Compression of the optic nerve is most commonly by a tumour.
- It usually presents a slow, progressive, painless loss of vision.

Raised intracranial pressure
Raised intracranial pressure can be accompanied by other non-visual symptoms.
- These include headache with early morning nausea or vomiting, occasional loss of vision.
- It can also be accompanied with weakness in other parts of the body or loss of balance.
- CT scan or MRI imaging is usually necessary along with a lumbar puncture to obtain cerebrospinal fluid for analysis.
- Referral to a neurologist or neurosurgeon is usually required.

Eye Movement Disorders
There are several diseases that affect movement of the eyes. The eye is a round ball attached by muscles to the socket at certain points. Movement of the eyes is a complex operation involving a signal sent by the brain along nerves to the muscles. The muscles respond and the eye moves in the socket. If any of these parts are affected, then movement will be affected too. For example, eye movement disorders can include: