

- **fibers from the temporal half of the left eye and nasal half of the right eye**

The **optic nerve** (CN II) arises from axons of **ganglion cells of the retina**, which converge at the **optic disc**. The optic nerve leaves the orbital cavity by passing through the **optic foramen** (also called optic canal) of the sphenoid bone with the **ophthalmic artery** and then enters the cranial cavity. The nerves on both sides join one another to form the **optic chiasma**. Here, the nerve fibers that arise from the medial (nasal) half of each retina cross the midline and enter the optic tract of the opposite side; the fibers from the lateral (temporal) half of each retina pass posteriorly in the optic tract of the same side.

The optic tract emerges from the posterolateral angle of the optic chiasma and passes backward around the lateral side of the midbrain to reach the **lateral geniculate body**.

**Remember:** The optic nerves carry impulses associated with **vision**. Like the olfactory nerves, the optic nerves are entirely **sensory**. The optic nerves are actually brain tracts rather than true nerves, since the optic nerves are formed from outgrowths of the embryonic diencephalon.

**Note:** The optic nerve fibers originating from the nasal halves of the retina cross in the optic chiasm. The fibers from the temporal halves do not cross but continue on the ipsilateral side. Hence, the right tract contains the fibers from the temporal half of the right eye and from the nasal half of the left eye. The left tract contains fibers from the temporal half of the left eye and from the nasal half of the right eye.