

Sphenopalatine and facial arteries

The arterial blood supply to the nasal cavity is derived mainly from branches of the **maxillary artery**. The most important branch is the **sphenopalatine artery**, which enters the nasal cavity through the sphenopalatine foramen. There are three arterial networks that branch heavily and form a rich anastomotic area in the anterior portion of the nasal cavity. This area of anastomosis between the sphenopalatine, ethmoid, and superior labial (*branch of the facial artery*) arteries is called **Kiesselbach's area**. This area is responsible for the more common anterior epistaxis, which is mostly self-limited and typically can be controlled by applying external pressure to the nose.

Other **small** arteries that **supply blood** to the nasal cavity include:

- The **descending palatine** branch of the maxillary artery
- The **superior labial** branch of the facial artery
- The **posterior ethmoidal** branch and **anterior ethmoidal** branch of the ophthalmic artery

Remember:

1. The **ophthalmic artery** is a branch of the **internal carotid artery**.
2. The **maxillary artery** and the **superficial temporal artery** are the terminal branches of the external carotid artery.
3. The **pterygopalatine fossa** is a cone-shaped paired depression deep to the infratemporal fossa. The pterygopalatine fossa is located between the pterygoid process and the maxillary tuberosity, close to the apex of the orbit. This fossa contains the maxillary artery and nerve and their branches arising here, including the infraorbital and sphenopalatine arteries, the maxillary division of the trigeminal nerve and branches, and the pterygopalatine ganglion. The pterygopalatine fossa **communicates** laterally with the infratemporal fossa through the **pterygomaxillary fissure**, medially with the nasal cavity through the **sphenopalatine foramen**, superiorly with the skull through the **foramen rotundum**, and anteriorly with the orbit through the **inferior orbital fissure**.