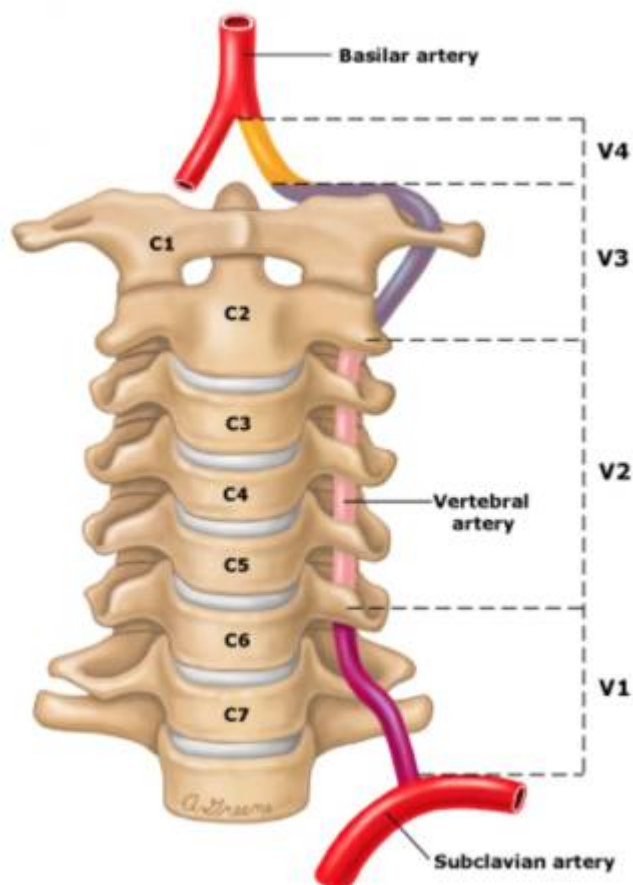


Vertebral artery segments



The **vertebral artery** is typically divided into 4 **segments**:

V1 (preforaminal): origin to transverse foramen of C6

V2 (foraminal): from the transverse foramen of C6 to the transverse foramen of C2

The V3 segment of the vertebral artery corresponds to the suboccipital portion, which is extradural and extends from the transverse foramen of C2 to the dura mater entry at the foramen magnum.

The V4 segment begins after the artery pierces the dura mater, entering the subarachnoid space, and is thus the intradural or intracranial portion of the vertebral artery.

[V3 Vertebral artery segment](#)

[V4 Vertebral artery segment](#)

The first part runs upward and backward between the Longus colli and the Scalenus anterior.

In front of it are the internal jugular and vertebral veins, and it is crossed by the inferior thyroid artery; the left vertebral is crossed by the thoracic duct also.

Behind it are the transverse process of the seventh cervical vertebra, the sympathetic trunk and its inferior cervical ganglion.

The second part runs upward through the foramina in the transverse processes of the C6 to C2 vertebræ, and is surrounded by branches from the inferior cervical sympathetic ganglion and by a plexus of veins which unite to form the vertebral vein at the lower part of the neck.

It is situated in front of the trunks of the cervical nerves, and pursues an almost vertical course as far as the transverse process of the axis.

The third part issues from the C2 foramen transversarium on the medial side of the Rectus capitis lateralis. It is further subdivided into the vertical part V3v passing vertically upwards, crossing the C2 root and entering the foramen transversarium of C1, and the horizontal part V3h, curving medially and posteriorly behind the superior articular process of the atlas, the anterior ramus of the first cervical nerve being on its medial side; it then lies in the groove on the upper surface of the posterior arch of the atlas, and enters the vertebral canal by passing beneath the posterior atlantoöccipital membrane.

This part of the artery is covered by the Semispinalis capitis and is contained in the suboccipital triangle—a triangular space bounded by the Rectus capitis posterior major, the Obliquus superior, and the Obliquus inferior.

The first cervical or suboccipital nerve lies between the artery and the posterior arch of the atlas.

The fourth part pierces the dura mater and inclines medialward to the front of the medulla oblongata; it is placed between the hypoglossal nerve and the anterior root of the first cervical nerve and beneath the first digitation of the ligamentum denticulatum.

At the lower border of the pons it unites with the vessel of the opposite side to form the basilar artery.

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