

The **internal jugular vein** is a continuation of the sigmoid sinus as it exits the skull via the jugular foramen. At its superior and inferior ends, the internal jugular vein forms dilated bulbs; there are valves inferior bulb. It descends in the carotid sheath, lying lateral to the internal carotid artery above the third or fourth cervical vertebrae, and the common carotid artery below the third or fourth cervical vertebrae. It unites with the subclavian vein behind the sternal end of the clavicle, anterior to the vagus nerve (X cranial nerve) to form the brachiocephalic vein.

At the base of the skull it lies posterior to the internal carotid artery separated from it by the last four cranial nerves; glossopharyngeal nerve (IX), vagus nerve (X), accessory nerve (XI) and the hypoglossal nerve (XII). In a supero-inferior direction, its anterior relations are rectus capitis lateralis, the transverse process of C1 (atlas), scalenus medius, the cervical plexus, scalenus anterior, phrenic nerve, inferior thyroid artery, thyrocervical trunk, vertebral vein and first part of the subclavian artery; in addition the thoracic duct is on the left. The internal jugular vein lies posterior to sternocleidomastoid and is crossed by the posterior belly of the digastric and the superior belly of the omohyoid muscles. Above the digastric muscle it is crossed anteriorly by the accessory nerve (XI cranial nerve), the posterior auricular and occipital arteries. Between the digastric and omohyoid muscles, the sternocleidomastoid arteries and inferior root of the ansa cervicalis cross the internal jugular vein; below omohyoid it is crossed by the anterior jugular vein. Deep cervical lymph nodes lie on its postero-lateral aspect.

The internal jugular vein receives the inferior petrosal sinus, the facial, lingual, pharyngeal, and superior and middle thyroid veins; the right also receives the right lymphatic trunk and the left the thoracic duct at the union with the subclavian vein. It drains blood from the skull, brain, face and neck.