

The inferior thyroid veins arise from the pretracheal plexus, which is formed by tributaries of the inferior thyroid, superior and middle thyroid veins from around the isthmus of the thyroid gland. The left thyroid vein descends vertically to drain into the left brachiocephalic vein, where it has a valve. The right thyroid vein descends obliquely anterior to the brachiocephalic artery to drain into the right brachiocephalic vein, where it has a valve. Occasionally, near the junction between the right brachiocephalic vein and superior vena cava, the inferior thyroid veins unite and drain directly into the left brachiocephalic vein or superior vena cava.

The inferior thyroid veins receive esophageal, tracheal and inferior laryngeal veins.