

## **Core Surgical Anatomy – Learning outcomes**

### ***Neck – Fascias, compartments and contents, levels***

1. Demonstrate the boundaries of the anterior and posterior triangles of the neck defined by the sternum, clavicle, mandible, mastoid process, trapezius, sternocleidomastoid and the midline.
2. In the posterior triangle, demonstrate the position of the spinal accessory nerve, the roots and trunks of the brachial plexus, the phrenic nerve, the external jugular vein and subclavian vessels in relation to penetrating neck trauma.
3. In the anterior triangle, demonstrate the position of the common, internal and external carotid arteries, the internal jugular vein and vagus nerve, the trachea, thyroid cartilage, larynx, thyroid and parathyroid glands. Explain their clinical significance in relation to carotid insufficiency, central venous line insertion and emergency airway management.
4. Describe the hyoid bone and cartilages of the larynx. Explain how these are linked together by the intrinsic and extrinsic laryngeal membranes.
5. Describe the intrinsic and extrinsic laryngeal muscles responsible for closing the laryngeal inlet and controlling vocal cord position and tension. Explain how these muscles function during phonation, laryngeal closure, cough / sneeze reflexes and regulation of intrathoracic pressure.
6. Describe the origin, course and functions of the motor and sensory nerve supply of the larynx and the functional consequences of their injury.
7. Describe the position and anatomy of the thyroid and parathyroid glands, their blood supply and the significance of the courses of the laryngeal nerves.

8. Demonstrate the origin, course and major branches of the common, internal and external carotid arteries and locate the carotid pulse.
9. Describe the courses of the accessory, vagus and phrenic nerves in the neck.
10. Describe the anatomy of the major structures passing between the neck, and the thorax and the upper limb. Describe the courses and important relationships of the subclavian arteries and veins.
11. Describe the anatomy of the motor and sensory nerves to the head and neck and apply this knowledge to a neurological assessment of the cranial and upper cervical spinal nerves.
12. Describe the sympathetic innervation of the head and neck including the features and main causes of Horner's syndrome.
13. Demonstrate the positions of the external and internal jugular veins and the surface landmarks that are used when inserting a central venous line.
14. Describe the anatomy of the major groups of lymph nodes in the head and neck and the potential routes for the spread of infection and malignant disease.
15. Interpret standard diagnostic images, e.g. CT, MRI, X-ray and ultrasound of the head and neck and be able to recognise common abnormalities.