

CADAVER DISSECTION – NECK

All of the terms indicated below in **BOLD** print should be identified during the student's oral presentation on this region.

PROCEDURE:

I. SURFACE ANATOMICAL LANDMARKS – Prior to dissection, identify the following surface anatomical landmarks of the neck: **inferior border of the mandible (angle), mastoid process, hyoid bone, thyroid cartilage, suprasternal (jugular) notch, outline of the clavicle, acromion process.**

I. SUPERFICIAL VESSELS & NERVES – Determine the location of any major superficial muscles, superficial veins, or superficial nerves in your area of dissection to avoid damaging these structures as you dissect.

II. REMOVAL OF SKIN – Using the following steps, remove the skin from the median line of the neck laterally to beyond the ear.

A. Incision Lines - Use a marking pencil to outline the incision lines (illustrated on the handout). Use a scalpel blade to cut through the skin. Insert a smooth probe under the skin along the remaining incision lines (instructor will demonstrate). When making your remaining incision, only cut to the smooth probe to avoid damaging superficial structures deep to the skin.

Median Incision Lines – Cut the skin along the median line from the mandible to the suprasternal notch.

Lateral Incision Lines

1. Cut along the inferior border of the mandible to a point inferior to the auricle of the ear.
2. Cut along the superior margin of the clavicle to the acromion process.

B. Removal of skin – When removing the skin laterally, avoid damaging the superficial platysma muscle. **ONLY THE SKIN SHOULD BE REMOVED. LEAVE ANY SUBCUTANEOUS TISSUE AND FASCIA.**

IV. MUSCLE IDENTIFICATION AND SEPARATION

SUPERFICIAL

A. **Platysma** – Identify the platysma muscle, a muscle of facial expression. Cut through the attachment of the platysma superficial to the clavicle and reflect the muscle superiorly to the mandible.

- Be careful not to damage the superficial external jugular vein located on the lateral surface of the sternocleidomastoid muscle.

B. Deep Fascia – Identify the deep fascia superficial to the sternocleidomastoid and trapezius muscles. Cut through the deep fascia, without damaging the external jugular vein, exposing the sternocleidomastoid muscle. An anterior jugular vein may also be evident near the median line of the neck.

REVIEW THE ANTERIOR AND POSTERIOR TRIANGLES OF THE NECK.

- 1). Anterior Triangle (Boundaries) – median line of the neck, anterior margin of the sternocleidomastoid muscle, inferior border of the mandible.
 - The anterior triangle of the neck may be further subdivided into the following triangles: carotid triangle, submandibular triangle, submental triangle, and muscular triangle.
- 2). Posterior Triangle (Boundaries) – posterior margin of sternocleidomastoid muscle, anterior margin of the trapezius muscle, superior border of the clavicle.

DEEP

- B. **Sternocleidomastoid** – Identify the sternal and clavicular heads of the sternocleidomastoid muscle. Separate the margins of this muscle from the underlying tissue without damaging the external jugular vein.
- C. **Trapezius** – Identify the anterior margin of the trapezius muscle.

INFRAHYOID MUSCLES

- D. **Sternohyoid** – Identify the sternohyoid muscle lateral to the median line.
- E. **Omohyoid** – Identify the superior belly of the omohyoid muscle lateral to the sternohyoid muscle.
- F. **Thyrohyoid** – A portion of the thyrohyoid muscle is visible just lateral to the superior belly of the omohyoid muscle.
- G. **Sternothyroid** – Identify the sternothyroid muscle deep to the sternohyoid muscle.

SUPRAHYOID MUSCLES

- H. **Digastric** – Identify the anterior belly of the digastric muscle.
- I. **Mylohyoid** – Deep to the anterior belly of the digastric muscle identify the Mylohyoid muscle.

V. VESSEL IDENTIFICATION

- C. **External Jugular Vein** - Identify the external jugular vein superficial to the sternocleidomastoid muscle on its lateral surface.
- D. **Anterior Jugular Vein** - Identify the anterior jugular vein (variation in this vein are often present).

CAROTID TRIANGLE - Identify the neurovascular bundle located within the carotid triangle. Identify the following veins inside the bundle.

- E. **Common Carotid Artery** - Identify the common carotid artery and its bifurcation into the **internal carotid artery** and **external carotid artery**.
- F. **Internal Jugular Vein** - Identify the internal jugular vein.
- G. **Superior Thyroid Artery** - Identify the superior thyroid artery which is the first branch of the external carotid artery.

VI. NERVE IDENTIFICATION

CAROTID TRIANGLE

- A. **Vagus Nerve** - Identify cranial nerve X, the vagus nerve, within the carotid triangle.

POSTERIOR TRIANGLE

- B. **Accessory Nerve** – Identify cranial nerve XI, the accessory nerve, located within the posterior triangle of the neck.
- C. **Transverse Cervical Nerve**
- D. **Supraclavicular Nerve**
- E. **Great Auricular Nerve**
- F. **Lesser Occipital Nerve**

ORGAN IDENTIFICATION - Identify the following organs and structures.

- A. **Submandibular Gland** - Identify the submandibular gland within the submandibular triangle.
- B. **Larynx** - Identify the cartilage of the larynx: **thyroid cartilage, cricoid cartilage.**
- C. **Thyroid Gland** - Identify the thyroid gland inferior to the larynx.

DEEP STRUCTURE OF THE NECK – Cut through the middle of the sternocleidomastoid muscle. Identify the following structures in the posterior triangle of the neck.

VIII. MUSCLES

- A. **Inferior Belly of the Omohyoid**
- B. **Anterior Scalene**
- C. **Middle Scalene**
- D. **Posterior Scalene**
- E. **Levator Scapulae**
- F. **Splenius Capitis**

IX. NERVES

- A. **Brachial Plexus** - Identify the brachial plexus as it emerges between the anterior and middle scalene muscles.
- B. **Phrenic Nerve** - Identify the phrenic nerve as it emerges between the anterior and middle scalene and crosses the lateral surface of the anterior scalene on its way to the thoracic inlet.