LYMPHATIC DRAINAGE OF HEAD & NECK :-

The vertical chain consists of superior and inferior groups of nodes related to the carotid sheath.

All lymph vessels of the head and neck drain into the deep cervical nodes, either directly from the tissues or indirectly via nodes in outlying groups.

Lymph is returned to the systemic venous circulation via either the right lymphatic duct or the thoracic duct.
## Classification

<table>
<thead>
<tr>
<th>Node</th>
<th>Location</th>
<th>Afferent</th>
<th>Efferent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occipital (2-4)</td>
<td>Superior nuchal line between sternocleidomastoid and trapezius</td>
<td>Occipital part of scalp</td>
<td>Superficial cervical lymph nodes</td>
</tr>
<tr>
<td>Mastoid (1-3)</td>
<td>Superficial to sternocleidomastoid insertion</td>
<td>Posterior parietal (scalp) Skin of ear, External acoustic meatus</td>
<td>Superior deep cervical nodes</td>
</tr>
</tbody>
</table>

**Superficial Lymph Nodes of the Head**
1. **Parotid**
   (up to 10 or more)
   - About parotid gland
   - and under parotid fascia
   - Deep to parotid gland

2. **Preauricular**
   (2-3)
   - Anterior to ear
   - over parotid fascia

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**PAROTID AND PRE-AURICULAR LYMPHATICS**

**Location:**
- Embedded in parotid
- or
- Just below the parotid gland

**Drains:**
- Root of nose
- Eye lids
- Frontotemporal region
- Ext auditory meatus
- Floor and posterior of nasal cavity
- Parotid gland

**Drains to:**
- Superior deep cervical nodes
<table>
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<th>Node</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Facial A. Superficial (up to 12) Maxillary Buccal Mandibular</td>
<td>Distributed along course of facial artery and vein</td>
<td>Skin and mucous membranes of eyelids, nose, cheek</td>
<td>Submandibular nodes</td>
</tr>
<tr>
<td>Facial B. Deep</td>
<td>Distributed along course of maxillary artery lateral to lateral pterygoid muscle</td>
<td>Temporal and infratemporal fossa Nasal pharynx</td>
<td>Superior deep cervical lymph nodes</td>
</tr>
</tbody>
</table>
Lymph drainage of external nose

Lymph drainage of external nose is primarily to the submandibular group (Although lymph from the root of the nose drains to superficial parotid nodes).
Lymphatic drainage of nasal cavity

- Lymph vessels from the anterior region of the nasal cavity pass superficially to join those draining the external nasal skin, and end in the Submandibular nodes.

- The rest of the nasal cavity, paranasal sinuses, nasopharynx and pharyngeal end of the pharyngotympanic tube, all drain to the upper deep cervical nodes either directly or through the Retropharyngeal nodes.

- The posterior nasal floor probably drains to the Parotid nodes.
<table>
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<th>Node</th>
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</thead>
<tbody>
<tr>
<td>Superficial</td>
<td>Anterior jugular vein between superficial cervical fascia and infrahyoid fascia</td>
<td>Skin, muscles, and viscera of infrahyoid region of neck</td>
<td>Superior deep cervical lymph nodes</td>
</tr>
<tr>
<td>Deep</td>
<td>Between viscera of neck and investing layer of deep cervical fascia</td>
<td>Adjoining parts of trachea, larynx, thyroid gland</td>
<td>Superior deep cervical lymph nodes</td>
</tr>
<tr>
<td><strong>Superficial cervical</strong> (1-2)</td>
<td>Along external jugular vein superficial to sternocleidomastoid muscle</td>
<td><strong>SUPERFICIAL CERVICAL LYMPHATICS</strong></td>
<td></td>
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<tr>
<td><strong>Location:</strong></td>
<td>About the ext jugular vein (anterior to the SCM muscle)</td>
<td><strong>Drains:</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>External ear</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Parotid gland</td>
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<tr>
<td></td>
<td></td>
<td><strong>Drains to:</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Deep to cervical nodes</td>
<td></td>
</tr>
</tbody>
</table>
Superior deep cervical lymphatics:

**Location:**
- Course of the carotid artery and internal jugular vessels (behind SCM muscle)

**Drains:**
- Back of Neck
- Occipital region of scalp
- Portions of ext ear
- Post and central portions:
  - Tongue
  - Palate
  - Nasopharynx
  - Nose
  - Larynx
  - Upper esophagus

**Drains to:**
- Jugular trunk

Surrounding internal jugular vein deep to sternocleidomastoid and superior to omohyoid muscle
Fig. 7.25. Lymph nodes of the Neck.
Deep (inner circle) of cervical nodes

- Superior deep cervical
- Inferior deep cervical
- Submental
- Submandibular
- Pre laryngeal
- Paratracheal
- Pretracheal
Submental (2-3)
Submental triangle

Drain the:
Medial part of lower lip
Lower incisor teeth and gingiva
Tip of tongue
Cheeks

Efferent:
Submandibular lymph node → jugulo-omohyoid lymph node and superior deep cervical lymph nodes
Lymphatic drainage of tongue -

The lymphatic drainage of the tongue can be divided into three main regions, marginal, central and dorsal.

The anterior region of the tongue drains into marginal and central vessels,

the posterior part of the tongue behind the circumvallate papillae drains into the dorsal lymph vessels.

The more central regions drain bilaterally into sub-mandibular and deep cervical nodes.
Fig. 30.9 Lymphatic drainage of the tongue. Removal of sternocleidomastoid has exposed the whole chain of deep cervical lymph nodes.
Submandibular (3-6)

Submandibular triangle adjacent to submandibular gland
<table>
<thead>
<tr>
<th>Node</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Jugulo-omohyoid</td>
<td>Above junction of internal jugular vein and omohyoid muscle</td>
<td>Posterior 1/3 of tongue</td>
<td>Inferior deep cervical lymph nodes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Submandibular nodes</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Submental nodes</td>
<td></td>
</tr>
<tr>
<td>Inferior deep cervical</td>
<td>Along internal jugular vein below omohyoid muscle deep to the sternocleidomastoid muscle</td>
<td>Transverse cervical nodes</td>
<td>Jugular trunk</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Anterior cervical nodes</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Superior deep cervical nodes</td>
<td></td>
</tr>
<tr>
<td>Retropharyngeal (1-3)</td>
<td>Retropharyngeal space</td>
<td>Posterior nasal cavity</td>
<td>Superior deep cervical nodes</td>
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<tr>
<td></td>
<td></td>
<td>Paranasal sinuses</td>
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<tr>
<td></td>
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<td>Hard and soft palate</td>
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<td></td>
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<td>Nasopharynx, oropharynx, Anditory tube</td>
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Jugulo-digastric

Junction of internal jugular vein and posterior digastric muscle