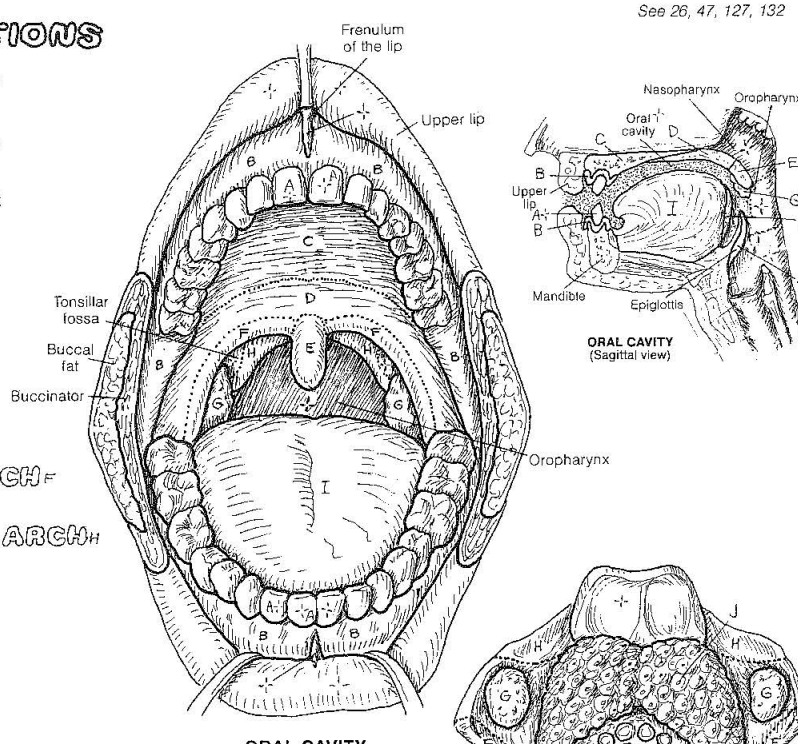
ORAL CAVITY & RELATIONS

CN: Use pink or red for I and very light colors for N, O, and P. The asterisks preceding titles F, G, and H refer to the footnote under the list of titles, and not the color gray. (1) Color the two upper views of the oral cavity simultaneously. (2) Color the papillae of the tongue with the color of the tongue (I) but not the tongue itself. (3) Color the three salivary glands and the cellular diagram to their right. Note that the lumen, which receives glandular secretions, is not colored as it passes through the various colored structures.

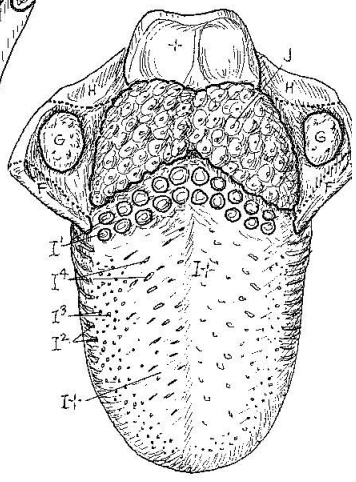
ORAL CAVITY -/-

- TEETH A -/-
- GINGIVA (GUM) B
- HARD PALATE C
- SOFT PALATE D
  - UVULA E
  - * PALATOGLOSSAL ARCH F
  - * PALATINE TONSIL G
  - * PALATOPHARYNGEAL ARCH H
- TONGUE I
  - LINGUAL TONSIL J
  - VALLATE PAPILLAE I'
  - FOLIATE P, I^2
  - FUNGIFORM P, I^3
  - FILIFORM P, I^4

*These structures are considered as part of the oropharynx in Plates 132 and 139; as a practical mattter, they are part of the oral cavity bordering the oropharynx.



ORAL CAVITY

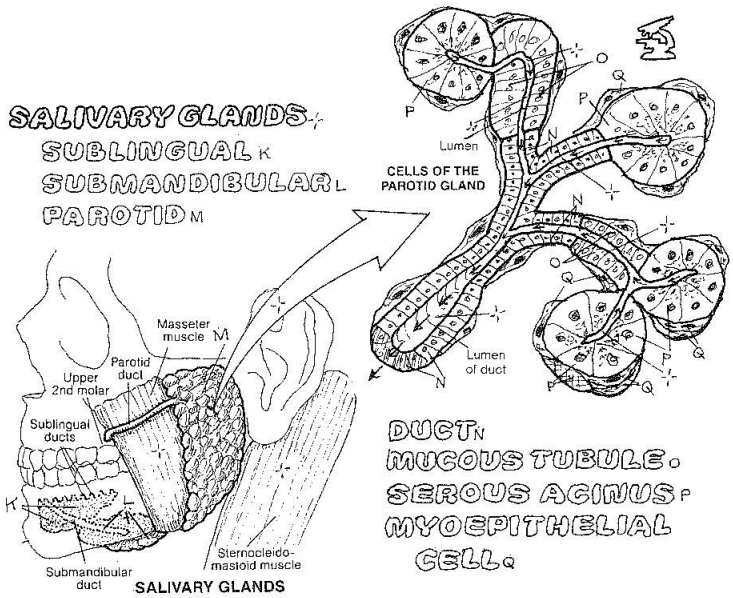


TONGUE

The oral cavity (mouth) is essentially concerned with preparation of food for swallowing. Food is pulverized with *teeth* (presented in next plate), which act on food through chewing (mechanical digestion), made possible by the muscles of mastication and the temporomandibular joint, which permits mouth opening to an interincisor distance of 35–50 mm. Wetting the food is a function of the thousands of mucous and serous glands in the tongue and the mucosa lining the oral cavity. Wetting and enzymatic action also are functions of the salivary glands (discussed below). Mechanical digestion is enhanced by the *papillae* on the surface (dorsum) of the tongue. These provide a site for taste receptors (except filiform papillae) and an abrasive surface, for breaking down food.

SALIVARY GLANDS -/-

- SUBLINGUAL K
- SUBMANDIBULAR L
- PAROTID M



SALIVARY GLANDS

Salivary glands secrete an enzyme-rich fluid into the mouth during periods of eating or anticipated eating. The largest is the *parotid gland*, situated bilaterally in front of and below each external auditory canal, partly overlying the masseter muscle. Its duct arches over the masseter, penetrating the cheek mucosa to enter the oral cavity opposite the upper 2nd molar. Its glandular cells are serous. The smallest of the salivary glands, the mucus-type *sublingual glands*, lie under the tongue below the oral mucosa. The *submandibular glands* are U-shaped and wrap around the mylohyoid muscle (Plate 48). They consist of ducts and mixed glands, primarily mucous.

An example of a mixed (muco-serous) gland is shown here. The serous glands consist of cells that are pyramid-shaped. The cells form rounded, grape-shaped alveoli or acini, whose center forms the *duct*. The more *tubular glands* are mucous-secreting; they are cylinder-shaped, with a central duct. Collections of *serous cells* capping a mucous gland are called serous demilunes (half-moon shaped). Contractile *myoepithelial cells* within the basal laminae of both duct and gland cells are responsible for forcing the secretions into the ducts and out of the glands.