

Dental Anatomy Lesson One

Vocabulary Flashcards

Directions:

1. Print cards double sided and cut vocabulary cards
2. Choose an activity method for learning vocabulary words

Class method

- Read the vocabulary word aloud and ask for volunteers to provide the definition
or
- Read the definition aloud and ask for volunteers to provide the vocabulary word

Small group method

- Divide the class into small groups
- Give each group a set of the cards
- Have one person pick a card and read it aloud to the group
- The first person in the group to get it right gets a point and is the next person to read a card

Concentration method

- Pair the students up
- Give each pair a set of cards
- Lay the vocabulary cards on a table with the definition side down
- Each player takes a turn reading a word and saying the definition
- If the definition is correct, the player picks up the card and keeps it as a point
- If the definition is incorrect, the next player takes a turn
- Continue until all cards are drawn



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FRONTAL REGION

ORBITAL REGION

ORBIT

NASAL REGION

EXTERNAL NOSE

ROOT OF THE NOSE

APEX OF THE NOSE

NARIS (NARES, PLURAL)

Facial region that includes the
forehead and area above the eyes

Facial region that includes the bony
orbit and eyeball

Bony eye socket

Facial region occupied by the
external nose

Surface of the nose in the
nasal region

Nose located between the eyes

Tip of nose

Nostrils of nose, inferior to the apex
on either side of the nose

NASAL SEPTUM

ALA (ALAE, PLURAL)

INFRAORBITAL REGION

ZYGOMATIC REGION

ZYGOMATIC ARCH

TEMPOROMANDIBULAR JOINT (TMJ)

BUCCAL REGION

MASSETER MUSCLE

Midline part of the nose that
separates the nares

Winglike cartilaginous structure(s)
bounding nares laterally

Facial region located both inferior to
the orbital region and lateral to the
nasal region

Facial region that overlies the
zygomatic arch

Bony support for the cheek; extends
from just below the lateral margin of
the eye toward the middle part of the
external ear

Joint where the temporal bone of the
skull articulates with mandible

Structures on facial surface of the
tooth close to the inner cheek

Powerful bilateral muscle
of mastication

MASTICATION

ORAL REGION

MAXILLA

MANDIBLE

VERMILION ZONE

MUCOCUTANEOUS JUNCTION

PHILTRUM

TUBERCLE OF THE UPPER LIP

Chewing process

Facial region that contains the lips
and oral cavity

Upper jaw

Lower jaw

Darker appearance of the lips with its
outlining mucocutaneous junction
at the vermilion border as compared
with surrounding skin

Transition zone at the vermilion
border, outlining the lips from the
surrounding skin

Vertical groove on the midline of the
upper lip extending downward from
the nasal septum

Midline thickening of the upper lip

LABIAL COMMISSURE

MENTAL REGION

MANDIBULAR SYMPHYSIS

RAMUS

CORONOID PROCESS

CORONOID NOTCH

MANDIBULAR CONDYLE

MANDIBULAR NOTCH

Corner of the mouth where the upper
and lower lips meet

Region of face with the chin as the
major feature

Midline area of the mandible
marking fusion of the two
mandibular processes

Stout, flat plates(s) that extend(s)
upward and backward from the body
of the mandible on each side

Bony projection at the anterior border
of the mandibular ramus

Main part of the anterior border
of the ramus forming a concave
forward curve

Bony projection off posterior and
superior thickened border of the
mandibular ramus

Depression between the coronoid
process and condyle

REGIONS OF THE NECK

STERNOCLEIDOMASTOID MUSCLE (SCM)

HYOID BONE

THYROID CARTILAGE

LARYNX

THYROID GLAND

PARATHYROID GLANDS

SUBMANDIBULAR SALIVARY GLAND

Extending from the skull and lower
jaw down to the clavicles and
sternum

Large strap muscle of the neck

Bone suspended in the anterior
midline of neck that has many
muscle attachments

Midline prominence of the larynx

Voice box in the midline of the neck

Endocrine gland in the neck

Endocrine glands along the posterior
aspects of the thyroid

Major salivary gland located in
the neck

SUBLINGUAL SALIVARY GLAND

VERTICAL DIMENSIONS OF THE FACE

GOLDEN PROPORTIONS

LYMPH NODES

FACIAL

LABIAL

BUCCAL

LINGUAL

Major salivary gland located in the neck

Dividing the face into three horizontal parts

Principle that provides a guide for aesthetically pleasing proportion; allows comparison of the three divisions of the face for functional and aesthetic purposes

Bean-shaped filtering bodies grouped in clusters along connecting lymphatic vessels

Structures closest to the facial surface

Structures closest to the lips

Structures closest to the cheeks

Structures closest to the tongue

PALATAL

ORAL VESTIBULES

ORAL MUCOSA

LABIAL MUCOSA

BUCCAL MUCOSA

BUCCAL FAT PAD

PAROTID PAPILLA

PAROTID DUCT (STENSEN'S DUCT)

Structures closest to the palate

Upper and lower (maxillary and mandibular) horseshoe-shaped spaces in the oral cavity between the lips and cheeks anteriorly and laterally as well as the teeth and their soft tissue medially and posteriorly

Mucosa or mucous membrane lining the oral cavity

Mucosal lining of the inner parts of the lips

Mucosa that lines inner cheek

Dense pad of underlying adipose (fat) connective tissue at the posterior part of each vestibule; acts as a protective cushion during mastication

Small elevation of tissue on the inner part of the buccal mucosa, just opposite the maxillary second molar, that protects the opening of the parotid duct

Duct associated with the parotid salivary gland

VESTIBULAR FORNIX

ALVEOLAR MUCOSA

MUCOBUCCAL FOLD

LABIAL FRENUM (FRENA, PLURAL)

BODY OF MAXILLA

MAXILLARY SINUS

MANDIBLE

BODY OF MANDIBLE

Deepest recess of each vestibule

Oral mucosa immediately apical to mucogingival junction, redder in color than the pink labial and buccal mucosa

Area within a vestibule where the labial mucosa or buccal mucosa meets the alveolar mucosa

Fold(s) of tissue located at midline between labial mucosa and alveolar mucosa on the upper and lower dental arch(es)

Horizontal part of the upper jaw superior to teeth

Paranasal sinus within maxilla

Singular bone, movable articulation with the temporal bones at each temporomandibular joint (TMJ)

Heavy, horizontal part of the lower jaw inferior to teeth

ALVEOLAR PROCESS (ALVEOLAR BONE)

ALVEOLUS (ALVEOLI, PLURAL)

CANINE EMINENCE

PERIODONTAL LIGAMENT (PDL)

CROWN

ROOT

ENAMEL

DENTIN

Dental arch or tooth-bearing part of each jaw that contains alveoli; bony extension for both the maxilla and mandible that contain each tooth socket

Tooth socket

Vertically oriented and labially placed bony ridge of the alveolar process, especially prominent on each side of the maxilla

Fibrous ligament surrounding the teeth that supports and attaches them to the alveoli bony surface; allows slight tooth movement within the alveolus while still supporting the tooth

Part of a tooth composed of dentin and pulp covered by enamel

Part of a tooth composed of dentin covered by cementum

Extremely hard outer layer of the tooth crown

Moderately hard inner layer of the tooth crown overlying pulp

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PULP

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CEMENTUM

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DENTAL ARCHES

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**MAXILLARY
TUBEROSITY**

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RETROMOLAR PAD

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**PRIMARY TEETH
(PRIMARY DENTITION,
DECIDUOUS TEETH,
BABY TEETH)**

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INCISORS

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CANINES

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Soft innermost connective tissue in both the crown and root

Outermost layer of the root of a tooth; the part of the tooth that attaches to the PDL, which then attaches to the alveolus of the bone, holding the tooth in its socket

Alveolar process or tooth-bearing part of each jaw in either the maxillary or mandibular arch

Tissue-covered bony elevation just distal to last tooth of the maxillary arch

Dense pad of tissue just distal to last tooth of the mandibular arch

First teeth present

First and second anterior teeth from the midline: centrals and laterals

Anterior teeth that are the third from the midline in each quadrant

MOLARS

PERMANENT TEETH (PERMANENT DENTITION, ADULT TEETH)

PREMOLARS

ANTERIOR TEETH

POSTERIOR TEETH

GINGIVA

ATTACHED GINGIVA

MUCOGINGIVAL JUNCTION

Most posterior teeth with firsts,
seconds, and thirds

Second and final dentition with all
the permanent/adult teeth present

Fourth and fifth posterior teeth from
the midline in permanent dentition,
including firsts and seconds or
bicuspid; no deciduous counterpart
in primary dentition

Incisors and canines at the front of
the oral cavity

Premolars and molars in the back of
the mouth

Gum tissue composed of mucosa
surrounding the maxillary and
mandibular teeth while covering the
alveolar processes

Gingiva that tightly adheres to the
alveolar process around the roots of
teeth; firmer and pinker than redder
and movable alveolar mucosa

Scallop-shaped line of demarcation
between the attached gingiva and
alveolar mucosa

MARGINAL GINGIVA

FREE GINGIVAL GROOVE

FREE GINGIVAL CREST

INTERDENTAL GINGIVA

INTERDENTAL PAPILLA

MELANIN PIGMENTATION

GINGIVAL SULCUS

ORAL CAVITY PROPER

Gingiva at the gingival margin of each tooth; forms a cuff above the neck of the tooth

Groove that separates the attached gingiva from the marginal gingiva; varies in depth according to the area of the oral cavity; especially prominent on mandibular anterior teeth and premolars

Most coronal part of the marginal gingiva

Gingival tissue between adjacent teeth adjoining the attached gingiva

Individual extensions of the interdental gingiva between adjacent teeth adjoining the attached gingiva

Localized macules of pigmentation caused by the presence of melanin; found on the attached gingiva, especially at the base of the interdental papillae

Space facing the sulcular gingiva

Inside of the mouth; includes the palate, tongue, and floor of the mouth

FAUCES

ANTERIOR FAUCIAL PILLAR

POSTERIOR FAUCIAL PILLAR

PALATINE TONSILS (TONSILS)

PALATE

HARD PALATE

SOFT PALATE

MEDIAN PALATINE RAPHE

Opening posteriorly from the oral cavity proper into the pharynx/throat; formed laterally on each side by faucial pillars

Anterior lateral folds of tissue in the pharynx created by underlying muscle forming the fauces

Posterior lateral folds of tissue in the pharynx created by underlying muscle forming the fauces

Tonsillar tissue located between faucial pillars; can become enlarged when involved with inflammation

Roof of the mouth; has two parts: anterior and posterior

Firmer anterior part of the palate

Looser posterior part of the palate

Midline ridge of tissue on the hard palate that overlies the bony fusion of the palate; marked by the median palatine suture

INCISIVE PAPILLA

PALATINE RUGAE

UVULA

PTERYGOMANDIBULAR FOLD

TONGUE

BASE OF TONGUE

BODY OF TONGUE

APEX OF TONGUE

Small bulge of tissue at the most anterior part of the hard palate, lingual to the anterior teeth

Firm, irregular ridges of tissue directly posterior to the incisive papilla, radiating from the incisive papilla and raphe

Midline muscular structure hanging down from the posterior margin of the soft palate

Tissue fold that extends from the junction of the hard and soft palates down to the mandible, just behind the most distal mandibular tooth; stretches when mouth is opened wider; separates cheek from throat

Oral cavity structure consisting of muscle and covered by oral mucosa

Most posterior part of the tongue; pharyngeal part of tongue; attaches to the floor of the mouth; does not lie within the oral cavity proper but within the oral part of the throat

Anterior part of the tongue; lies within the oral cavity proper

Tip of the tongue

DORSAL SURFACE OF TONGUE

MEDIAN LINGUAL SULCUS

LINGUAL PAPILLAE

FILIFORM LINGUAL PAPILLAE

FUNGIFORM LINGUAL PAPILLAE

SULCUS TERMINALIS

CIRCUMVALLATE LINGUAL PAPILLAE

FORAMEN CECUM

Top surface of the tongue

Midline depression on the dorsal surface of the tongue

Small, elevated structures of specialized mucosa on the tongue, some associated with taste buds

Slender, thread-like lingual papilla giving the dorsal surface of the tongue its velvety texture

Reddish, smaller, mushroom-shaped lingual papillae on the dorsal tongue surface

Inverted, V-shaped groove located posteriorly on the dorsal tongue surface; separates the base from the body of the tongue, demarcating a line of fusion of tissue during the tongue's development

10-14 larger mushroom-shaped lingual papillae that line up along the anterior side of the sulcus terminalis on the tongue

Small, pit-like depression located where the sulcus terminalis points backward toward the pharynx

LINGUAL TONSIL

LATERAL SURFACE OF TONGUE

FOLIATE LINGUAL PAPILLAE

VENTRAL SURFACE OF TONGUE

PLICA FIMBRIATA (PLICAE FIMBRIATAE, PLURAL)

FLOOR OF MOUTH

LINGUAL FRENUM

SUBLINGUAL FOLD

Irregular mass of tonsillar tissue
located posteriorly on the dorsal
surface of the tongue

Side of the tongue

Vertical ridges of lingual papillae on
the lateral tongue surface

Underside of the tongue

Fold(s) with fringe-like projections
on the ventral surface of the tongue
lateral to each deep lingual vein

Area of the oral cavity proper
underneath the ventral surface of
the tongue and bordered by the
mandibular arch

Midline fold of the tissue between
the ventral surface of the tongue and
the floor of the mouth

Ridge of the tissue on each side of
the floor of the mouth; joins in a
V-shaped configuration extending
from the lingual frenum to the base
of the tongue; contains openings
of the sublingual duct from the
sublingual salivary gland

SUBLINGUAL CARUNCLE

SUBMANDIBULAR DUCT (WHARTON'S DUCT)

SUBLINGUAL DUCT (BARTHOLIN'S DUCT)

PHARYNGEAL DIVISIONS

PHARYNX

NASOPHARYNX

OROPHARYNX

LARYNGOPHARYNX

Small papilla at the anterior end of each sublingual fold; contains openings of the ducts

Duct associated with the submandibular gland

Short duct associated with the sublingual gland

Nasopharynx, oropharynx, and laryngopharynx

Muscular tube of the neck or throat; has both respiratory and digestive system functions

Division of the pharynx superior to the level of soft palate, continuous with the nasal cavity; only partially visible by dental professionals

Oral division of pharynx, between the soft palate and the opening of the larynx; fauces mark boundary between the oropharynx and the oral cavity proper; visible by dental professionals

Most inferior part of the pharynx close to the laryngeal opening; special diagnostic tools are needed to examine this division

FORDYCE GRANULES

LINEA ALBA

EXOSTOSES

MANDIBULAR TORUS (TORI, PLURAL)

PALATAL TORUS

GLAND

EXOCRINE GLAND

DUCT

Small, yellowish elevations of sebaceous glands on the oral mucosa

White ridge of keratinized epithelium (calloused tissue) that extends horizontally on the buccal mucosa at the level where teeth occlude (come together)

Small, localized developmental bone growths noted usually on the facial surface of the alveolar process of the maxilla

Bone growth(s) noted on the lingual aspect(s) of the mandibular arch

Normal variation of bone growth noted on the midline of the hard palate

A structure that produces a secretion necessary for normal body functioning

A gland with a duct associated with it

A passageway that allows the glandular secretion to be emptied directly into the location where the secretion is to be used

ENDOCRINE GLAND

SALIVARY GLAND

SECRETORY CELLS

ACINUS (ACINI, PLURAL)

LUMEN

MUCOUS CELLS

SEROUS CELLS

CAPSULE

A ductless gland with its secretions conveyed directly into the blood and then carried by the blood vessels to some distant location to be used

Glands that produce saliva; classified as major or minor depending on their size; both major and minor are exocrine glands with associated ducts that help convey the saliva directly into the oral cavity

Epithelial cells that produce saliva; classified as either mucous or serous depending on the type of secretion produced

Group(s) of secretory cells of salivary glands

Central opening where saliva is deposited into a duct after production by secretory cells

Secretory cells that produce mucous secretory product mainly with mucins

Secretory cells that produce serous secretory product with proteins and glycoproteins; produce enzyme amylase that catalyzes the hydrolysis of starch into sugars (beginning of the chemical process of digestion)

Connective tissue that surrounds the outer part of the entire gland

SEPTUM (SEPTA, PLURAL)

LOBES

LOBULES

INTERCALATED DUCT

STRIATED DUCT

EXCRETORY DUCT

MAJOR SALIVARY GLANDS

PAROTID

Connective tissue that divides the inner part of the gland into the larger lobes and then smaller lobules

Large inner parts of glands

Smaller inner parts of glands

Duct associated with acinus or the terminal part of salivary gland

Larger duct connecting lobules of salivary glands

Secretory duct; duct of salivary glands through which saliva exits into the oral cavity

Three large, paired glands that have named associated ducts: the parotid, the submandibular, and the sublingual glands

The largest salivary gland that only provides 25% of the total salivary volume

SUBMANDIBULAR

SUBLINGUAL

MINOR SALIVARY GLANDS

VON EBNER SALIVARY GLANDS

HYPOSALIVATION

XEROSTOMIA

MUCOCELE

RANULA

The second largest major
salivary gland

The smallest, most diffuse gland

Small salivary glands with short,
unnamed ducts, much smaller and
shorter than the major salivary
glands but more numerous

Serous minor salivary glands
associated with circumvallate
lingual papillae

Decreased production of saliva

Dry mouth

Lesion due to retention of saliva in
minor salivary gland

Lesion due to retention of
saliva, usually in submandibular
salivary gland

NICOTINIC STOMATITIS

THYROXINE

FOLLICLES

COLLOID

GOITER

LYMPHATIC(S)

TONSILLAR TISSUE

LYMPHATIC VESSELS

Whitish lesion on the hard palate caused by chronic heat production from smoking or hot liquid consumption

Hormone from the thyroid gland that stimulates the metabolic rate

Masses embedded in the meshwork of reticular fibers within lobules of thyroid

Material in the follicles of the thyroid reserved for production of thyroxine

Enlarged thyroid gland

Network of lymphatic vessels that collect and transport lymph, linking the lymph node; part of the immune system and helps fight disease processes

Nonencapsulated masses of lymphoid tissue

System of endothelium-lined channels that carry lymph; parallel to the venous blood vessels in location but are more numerous

LYMPH

LYMPHATIC DUCTS

LYMPH NODES

AFFERENT VESSELS

HILUS

EFFERENT VESSEL

TRABECULAE

GERMINAL CENTER

Tissue fluid that drains from surrounding regions into lymphatic vessels

Ducts that smaller lymphatic vessels containing lymph converge into and then empty into the venous system

Bean-shaped filtering bodies grouped in clusters along connecting lymphatic vessels

Lymphatic vessels that allow flow of lymph into lymph node

Depression on one side of a lymph node

Lymphatic vessel in which lymph flows out of a lymph node

Joined matrix pieces forming a lattice in cancellous bone or bands of connective tissue in a lymph node that separate lymphatic nodules

Center region of the lymphatic nodule of a lymph node where lymphocytes mature

PHARYNGEAL TONSILS

LYMPHADENOPATHY

NASAL CAVITY

NASAL CONCHAE

RESPIRATORY MUCOSA

GOBLET CELLS

OLFACTORY MUCOSA

ERECTILE TISSUE

Located on the superior and posterior walls of the nasopharynx, behind the uvula

Enlarged and palpable lymph nodes; results due to an increase in the size of each individual lymphocyte as well as the overall cell count in the lymphoid tissue

Inner space of the nose

Projecting structures that extend inward from each lateral wall of the nasal cavity

Mucosa that lines the nasal cavity; consisting of pseudostratified ciliated columnar epithelium

Cells in respiratory mucosa that produce mucus for moisture and to provide humidity and trap any foreign materials from the air

Mucosa in the roof of each part of the nasal cavity that carries sense of smell receptors

Extensive, superficial plexus of large, thin-walled vessels in the nasal cavity capable of considerable engorgement

PARANASAL SINUSES

SINUSITIS

BUCCOLABIAL

NASAL

EPICRANIAL

AURICULAR

ORBITAL

BUCCINATOR

Paired, air-filled cavities in bones

Inflamed mucosal tissue in the
paranasal sinus

Muscles in and around the mouth

Muscles around the nose

Muscles of the forehead, skull,
and neck

Muscles around the ears

Muscles surrounding the eyes

Thin muscle in the cheek that holds
each cheek toward the teeth

LATERAL PTERYGOID

MASSETER

MEDIAL PTERYGOID

TEMPORALIS

AURICULARS

CORRUGATOR SUPERCILIA

DEPRESSOR ANGULI ORIS

DEPRESSOR LABII INFERIORIS

A fan-shaped muscle that assists in opening the jaw

Powerful bilateral muscle that runs from each cheek to each side of the jaw and assists with closing the jaw

A thick muscle that helps close the jaw

A fan-shaped muscle that helps close the jaw

Allows movement of ears

Enables frowning, located near the eyebrow

Assists in frowning, located on each side of the chin

Helps control movement in the lower lip, located in the chin

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LEVATOR LABII SUPERIORIS ALAEQUE NASI

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MENTALIS

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NASALIS

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OCCIPITOFRONTALIS

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ORBICULARIS OCULI

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ORBICULARIS ORIS

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RISORIIUS

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Opens nostrils and lifts upper lip

Pair of muscles toward the center of the chin that helps control the lower lip

Allows flaring of the nostrils

Muscle extending from the eyebrows to the top of the skull enabling one to raise eyebrows and wrinkle the forehead

Enables closing of the eyelids

Circle of muscle around the mouth that closes or purses the lips

Muscle located between the eyebrows that enables the eyebrows to be pulled downward and assists in flaring of the nostrils

Aids in smiling, located on each side of the mouth

ZYGOMATICUS MAJOR AND MINOR

FACIAL PALSY

FACIAL PARALYSIS

BELL'S PALSY

CRANIUM (NEUROCRANIUM)

CRANIAL ROOF (CALVARIUM)

FORAMEN MAGNUM

CRANIAL BASE

Enables smiling

Weakness

Inability to move parts of the face; difficulty chewing, speaking or making facial expressions, and drooling

When swelling puts pressure on the facial nerve, Bell's palsy can cause facial weakness or paralysis on one or both sides of the face

Formed by the superior aspect of the skull; encloses and protects the brain, cerebral vasculature, and meninges

Composed of the frontal, occipital, and two parietal bones

Opening through which the spinal cord enters the skull to attach to the brain

Comprised of the frontal, sphenoid, parietal, occipital, ethmoid, and temporal bones

FACIAL SKELETON (VISCEROCRANIUM)

ZYGOMATIC

LACRIMAL

NASAL

INFERIOR NASAL CONCHAE

PALATINE

MAXILLA

VOMER

Supports the soft tissues of the face

Bone that forms the cheekbones of the face and articulates with the frontal, sphenoid, temporal, and maxilla bones

The smallest bones of the face that form part of the medial wall of the orbit

The two slender bones that are located at the bridge of the nose

Located within the nasal cavity, increases the surface area of the nasal cavity, and thus helps increase the amount of air that meets the cavity walls

Forms part of the hard palate, situated at the rear of the oral cavity

Comprises part of the upper jaw and hard palate

Forms the posterior aspect of the nasal septum

MANDIBLE

SUTURES

CORONAL SUTURE

SAGITTAL SUTURE

LAMBDOID SUTURE

NASAL FRACTURE

MAXILLARY FRACTURE

MANDIBULAR FRACTURE

Articulates with the base
of the cranium at the
temporomandibular joint (TMJ)

A form of immovable fibrous joint
found only in the skull that fuses
adjacent bones together; fusion
completes at 20 years old

Fuses the frontal bone with the
two parietal bones

Fuses both parietal bones
to each other

Fuses the occipital bone to the
two parietal bones

Most common facial fracture

Associated with high-energy
trauma; classified using the
Le Fort classification system,
ranging from 1-3

Often bilateral, occurring indirectly
at the contralateral side due to
transmitted forces and directly
at the site of trauma

ZYGOMATIC ARCH FRACTURE

PTERION

FONTANELLES

FRONTAL FONTANELLE

OCCIPITAL FONTANELLE

FORAMEN (FORAMINA, PLURAL)

FISSURE

FOSSAE

Linked with trauma to the side of the face

H-shaped junction between the frontal, temporal, parietal, and sphenoid bones; overlies the middle meningeal artery, which can be injured by fractures in this location; can result in an extradural hematoma

Membrane spaces between bones that form in newborns due to incompletely fused suture joints

Located at the junction of the sagittal sutures and coronal

Located at the junction of the lambdoid sutures and sagittal

An opening, hole, or passage in a bone; holes in the skull that serve as passageways through the bones of the skull that allow different structures of the nervous and circulatory system to enter and exit the skull

A natural cleft creating a passageway through bone, also allowing passage of cranial nerves into or out of the skull

Shallow, wide depressions

ANTERIOR CRANIAL FOSSA

FORAMEN CECUM

EMISSARY VEINS

OLFACTORY FORAMINA IN THE CRIBRIFORM PLATE

MIDDLE CRANIAL FOSSA

OPTIC CANAL

OPHTHALMIC ARTERY

OPTIC NERVE (2ND CRANIAL NERVE)

Comprised of frontal, ethmoid, and sphenoid bones

Allows the passage of the emissary vein that comes from the nasal cavity and drains into the superior sagittal sinus (part of the venous drainage system associated with the brain); most anterior of the holes in the floor of the skull; lies in the frontal bone, just anterior to the ethmoid bone

Veins that drain blood from outside the cranial cavity to inside the cranial cavity via foramina in the skull

Comprise a pathway of the first cranial nerve (CNI), the olfactory nerve, to allow for smell receptors to travel to the brain; nerve endings pass through this foramen in the ethmoid bone and then combine within the cranial cavity on top of the cribriform plate to form the olfactory bulb, the olfactory tract then relays the information to the brain

Comprised of sphenoid, temporal, and parietal bones

Allows passage of the ophthalmic artery and the second cranial nerve (CNII), the optic nerve, to travel to and from the eye; lies within the lesser wing of the sphenoid just anterior and medial to the anterior clinoid process of the sphenoid bone

Supplies blood to the retina of the eye

Sends visual information from the eye to the brain for interpretation; contains a dural sheath

OCULOMOTOR NERVE (3RD CRANIAL NERVE)

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TROCHLEAR NERVE (4TH CRANIAL NERVE)

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ABDUCENT NERVE (6TH CRANIAL NERVE)

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FORAMEN ROTUNDUM

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FORAMEN OVALE

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FORAMEN SPINOSUM

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FORAMEN LACERUM

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CAROTID CANAL

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Provides nervous input to four out of the six muscles that move the eyeball

Provides nervous input to the other two muscles that move the eyeball

Provides nervous input to the other two muscles that move the eyeball

Allows the second division of the trigeminal nerve (CNV2), the maxillary nerve, to enter the skull carrying sensory information coming from areas of the face associated with the region under the eyes, the upper lip, and the skin overlying the maxilla bone; small round hole lying posterior to the optic canal and the superior orbital fissure

Allows passage of the final division of the trigeminal nerve (CNV3), the mandibular nerve; oval-shaped hole lying posterior and lateral to the foramen rotundum

Allows the middle meningeal artery to enter the skull, supplying blood to the dura mater that surrounds the brain; smallest and most lateral foramen; located posterior and lateral to the foramen ovale

Allows passage of the seventh cranial nerve (CNVII), the facial nerve, providing innervation to the glands located about the level of the mouth; located posterior and medial to the foramen ovale; may be filled with cartilage

Allows the internal carotid artery to enter the skull; lies immediately posterior and lateral to the foramen lacerum

INTERNAL CAROTID ARTERY

POSTERIOR CRANIAL FOSSA

INTERNAL ACOUSTIC MEATUS

FACIAL NERVE (7TH CRANIAL NERVE)

VESTIBULOCOCHLEAR NERVE

JUGULAR FORAMENNERVE (9TH CRANIAL NERVE)

GLOSSOPHARYNGEAL NERVE (9TH CRANIAL NERVE)

VAGUS NERVE (10TH CRANIAL NERVE)

One of the major blood supplies to the brain; also supplies blood to the eye, the contents of the orbit, and the forehead

Comprised mostly of occipital and temporal bones (and to a lesser extent, the sphenoid and parietal bones as well)

One end of the passageway that houses the hearing and balance apparatus (other end is the external acoustic meatus, or the outer hole of the ear)

Has a wide range of functions, including providing nervous input to the muscles of facial expression and taste sensation from the tongue

Brings sensory information from the cochlea (part of the hearing apparatus) and from the vestibular canal system contained within the ear

Allows passage for the 9th (CNIX, glossopharyngeal), 10th (CNX, vagus), and 11th (CNXI, spinal accessory) cranial nerves; more consistent in appearance to a fissure than a foramen

Innervates structures of tongue and pharynx

Innervates many of the organs of the abdominal cavity

SPINAL ACCESSORY NERVE (11TH CRANIAL NERVE)

INTERNAL JUGULAR VEIN

HYPOGLOSSAL CANAL

HYPOGLOSSAL NERVE

FORAMEN MAGNUM

TRIGEMINAL NERVE

OPHTHALMIC NERVE (1ST DIVISION)

MAXILLARY NERVE (2ND DIVISION)

Cranial nerve that arises from the upper segments of the cervical portion of the spinal cord, ascends into the skull via the foramen magnum and then back out through the jugular foramen, supplying the sternocleidomastoid muscle in the neck and the trapezius muscle in the neck

Drains much of the blood from the head and parts of the neck down into the brachiocephalic vein and to the heart via the superior vena cava

Allows passage of the 12th cranial nerve (CNXII), the hypoglossal nerve; closest to foramen magnum

Provides innervation to all but one of the muscles of the tongue

Allows the lower end of the brainstem and upper end of the spinal cord to pass through and allows vertebral arteries to enter the skull; arteries travel up each side of the spinal column and enter the skull to provide another important supply of blood to the brain

The largest of the 12 pairs; it is of particular importance in dentistry since it provides the nerve supply to the jaws and the teeth

Supplies sensation to the eyes, the tear-producing glands, the mucous lining of the nose, the eyelids, the eyebrows, and the forehead

Supplies sensation to the central part of the face, including the maxillary bone, all the maxillary teeth, the soft tissues of the hard palate, and the soft tissues surrounding the teeth

MANDIBULAR NERVE (3RD DIVISION)

ARTERIAL BLOOD

INTERNAL CAROTID

EXTERNAL CAROTID

LINGUAL ARTERY

FACIAL ARTERY

MAXILLARY ARTERY

VENOUS BLOOD

Supplies sensation to the mandible
and the teeth; it contains
somatic motor fibers as well as
sensory nerve fibers

Carries blood from the heart to the
tissues of the body

Supplies the tissues of the cranium
and the eyes

Supplies the exterior of the head,
face, and much of the neck;
has eight branches

Supplies the tongue

Supplies the soft tissues of the side
of the face

Supplies the bones of the jaws, the
teeth, and their supporting tissues

Carries blood from the tissues of the
body back to the heart

CAVERNOUS SINUS

Large channel of venous blood
creating a “sinus” cavity bordered by
the sphenoid bone and the temporal
bone of the skull