How many bones make up the skull?

22 bones – 8 cranial and 14 facial bones.

What is the function of cranial bones?

Protect the brain and provide attachment for head muscles.

Which bone forms the forehead and roof of the orbits?

Frontal bone.

Which paired bones form the top and sides of the cranium?

Parietal bones.

Which bone forms the back of the skull?

Occipital bone – contains the foramen magnum for spinal cord entry.

Which bones contain the ear structures?

Temporal bones – house the external auditory meatus and mastoid process.

Which bone forms part of the floor of the skull and supports the brain?

Sphenoid bone – key landmark with multiple foramina.

Which bone forms part of the nasal cavity and the roof of the mouth?

Ethmoid bone.

Which bone forms the upper jaw and supports upper teeth?

Maxilla – contains alveolar processes and maxillary sinuses.

Which bone forms the lower jaw and supports lower teeth?

Mandible – the only movable bone in the skull.

Which bone forms the cheek prominence?

Zygomatic bone – connects maxilla to temporal bone.

What is the purpose of the alveolar process?

Holds the tooth sockets (alveoli) for both jaws.

What is a suture in the skull?

An immovable fibrous joint connecting cranial bones.

What is the foramen magnum?

Large opening in occipital bone allowing spinal cord passage.

Which foramen transmits the inferior alveolar nerve?

Mandibular foramen – on the inner mandible surface.

What type of joint is the temporomandibular joint (TMJ)?

Synovial joint – hinge and gliding movement.

Name the articulating bones of the TMJ.

Mandibular condyle and temporal bone (mandibular fossa).

What is the articular disc in the TMJ?

Fibrocartilage pad that cushions and allows smooth movement.

What are the main movements of the TMJ?

Opening, closing, protrusion, retraction, lateral movement.

Which muscle controls forward movement of the mandible?

Lateral pterygoid – pulls the condyle forward during mouth opening.

Name the four muscles of mastication.

Masseter, Temporalis, Medial pterygoid, Lateral pterygoid.

Which muscles close the mouth?

Masseter, Temporalis, Medial pterygoid.

Which muscle opens the mouth?

Lateral pterygoid.

Which muscle assists side-to-side movement of the mandible?

Medial and Lateral pterygoid.

Which muscle elevates the mandible and provides bite force?

Masseter – main elevator of the mandible.

Which muscle retracts the mandible after protrusion?

Posterior fibres of Temporalis.

What is the function of the temporalis muscle?

Elevates and retracts the mandible.

Which muscle lies deep to the masseter?

Medial pterygoid – assists mandible elevation.

What is the nerve supply to the muscles of mastication?

Mandibular division of the trigeminal nerve (V3).

Why is knowledge of these muscles important in dentistry?

Helps locate injection sites and understand jaw movement.

Which muscle closes and puckers the lips?

Orbicularis oris – surrounds the mouth opening.

Which muscle forms the cheek wall?

Buccinator – aids chewing by keeping food on the teeth.

Which muscle raises the upper lip to expose teeth?

Levator labii superioris.

Which muscle lowers the bottom lip?

Depressor labii inferioris.

Which muscle pulls the corners of the mouth downwards?

Depressor anguli oris – creates frowning expression.

Which muscle elevates the corners of the mouth (smiling)?

Zygomaticus major.

Which muscle helps raise the eyebrows?

Frontalis – part of the occipitofrontalis muscle.

What nerve supplies the muscles of facial expression?

Facial nerve (Cranial Nerve VII).

Why is the facial nerve clinically important?

It controls expressions and can be affected by local anaesthetic or palsy.

Which muscle aids in closing the eyes tightly?

Orbicularis oculi.

How many pairs of cranial nerves are there?

Twelve (12) – numbered I–XII.

Which cranial nerve supplies the sense of smell?

Olfactory nerve (CN I).

Which cranial nerve controls vision?

Optic nerve (CN II).

Which cranial nerve supplies sensation to the teeth and jaws?

Trigeminal nerve (CN V).

Name the three branches of the trigeminal nerve.

Ophthalmic (V1), Maxillary (V2), Mandibular (V3).

Which branch of the trigeminal nerve supplies the upper teeth?

Maxillary branch (V2).

Which branch supplies the lower teeth?

Mandibular branch (V3) via inferior alveolar nerve.

Which cranial nerve controls facial expression?

Facial nerve (CN VII).

Which cranial nerve controls tongue movement?

Hypoglossal nerve (CN XII).

Which cranial nerve stimulates saliva production in the parotid gland?

Glossopharyngeal nerve (CN IX).

Why is the trigeminal nerve important in dental anaesthesia?

Carries sensory fibres for dental pain and local anaesthetic target.

What may occur if the facial nerve is accidentally anaesthetised?

Temporary facial paralysis on the affected side.

Which cranial nerve provides taste sensation to the anterior two-thirds of the tongue?

Facial nerve (via chorda tympani branch).

Which nerve supplies taste to the posterior one-third of the tongue?

Glossopharyngeal nerve (CN IX).

Which artery supplies oxygenated blood to the head and neck?

External carotid artery.

Which branch of the external carotid supplies the teeth and jaws?

Maxillary artery.

Which artery supplies the tongue?

Lingual artery.

Which vein drains the facial region?

Facial vein → internal jugular vein.

Which venous plexus drains the upper and lower jaws?

Pterygoid venous plexus.

Why must dental nurses understand facial venous drainage?

Because infections can spread to the cavernous sinus via facial veins.

How many major pairs of salivary glands are there?

Three pairs – parotid, submandibular, and sublingual.

Which is the largest salivary gland?

Parotid gland – produces watery, amylase-rich saliva.

Through which duct does the parotid gland drain?

Stensen’s duct – opens opposite the upper second molar.

Which gland produces mixed serous and mucous saliva?

Submandibular gland.

Where does the submandibular duct open?

Under the tongue at the sublingual caruncle.

Which gland produces mainly mucous saliva?

Sublingual gland.

Through which ducts does the sublingual gland drain?

Multiple small ducts along the floor of the mouth.

What is the function of saliva in oral health?

Lubrication, buffering, antimicrobial action, and early digestion.

Which nerve stimulates the parotid gland?

Glossopharyngeal nerve (CN IX).

Which nerves stimulate the submandibular and sublingual glands?

Facial nerve (CN VII) – via chorda tympani branch.

What happens if salivary flow is reduced (xerostomia)?

Increased risk of caries, halitosis, and oral infection.

What are the main groups of lymph nodes in the head and neck?

Submental, submandibular, deep cervical, parotid, and occipital.

Which lymph nodes drain the tip of the tongue and lower lip?

Submental nodes.

Which lymph nodes drain most of the oral cavity?

Submandibular nodes.

Where do all lymph nodes of the head and neck eventually drain?

Deep cervical nodes → thoracic duct / right lymphatic duct.

Why is lymphatic drainage important in dental care?

Tracks spread of oral infections and cancer metastasis.

Which vessel carries lymph back into the bloodstream?

Thoracic duct (left) and right lymphatic duct.

What condition may result from blocked lymphatic drainage?

Lymphoedema – swelling due to fluid accumulation.

Which anatomical space can dental infections spread through to the neck?

Submandibular / sublingual fascial spaces.

Which nerve is most often anaesthetised for lower dental procedures?

Inferior alveolar nerve.

What landmark is used for an inferior alveolar nerve block?

Pterygomandibular space – near mandibular foramen.

What could cause pain in the TMJ during wide opening?

Strain of capsule or displacement of articular disc.

Which artery is at risk during an inferior alveolar injection?

Inferior alveolar artery (branch of maxillary artery).

Why must dental nurses understand head and neck anatomy?

To assist safely with anaesthesia, radiography, and oral surgery procedures.