



A Brief Note on Dental Anatomy

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Description

Dental anatomy is a branch of anatomy that studies the architecture of human teeth. It is responsible for the development, appearance, and classification of teeth. (The function of teeth as they come into touch with one another is covered by dental occlusion.) Tooth production occurs before birth, and the morphology of the teeth is determined throughout this time. Dental anatomy is a taxonomic discipline that deals with the naming of teeth and the structures that make them up, with this information being useful in dental therapy.

There are usually 20 primary ("baby") teeth and 32 permanent teeth, with the last four being third molars or "wisdom teeth," which may or may not emerge. Ten main teeth are normally found in the maxilla (upper jaw) and ten in the mandible (lower jaw) (lower jaw). There are 16 permanent teeth in the maxilla and 16 permanent teeth in the mandible. The majority of the teeth have distinguishing characteristics.

The intricate process through which teeth emerge from embryonic cells, grow, and erupt into the mouth is known as tooth development. Nonhuman tooth development is basically the same as human tooth development, despite the fact that many different species have teeth. Enamel, dentin, cementum, and the periodontium must all form during proper phases of foetal development for human teeth to have a healthy oral environment. Primary (baby) teeth appear between the sixth and eighth weeks of pregnancy, while permanent teeth appear around the twentieth week. Teeth will not develop at all if they do not begin to develop at or near these timeframes.

The processes that trigger tooth development have been the subject of a great deal of investigation. It is widely believed that a component found in the tissues of the first branchial arch is required for tooth development. The enamel organ, the dental papilla, and the dental follicle are three elements of the tooth bud (also known as the tooth germ), which is an aggregation of cells that eventually forms a tooth. The outer enamel epithelium, inner enamel epithelium, stellate reticulum, and stratum intermedium make up the enamel organ. Ameloblasts, which generate enamel and the decreased enamel epithelium, are produced by these cells. The Hertwig's Epithelial root

sheath, which dictates the root shape of the tooth, is formed by cervical loop cells growing into deeper tissues. Cells that mature into odontoblasts, or dentin-forming cells, are found in the dental papilla.

The crown shape of a tooth is also determined by the junction between the dental papilla and the inner enamel epithelium. Cementoblasts, osteoblasts, and fibroblasts are three essential entities that arise from the dental follicle. Cementoblasts are the cells that make up a tooth's cementum. The alveolar bone around the roots of teeth is formed by osteoblasts. Periodontal ligaments, which attach teeth to the alveolar bone *via* cementum, are formed by fibroblasts

The bud stage, the cap, the bell, and eventually maturation are the phases of tooth development that are often used. The staging of tooth development is an attempt to categorise changes that occur on a time scale; it is often difficult to determine which stage a developing tooth should be allocated to. The appearance of different histologic sections of the same developing tooth, which can appear to be at different stages, further complicates this judgement.

Teeth are classified according to their sets, arch, class, type, and side. Primary ("baby") teeth and permanent ("adult") teeth are the two types of teeth. "Deciduous" is frequently substituted for "primary," and "adult" for "permanent." The term "succedaneous" refers to permanent dentition teeth that replace primary teeth (incisors, canines, and premolars of the permanent dentition). These teeth would be referred to as a group by succedaneous. Furthermore, the name is determined by the arch in which the tooth is placed.

The upper jaw's teeth are referred to as "maxillary," while the lower jaw's teeth are referred to as "mandibular." The incisors, canines, premolars, and molars are the four types of teeth. Premolars are exclusively found in permanent teeth; deciduous teeth lack premolars. Teeth can be divided into different features within each class. Central and lateral incisors are two types of incisors. There are first and second premolars, as well as first, second, and third molars, among premolars and molars. The name may also include the side of the mouth where a tooth is found. "Permanent maxillary left lateral incisor," for example, is a specific term for a tooth.