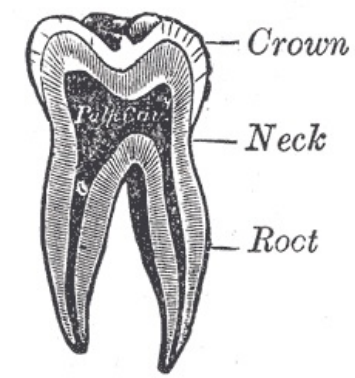
Molars

The first top Molar

The largest of the three molars (crown width 10.5 mm, root length 12.5 mm, tooth length 20.5 mm). It belongs to the class I pillar according to Voldrich.



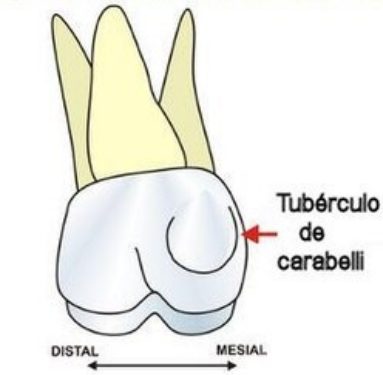
Schema chair

The **buccal surface** of the dental crown is trapezoidal, narrower in the area of the tooth neck. It is slightly arched, divided by a fissure, which divides the whole surface into two equally sized parts - mesial and distal.

The **palatal surface** is slightly arched, also trapezoidal. The fissure, which divides the two palatine bumps of the masticatory surface, passes onto the palatine plateau, which it divides into a smaller distal and a larger mesial one.

The **approximal plates** are square in shape. They end in the enamel mound of the occlusal plateau. The mesial surface is higher, flat, slightly concave at the neck of the tooth. The approximal distal surface is lower and shorter.

The **occlusal surface** is diamond-shaped with four bumps separated by three fissures. The mesiobuccal tubercle is the largest, together with the mesiopalatine tubercle, followed by the distobuccal and the smallest distopalatine tubercle. In about 17% of cases, a fifth interpalatine bump called tuberculum anomale Carabelli may form.



Tuberculum anomale Carabelli

Roots' The first upper molar has three roots, two are located buccally, one palatally. The palatine root is the largest, straight, conical in shape. It is circular in transverse section. The buccal roots are oval in cross-section. The roots of the upper molar often extend into the base of the maxillary sinus.

The **buccal cavity** is spacious, tapering in the region of the neck and continuing into the roots as root canals. The palatine canal is straight and widest. The buccal canals are narrower. A bifurcation may occur in the interbuccal canal.

Second top Molar

Similar in shape to first upper molar, but smaller (crown width 9.5mm, root length 11.5mm, tooth length 18.5mm). It belongs to the Voldrich class I pillar.

The **occlusal surface** is usually tetrahedral in shape, differing only in size from the first upper molar. However, a three-peaked form is often found. The palatine tubercle forms only one tubercle on the occlusal plate and is the largest of all the tubercles. The palatine surface is very narrow and convex. The distopalatine bump disappears.

The **roots** are usually three, placed as in the first upper molar (two buccally, one palatally). However, they tend to be closer together. Sometimes they may unite to form a single root. They are shorter and less curved.

The **pith cavity** is cylindrical, mesiodistally sheathed.

Root canals' tend to be three narrow ones. The interbuccal canal is poorly accessible.

Third Upper Molar

Otherwise called wisdom tooth (*dens sapientiae*), crown width 8.5 mm, root length 11 mm, tooth length 17.5 mm. It differs from other Molars in size. The shape is individually variable. Often not established at all. The classification of pillar teeth according to Voldrich is individual and depends on the morphology of the particular tooth of the individual.

The **crown** may be of both four-crowned and three-crowned shape, and the multi-crowned type also occurs.

Roots are also highly variable in number, shape and arrangement.

First lower Molar

First Lower Molar is the largest tooth on the mandible (crown width 11 mm, root length 14 mm, tooth length 21.5 mm).

It is a pillar class I tooth according to Voldrich. The first lower molar is mesiodistally elongated, the shape is given by the bumps of the masticatory plate.

The buccal surface of the dental crown: has the shape of a mesiodistally elongated trapezoid. It is very convex, the central bump protruding buccally. The fissure between the mesiobuccal and median tubercle is deep to the buccal plate, where it often ends in a blind hole (*foramen caecum*). It separates the mesial and distal parts of the buccal plate. The buccal area is larger and higher than the lingual area and is tapered towards the neck of the tooth.

Lingual surface
: convex and shorter than the buccal surface.

Mesial approximal
: the surface is flat. It tends to be higher than the distal surface.

Distal approximal surface
: is convex.

Occlusal surface
: has a five-pronged arrangement. The interdistally running fissure divides the masticatory surface into two unequal parts - the lingual part has two bumps, the buccal part three. The lingual bumps are equal in size, unlike the buccal bumps, where the largest bump is interbuccal.

Roots
: there are two and they are placed in the dental arch one mesially and the other distally. They tend to be massive, the mesial being broader, the mesiodistal being sheathed. They slope distally.

Gingival cavity
: has a cylindrical shape. It is extensive. It projects into three root canals.

Second lower Molar

The second Lower Molar is the largest tooth on the mandible (crown width 11 mm, root length 14 mm, tooth length 21.5 mm).

It is a pillar class I tooth according to Voldrich. The first lower molar is mesiodistally elongated, the shape is given by the bumps of the masticatory plate.

The buccal surface of the dental crown: has the shape of a mesiodistally elongated trapezoid. It is very convex, the central bump protruding buccally. The fissure between the mesiobuccal and median tubercle is deep to the buccal plate, where it often ends in a blind hole (*foramen caecum*). It separates the mesial and distal parts of the buccal plate. The buccal area is larger and higher than the lingual area and is tapered towards the neck of the tooth.

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Roots
: there are two and they are placed in the dental arch one mesially and the other distally. They tend to be massive, the mesial being broader, the mesiodistal being sheathed. They slope distally.

Gingival cavity
: has a cylindrical shape. It is extensive. It projects into three root canals.

Third lower Molar

Lower wisdom tooth, tooth width 10 mm, root length 11 mm, tooth length 18 mm

Unsectioned right lower third molar (OPG image)

It is very individual in the shape of the crown, and the number, shape and arrangement of the roots. The most common variant is the four- to five-crested variety. Variation is also present in the classification of pillar teeth according to Voldrich.

The **crown** may compare in shape to the crown of the second lower molar.

The **roots** are placed either separately or may be fused. There are a varying number of roots.

Due to the lack of space in the lower jaw, or also the inclination of the tooth germ, the eruption of the lower wisdom tooth very often causes a difficulty referred to as dentitio difficilis.

Links

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