

# Mandibular Anesthesia

*Mandibular anesthesia* is the most frequently used of all the seductive techniques of *local anesthesia*. The percentage of failure is quite high (15-25%) - positive aspirations (10-15%).<sup>[1]</sup>

## Extent of Anesthesia

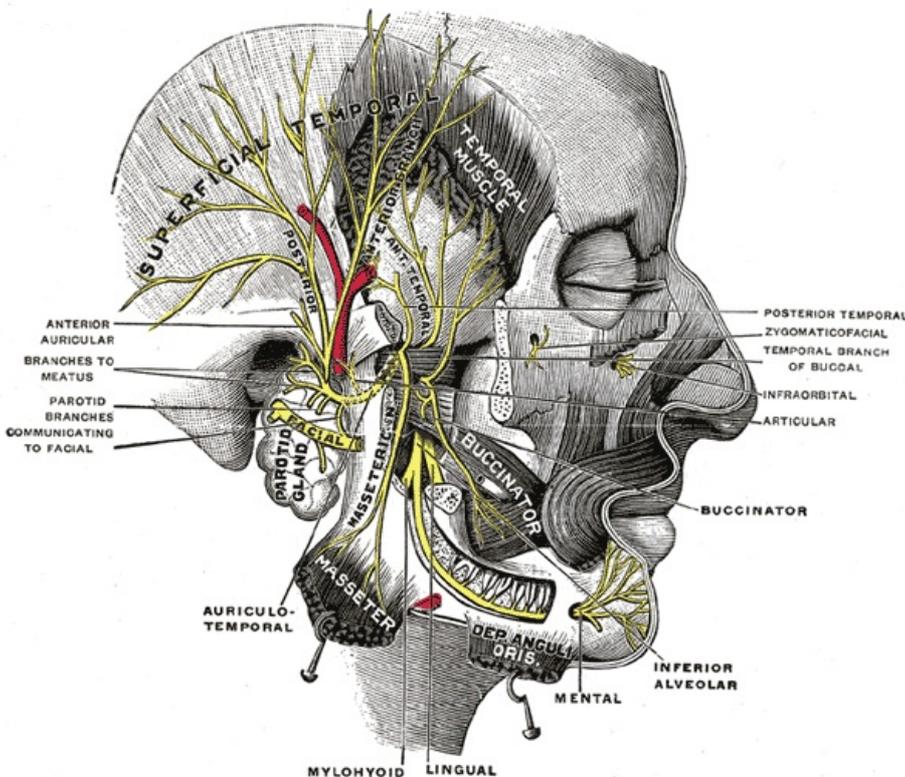
**N. alveolaris inferior, n. lingualis.** Half of the mandible and the adjacent vestibular mucosa, except for the vestibular mucosa of the molar region.

## Execution

### Direct technique

Description for the right half of the jaw:

- The patient leans back and relaxes the mouth.
- I will place the index finger of my left hand on the occlusal plane of the teeth of the right half of the mandible, following the curvature of the arch and pointing distally. The finger determines the height of the injection.
- The injection site is in a plane about **1 cm above the occlusal surfaces of the lower molars'** (by placing the index finger on the chewing surfaces of the molars). With the tip of my finger, I simultaneously feel the front edge of the branch of the mandible, namely its outer (linea obliqua) or inner edge (crista temporalis). Medially from the crista temporalis, the ligamentum pterygomandibulare runs upwards and, when the mouth is open, lifts the mucous membrane in the eyelid, where the indentation lies.
- I direct the syringe with the needle from the area of the premolars of the opposite side (from the corner of the mouth of the opposite side), the needle penetrates the mucous membrane in the socket and touches the surface of the bone in the sulcus coli mandibulae at a depth of about 2 cm. (The depth of the injection is determined by contact with the bone, i.e. 20-25 mm.<sup>[1]</sup>) I aspirate and apply 1-1.5 ml of anesthetic with a syringe for 45-60 s. Now we applied just above the foramen mandibulae on the inferior alveolar nerve.
- Pull the needle up approximately 1 cm, aspirate and deposit 0.1-0.3 ml of anesthetic on the lingual nerve.



### Indirect technique

This technique is used only '*exceptionally*, as it is more traumatizing and more painful than the direct method. We use it if the direct method fails.

#### Method

- Locating the injection site is identical to the direct technique. The injection is made from the canine region of the contralateral side (ie at a smaller angle). After reaching the bone, the position of the syringe is adjusted tangentially and it is introduced deeper in contact with the bone. As soon as the contact with the bone

disappears, we change the direction of the syringe again from the opposite side (direction to the fossa colli mandibulae), aspirate, deposit. As with the direct technique, we also apply LA to the lingual nerve.

## Onset of effect

- Start in 3-5 minutes, full range in 10-15 minutes. <sup>[1]</sup>

## Contraindications

- Acute *inflammation* at the injection site.
- Very young children, mentally disabled who are at risk of biting soft tissues during the action of LA.

## Complications

- pain (periosteal irritation/perforation);
- paresis nervus facialis;
- hematoma (pterygoid plexus);
- difficult opening of the mouth (result of swelling or hematoma).

## Links

### Related Articles

Seductive anesthesia in HČ:

- Anesthesia for foramen incisivum
- Anesthesia at tuber maxillae
- anesthesia for foramen palatinum majus
- Anesthesia at the infraorbital foramen

Seductive anesthesia in DČ:

- Anesthesia at the foramen mentale

### References

1. ŠCHIGEL, Vladimír. *Local anesthesia in dental practice*. 1. edition. Prague : Quintessenz, spol. s.r.o, 0000. 0 pp. ISBN 80-903181-4-2.