

# **Oral and maxillofacial surgery II.**

Anaesthesia  
Suture

# Pain control - anaesthesia

## Indications

- Surgical treatment

Also for:

Preparation of cavities

Preparation for crowns

Endodontic treatment

# Principles of anaesthesia

- Blocking of transfer of excitation on nerve fibers

Electric potential of nerve fibers

Excitation goes through depolarization – repolarization

*Perception of pain is stopped*

# Anaesthesia

- General anaesthesia
- Analgesia (inhalation, sedation)
- Hypnosis
- Local anaesthesia

# Drugs

- Articain 4% with epinephrine 1: 200 000
- Articain 4% with epinephrin 1:100 000
- Mepivacain 3%plain
- Prilocaine 4% with epinephrine 1:200 000
- Prilocaine plain
- Lidocain spray 10%
- Xylocain spray 10%

# Benefits of local anaesthesia

- Comfort for the patient
- Haemostasis (addtion of epinephrin – hormone of suprarenal gland – arteficial)
- Operator efficiency

# Anaesthesia

Topical (spray,liquid) applied on mucosa

By injection

- Infiltration
- Nerve block
- Intraligamentar
- Intrapulpal anaesthesia

# Contraindications

- Allergy
- Serious systemic diseases (blood circulation)
- Antithrombotic therapy , coagulopathy –  
nerve blocked anaesthesia



# Infiltration

- The drug is delivered by infiltration of soft tissues using syringe and needle.

# Infiltration anaesthesia

- Suitable for - indications

- simple extractions in maxilla, mandibular incisors, canines
- soft tissue surgery

# Infiltration

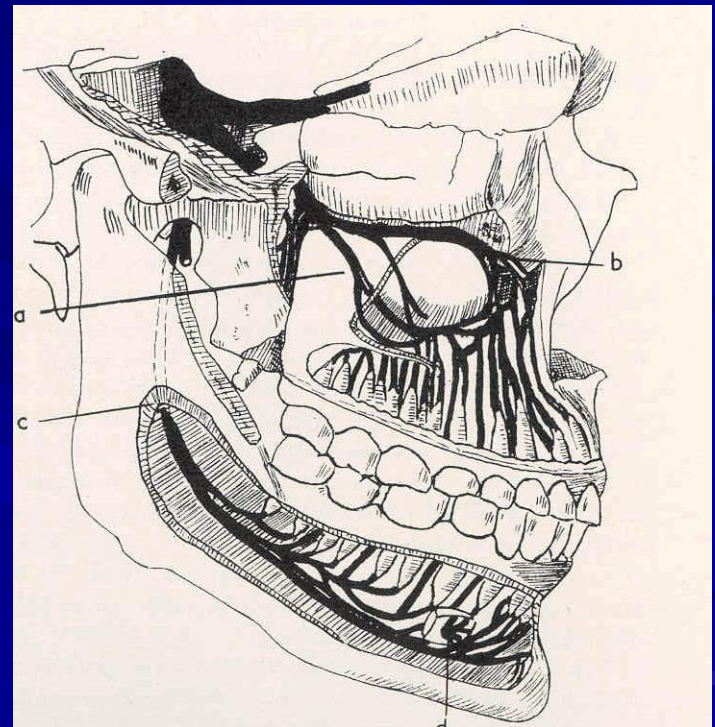
- Syringe
- Short needle

Raise lip or cheek

The puncture is situated into mucosa appr. 1cm from fornix vestibuli. Do not touch periosteum.

# Nerve block anaesthesia

- Foramen mandibulare
- Foramen mentale
- Foramen palatinum majus
- Foramen incisivum
- Foramen infraorbitale
- Tuber maxillae



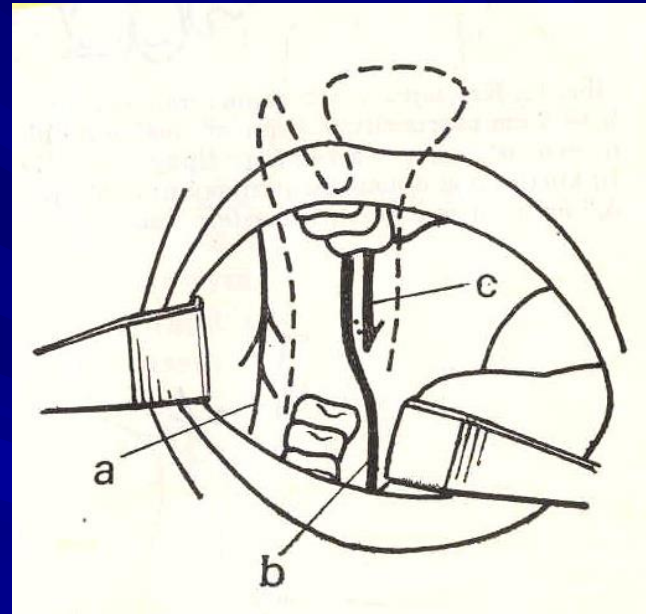
# Nerve block anaesthesia

N. alveolaris inferior

Foramen mandibulare



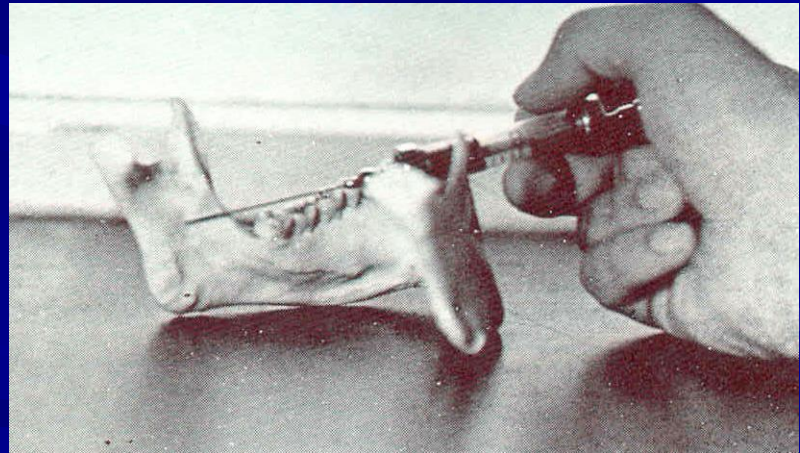
**N. Alveolaris inferior**  
**N. lingualis**



# Nerve block anaesthesia

Nervus alveolaris inferior

In sulcus colli mandibulae



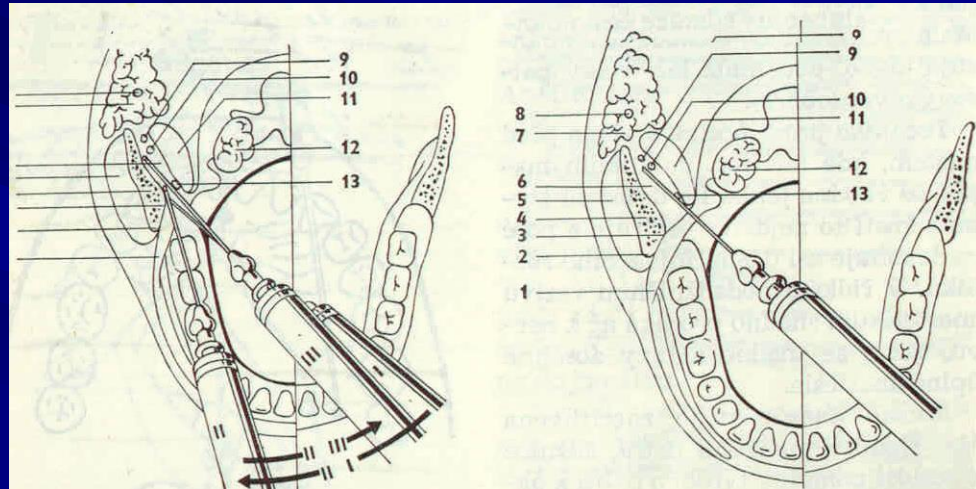


# Nerve block anaesthesia

## N. alveolaris inferior

Indirect

Direct

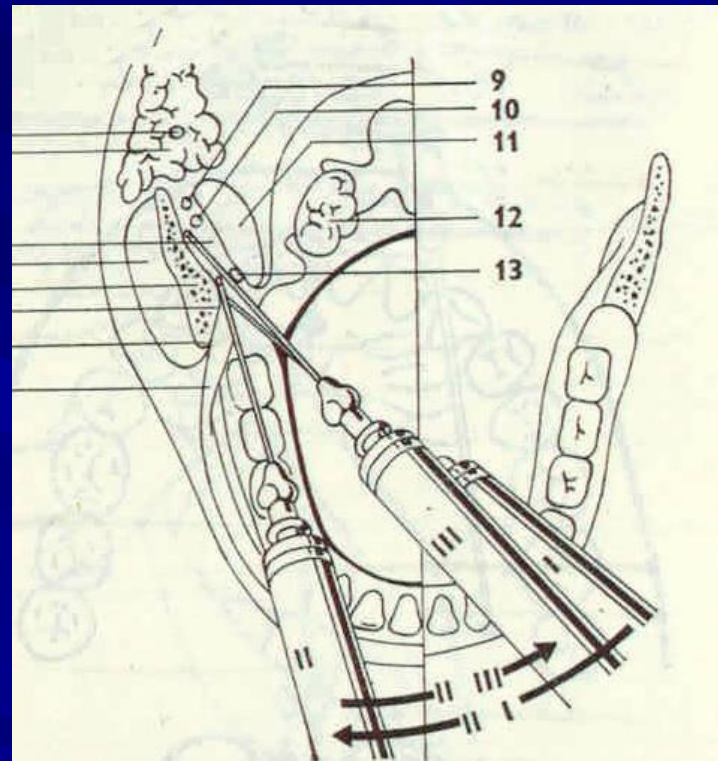


# Nerve block anaesthesia

## N. alveolaris inferior

### Indirect

Put the forefinger  
on the occlusal surface  
Rotate inside (nail inside)  
1 cm up occlusal surface  
the puncture is situated



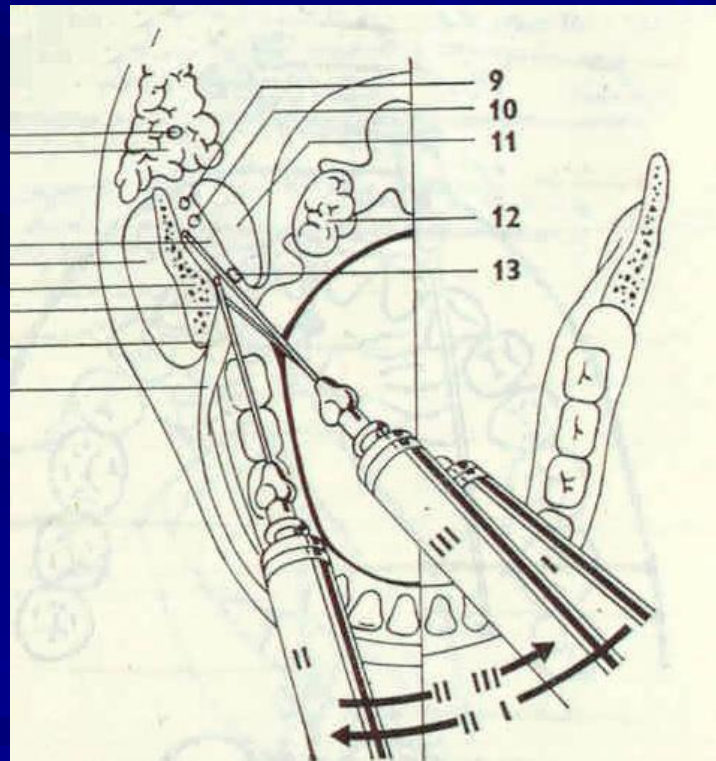


# Nerve block anaesthesia

## N. alveolaris inferior

### Indirect

1. The needle goes behind the crista temporalis, the syringe on the opposite canine

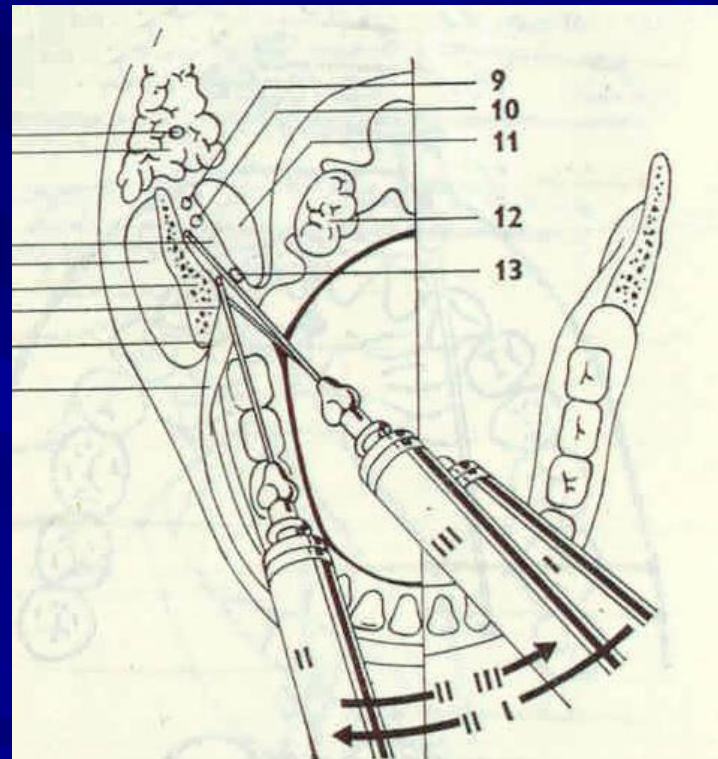


# Nerve block anaesthesia

## N. alveolaris inferior

### Indirect

- 2. The needle goes deeper in the contact with the bone
- The syringe goes mesial

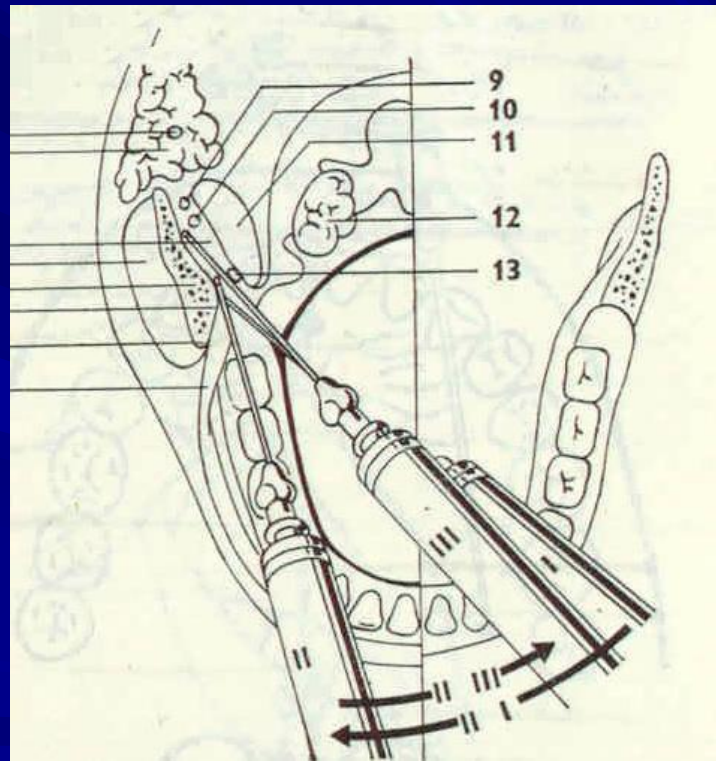


# Nerve block anaesthesia

## N. alveolaris inferior

### Indirect

3. The contact with bone  
Is lost, the syringe goes back

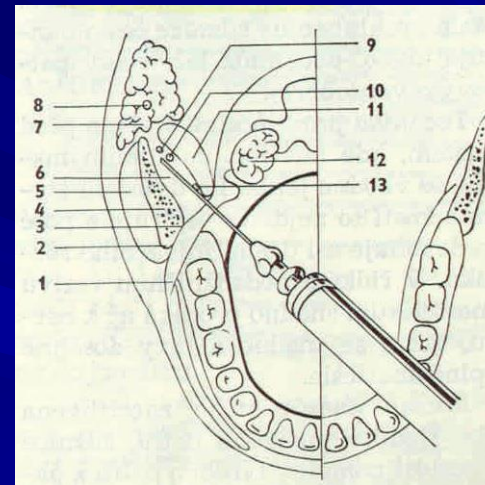


# Nerve block anaesthesia

## N. alveolaris inferior

### Direct

Put the forefinger  
on the occlusal surface  
Rotate inside (nail inside)



1,5 cm deep

# Nerve block anaesthesia

## N. alveolaris inferior

Area blocked

Molars

Premolars

Tongue



# Nerve block anaesthesia

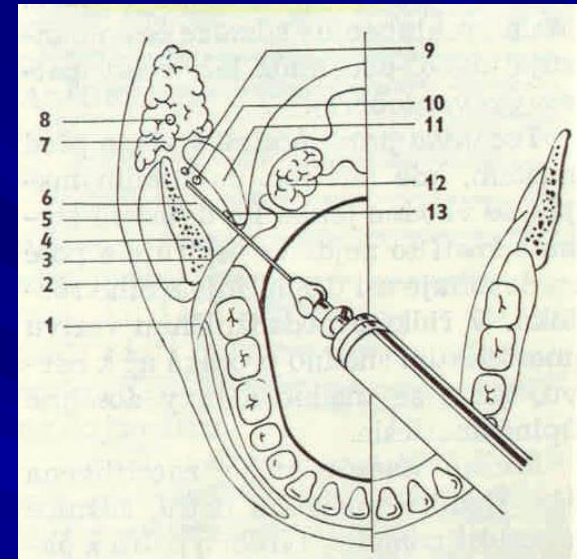
## N. alveolaris inferior

### Direct

- The puncture at the same place
- The syringe on opposite premolars
- The puncture goes into the small pink depression medial from crista temporalis and lateral from plica prerygomandibularis

1,5 cm deep

Molars, premolars, mucosa, skin, bone



# Nerve block anaesthesia

## N. mentalis

### F. mentale

The puncture is situated behind  
the distal surface of 2nd premolar

The needle goes between  
roots of premolars



# Nerve block anaesthesia

## N. mentalis

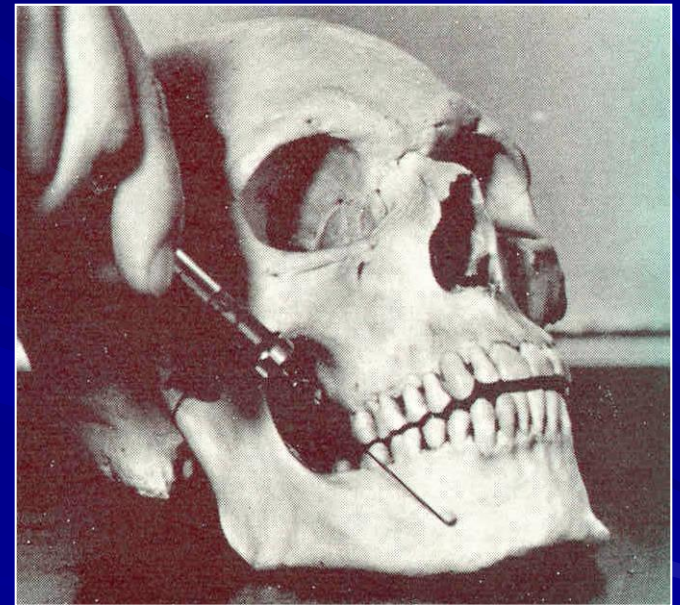
### F. mentale

The puncture is situated behind the distal surface of 2nd premolar

The needle goes between roots of premolars,

From up to down

Forward and mesial



Premolars and canine, mucosa, skin.



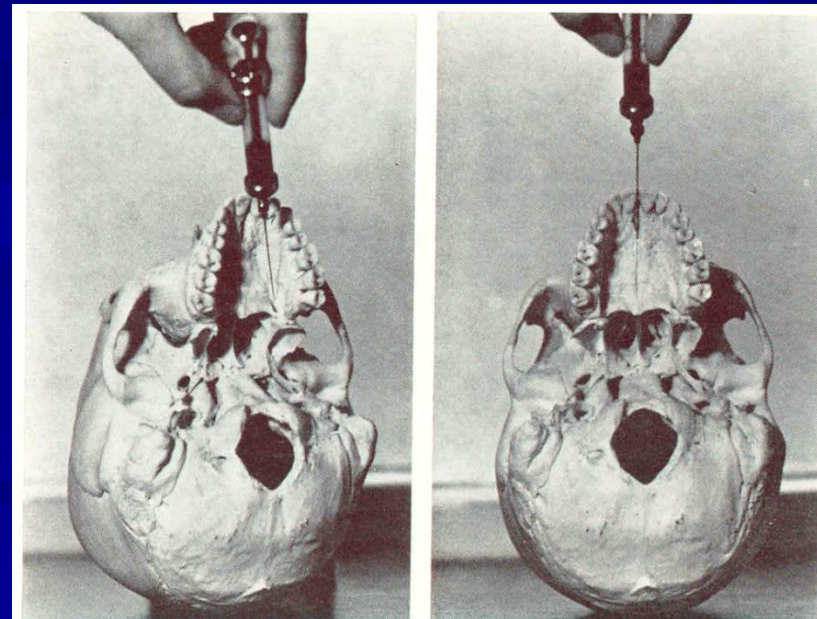
# Nerve block anaesthesia

Foramen palatinum majus

Distal surface of 1.st molar

The puncture is  
0,5 – 1 cm before

Half of palate



# Nerve block anaesthesia

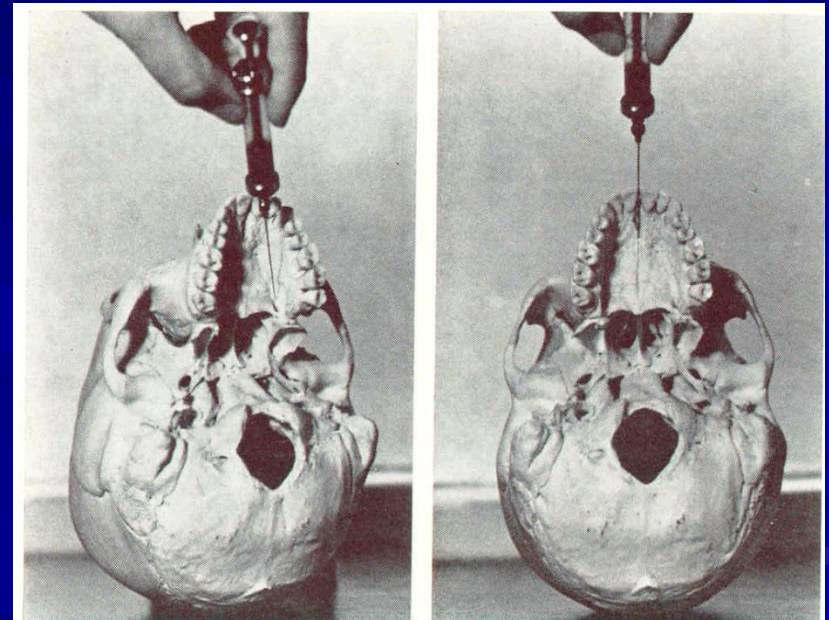
Foramen incisivum

Nervus incisivus

Papilla incisiva

Next to papilla,  
mesial direction

*Triangular area  
behind incisors*



# Anaesthesia on f. infraorbitale

- Find the margo infraorbitalis
- Raise the lip
- The puncture is situated between canine and 1st premolar
- The needle goes to the region (appr 1 cm below margo infraorbitalis)

# Anaesthesia on tuber maxillae

- The drug is delivered on tuber maxillae
- The puncture is situated behind 2nd molar (distal surface), goes behind and upper around tuber maxillae.

# Intraligamentar

- Special syringe (pen or gun)
- The needle is introduced into periodontal space – few drops on anaesthetic

Indication: single extraction, preparation, pulp exstirpation





# Intrapulpal

- Exstirpation of the pulp – additional step.

# Anaesthesia - complications

- Bleeding
- Breakage of needle
- Haematoma
- Allergy (swelling, collapse)



Patient's history is needed !!!

# Suture

Suture material

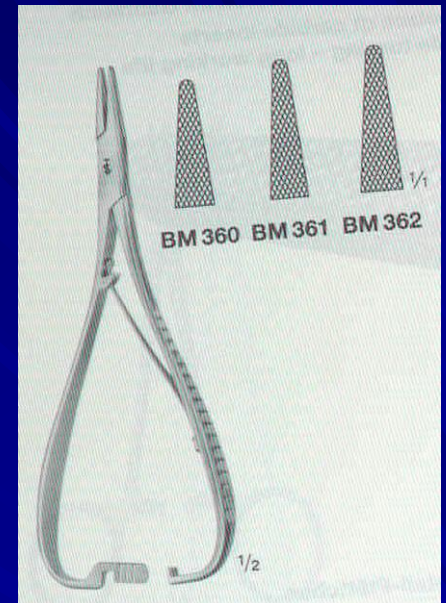
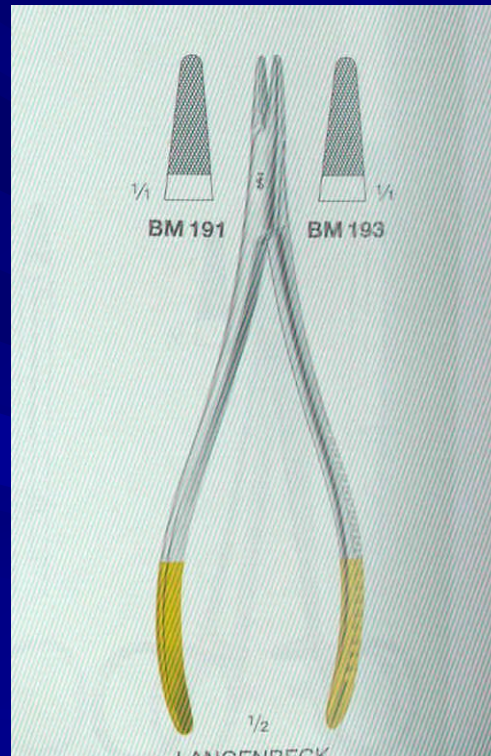
Silk, nylon

Needles

- bent, rounded
- straight

Needle holders

- autofix
- without fixation



# Suture

Suture material

Silk, nylon

Needles

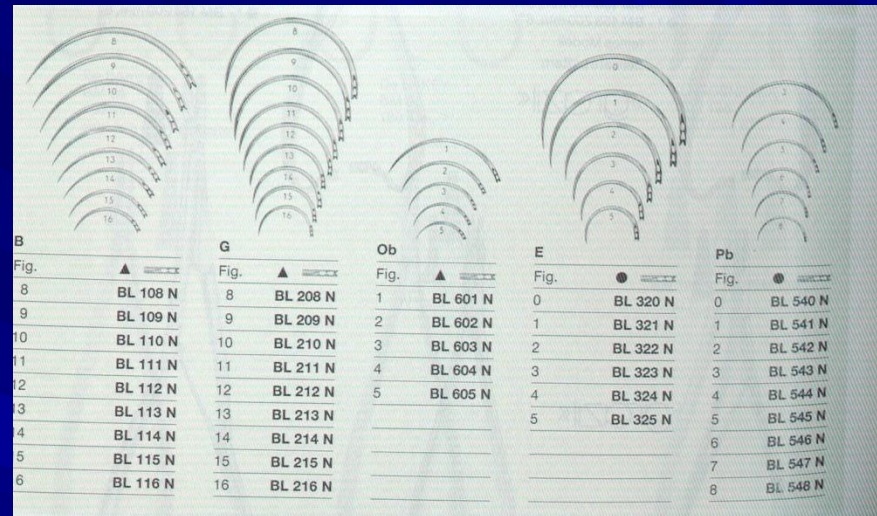
- bent, rounded

- straight

Needle holders

- autofix

-without fixation



# Suture

Suture material

Silk, nylon

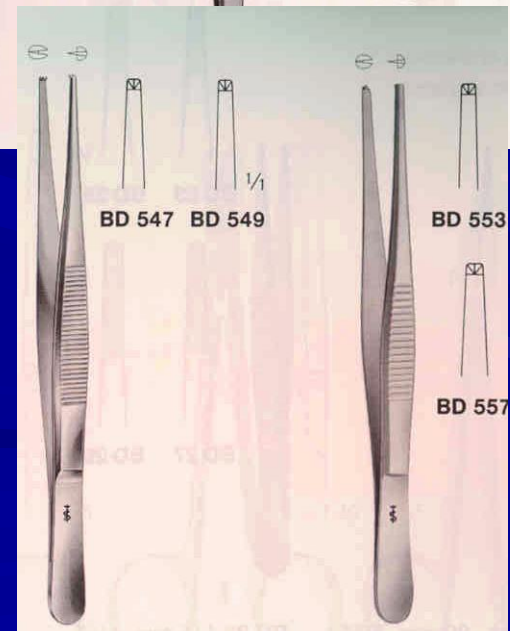
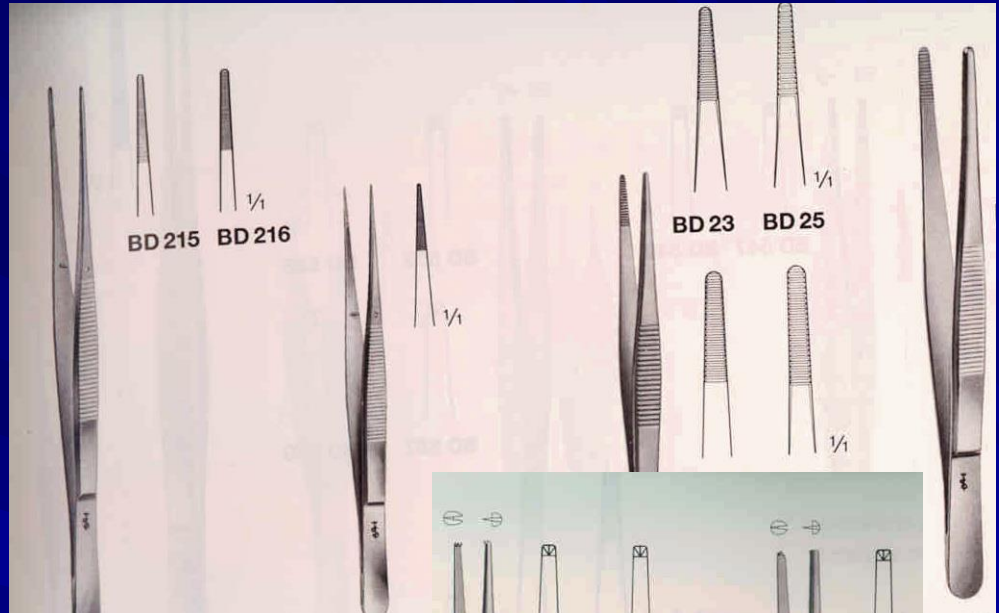
Needles

- bent, rounded
- straight

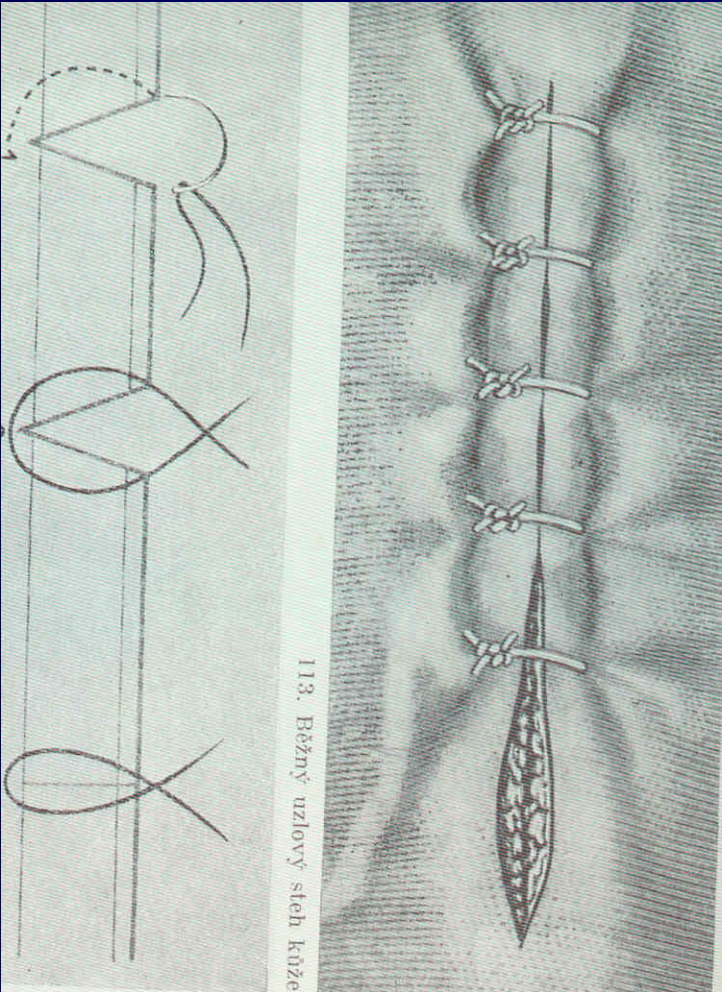
Needle holders

- autofix
- without fixation

Tweezers – tissue forceps







113. Bežný uzlový steh kože

