

Classification acc. to Black

- Class I.

Pit and fissure caries



Classification acc. to Black

- Class II.

Proximal surfaces in pre



Classification acc. to Black

- Class III.

Proximal surfaces of incisors and canines
without
lost an incisal ridge



Classification acc. to Black

- Class IV.

Proximal surfaces of incisors and canines with lost an incisal ridge



Classification acc. to Black

- Class V. cervical lesions



Basic rules preparation of cavities

Access to the cavity

Outlines – cavosurface margin (extention for prevention)

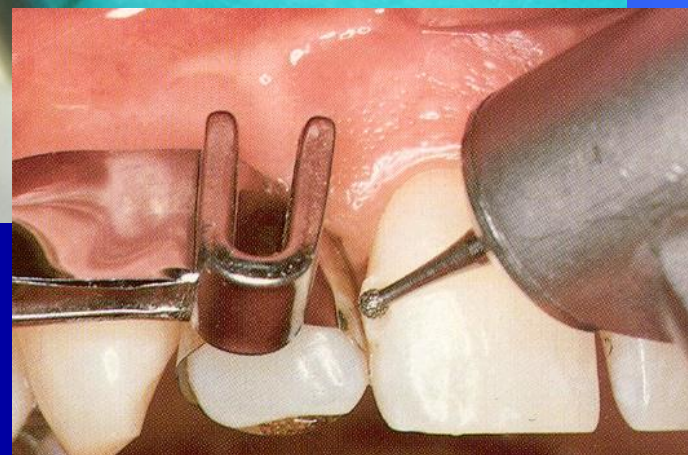
Retention

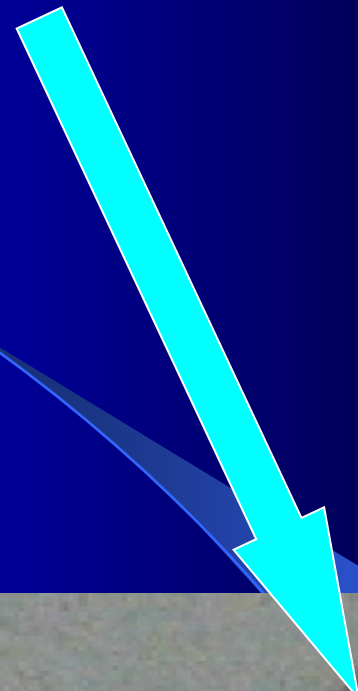
Resistance

Excavation of carious dentin

Preparation of borders – finishing

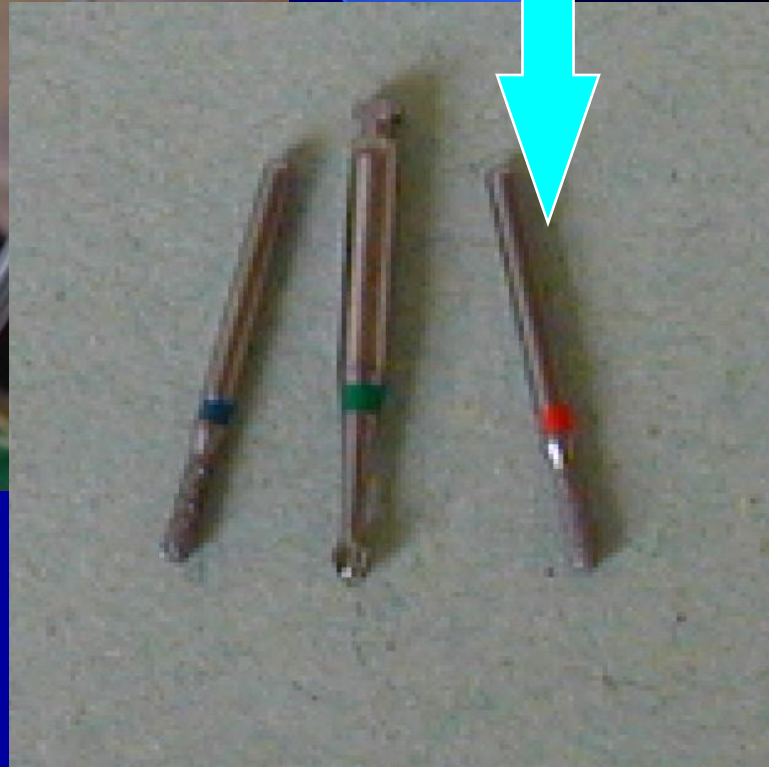
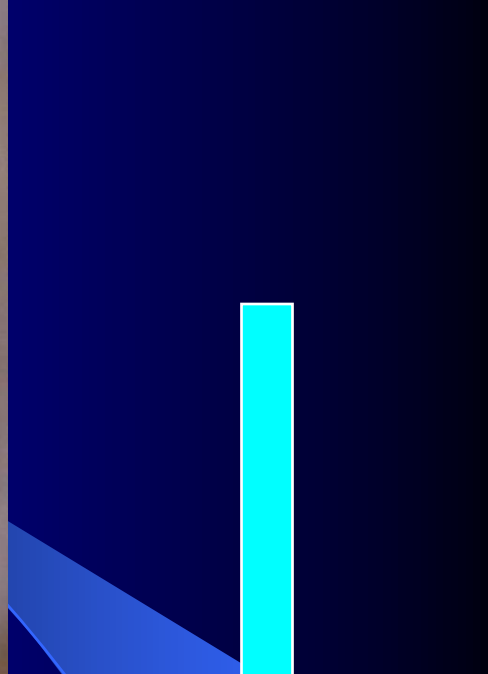
Control







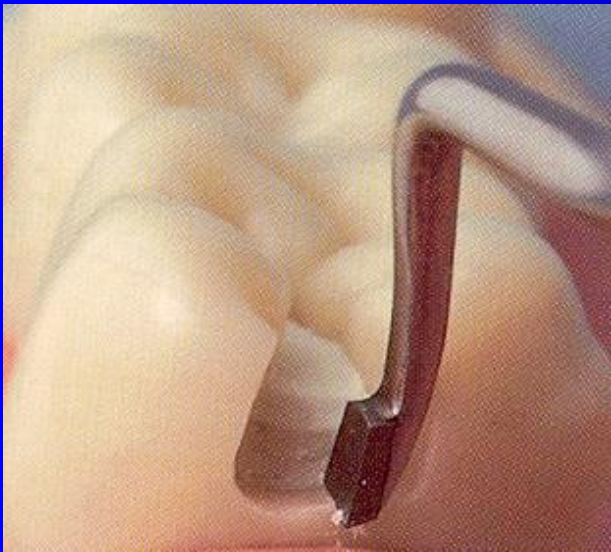
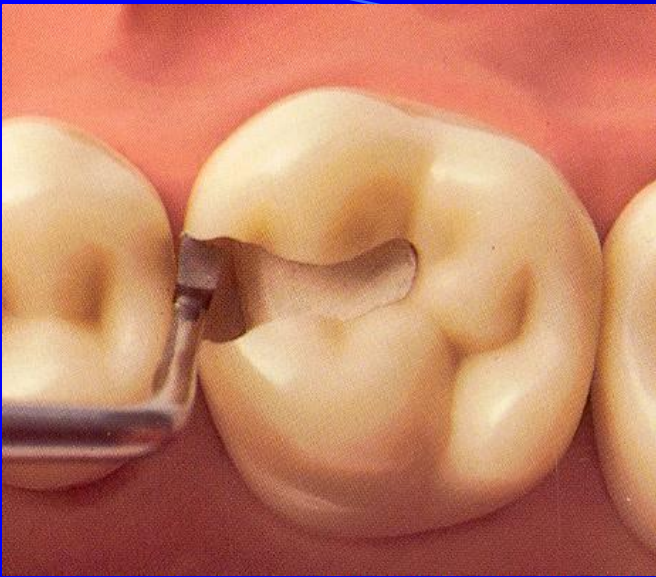




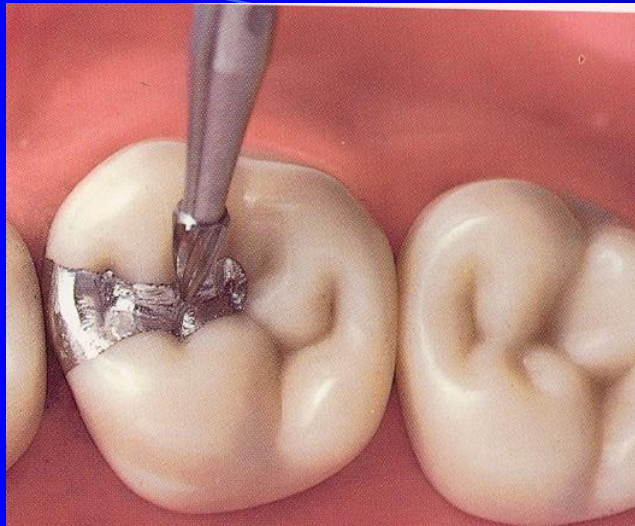
Úprava sklovinných stěn

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Protection of dentin wound

- Dentin wound – open dentin tubules – movement of dentinal liquor – hydrodynamic effect.

Physical reasons

-thermal

-osmotic

Chemical reasons

Combination

Protection of dentin wound

Isolation

Base

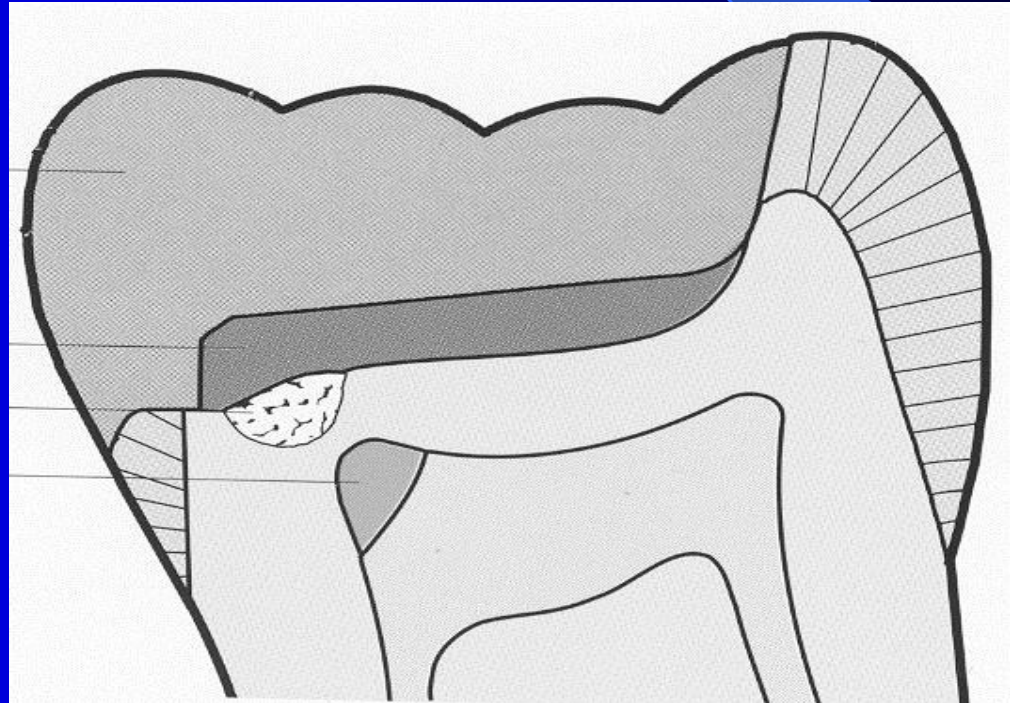
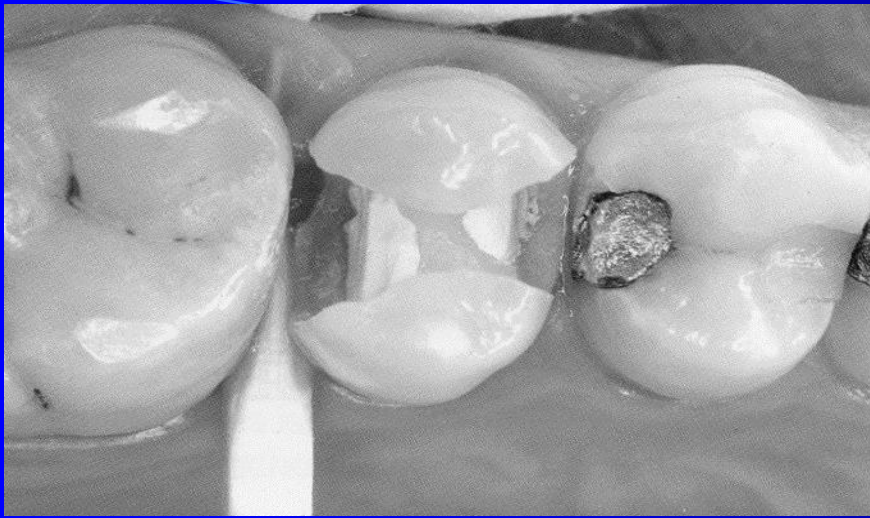
Lining

Subbase

Adhesive systems (explanation later)

Making fillings

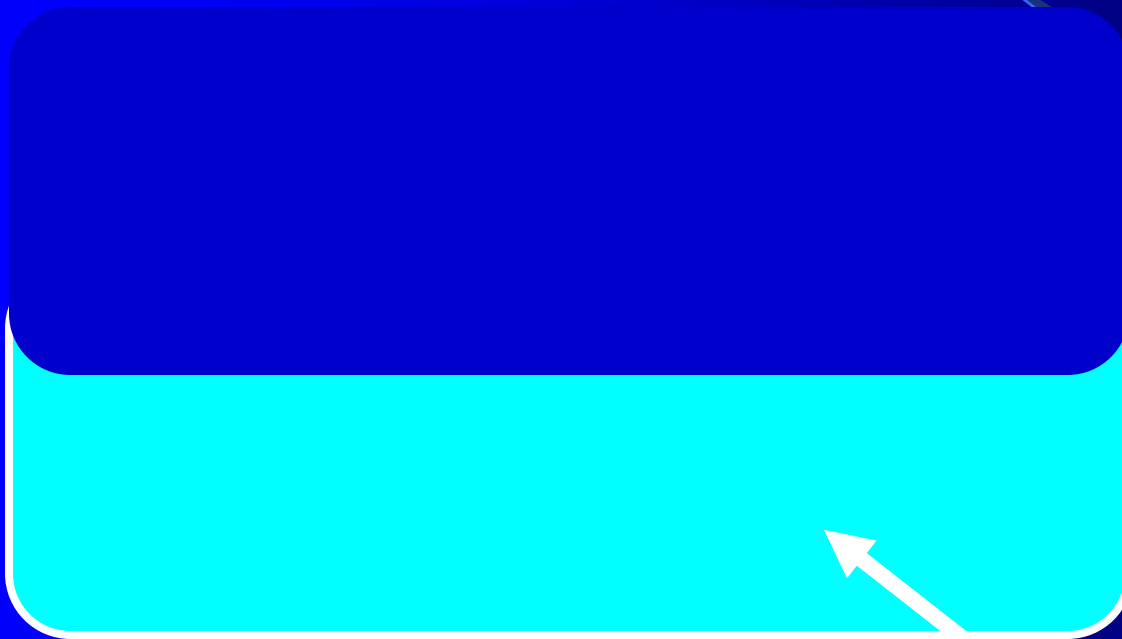
- Filling replaces lost hard dental tissue anatomically and functionally
- Always different properties in comparison to hard dental tissues.



Lining



Base



Preparation of the cavity I.st class acc. to Black

- Cavities in fissures and pits
- (Occlusal surfaces of premolars and molars and in f. coeca)

F. Coeca: buccal surfaces of lower molars,

Palatal surfaces of lower molars, palatal surfaces of canines.

All pit and fissure restorations.

They are assigned in to three groups.

R. on occlusal surface of premolars and molars

R. in foramina coeca – usually on occlusal two thirds of the facial and lingual surfaces of molars.

R. on lingual surface of maxillary incisors.

Materials: Amalgam, composite.

Amalgam:

Pertinent material qualities and properties

Strength

Longevity

Ease of use

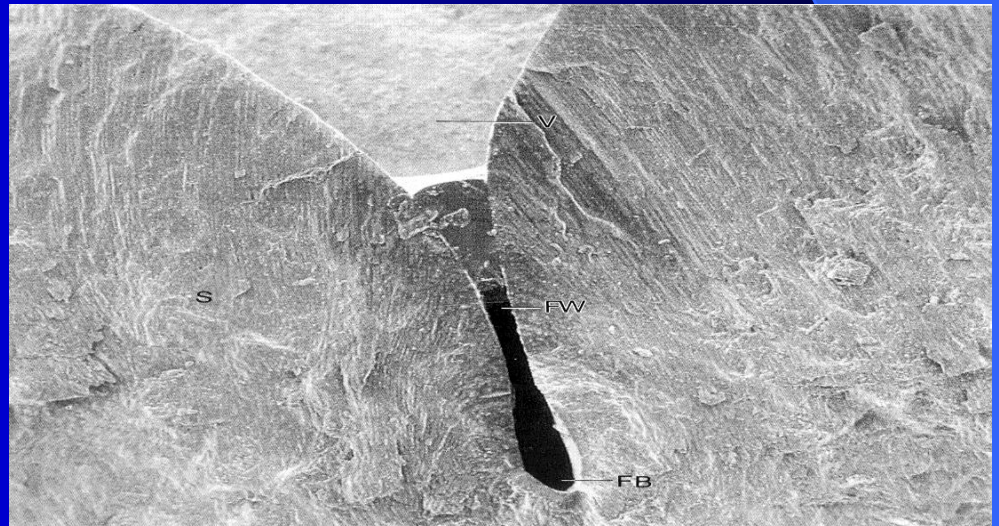
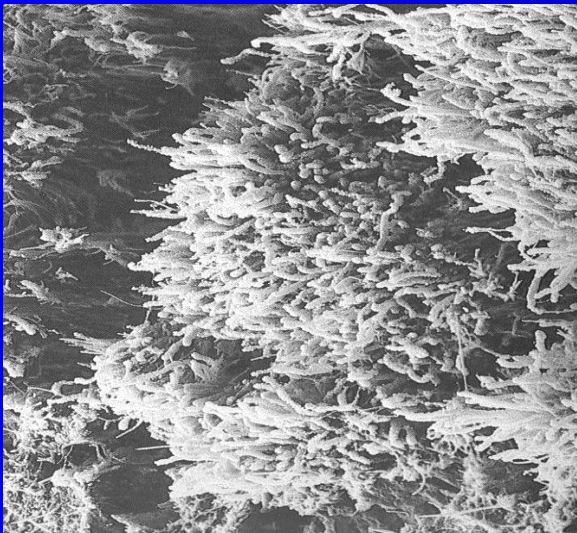
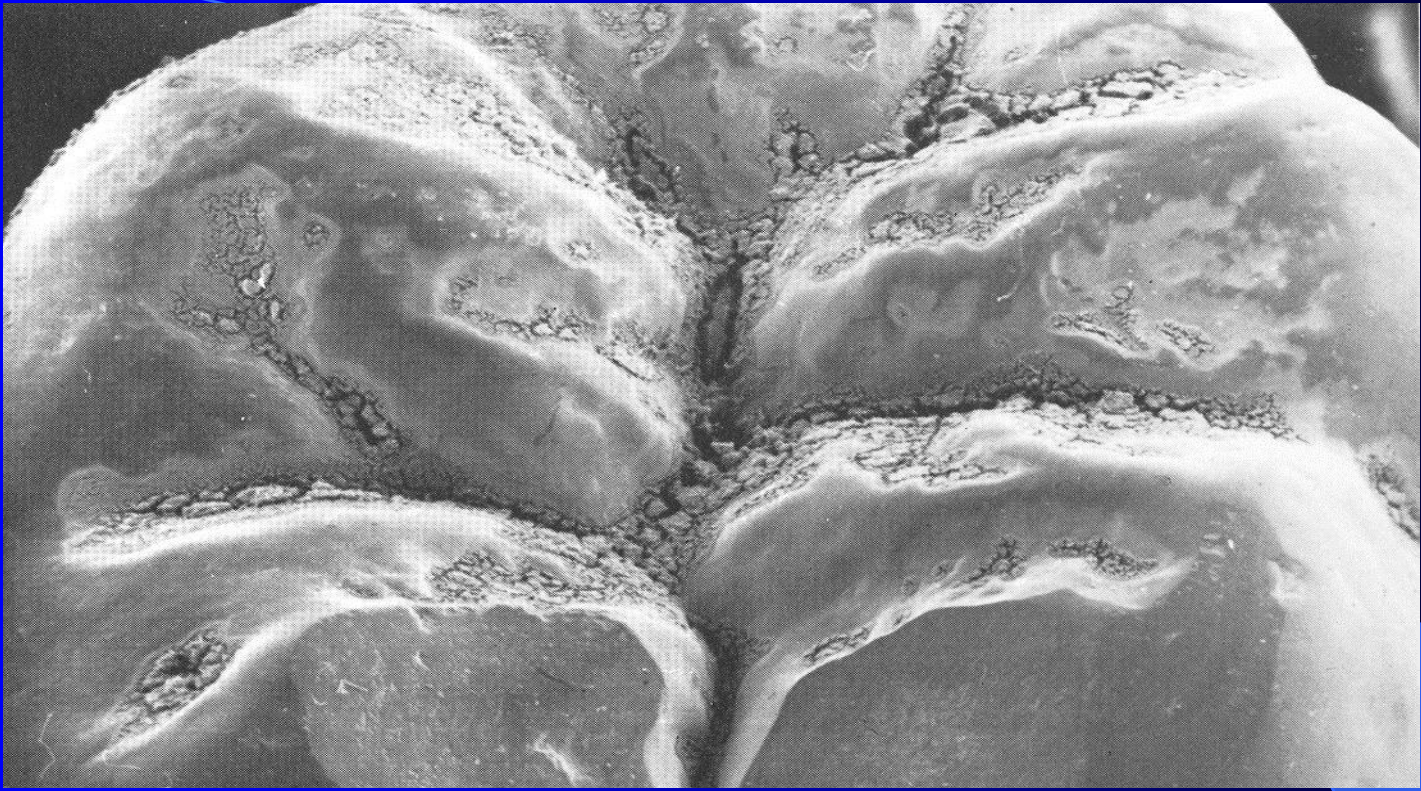
Clinically proven success

Indications

- Moderate to large restorations
- Restorations that are not in highly aesthetics areas
- Restorations that have heavy occlusal contacts
- Restorations that cannot be well isolated
- Restorations that extend onto the root surface
- Foundations
- Abutment teeth for removable partial dentures
- Temporary or caries control restorations.

Contraindications

- Aesthetically prominent areas of posterior teeth
- Small moderate classes I. that can be well isolated





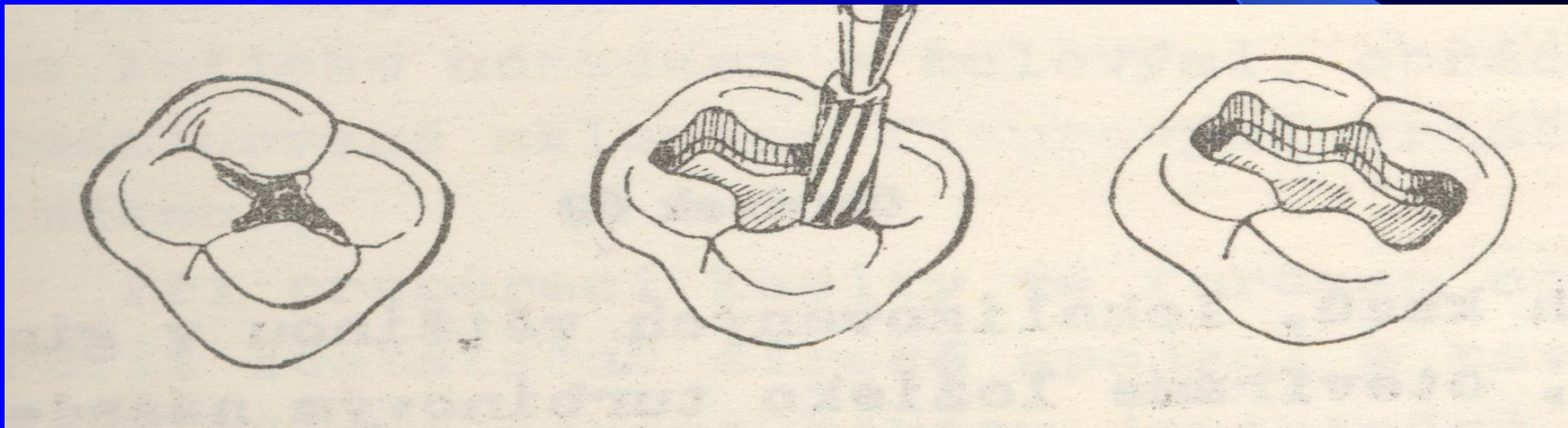
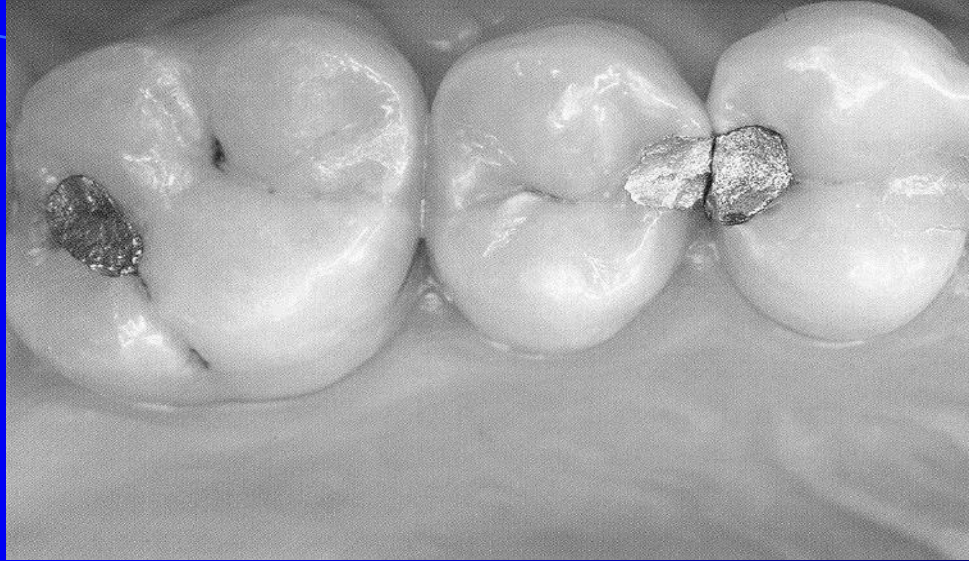
Access to the cavity

- From the occlusal surface using the fissure bur (or diamond burs, see below).

Outline

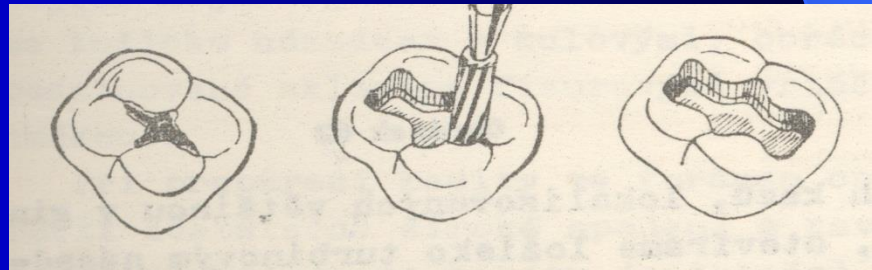
- Ideal outline includes all occlusal pits and fissures. If crista transversa and obliqua are not affected, it is recommended not to prepare them.





Vytvoření obrysu kavity a preventivní extenze

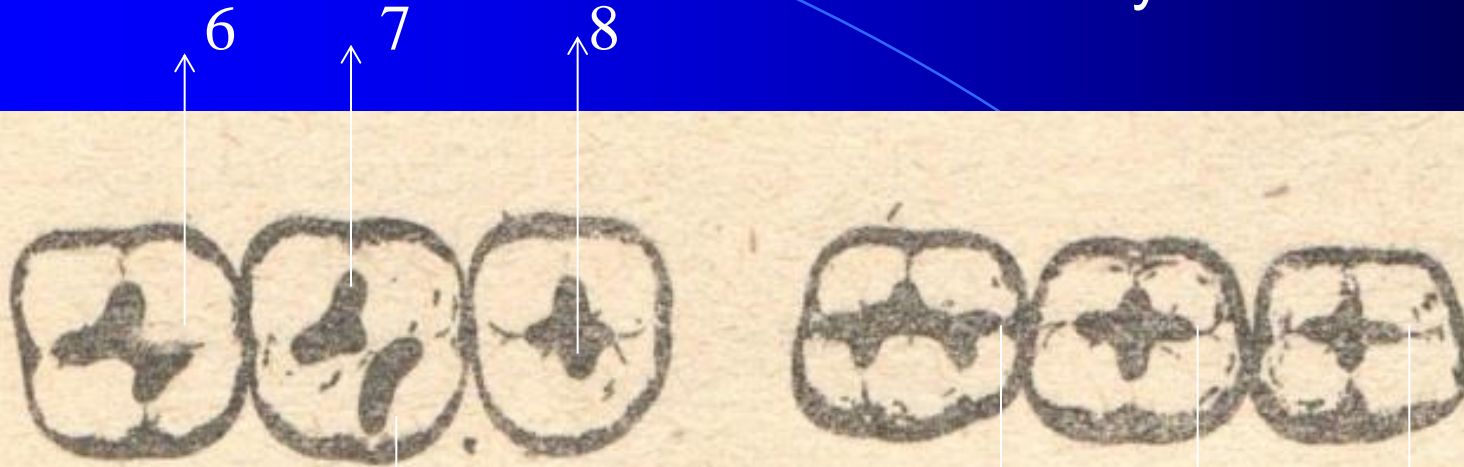
Kavita zaujímá veškeré rýhy ústí do Ložiska (kavita kopíruje fissurální komplex). Crista obliqua nebo crista transversa se ponechává, není – li zasažena kazem.



Kavita sahá do ½ úbočí hrbolků



Kavity na molárech



Zachování crista obliqua

6

7

8

Kavity na premolárech



Zachování crista transversa

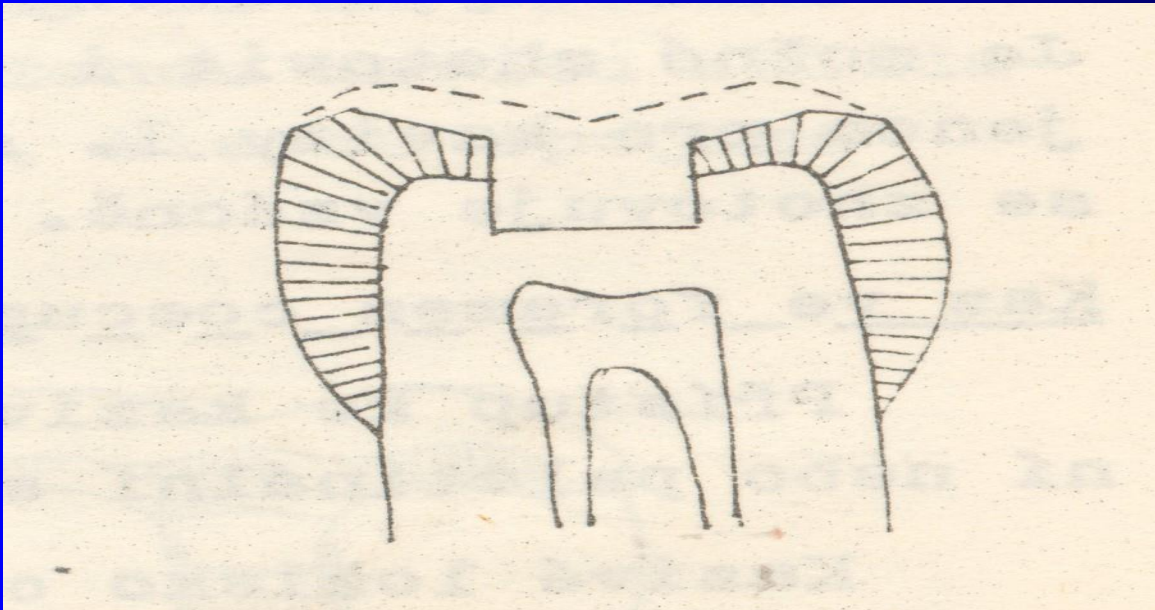


Retention principles

- Prepare the box – the bottom is in dentin
- Undercuts can be prepared, the proximal ridges must not be weakened!

Retention principles

- Box in dentin



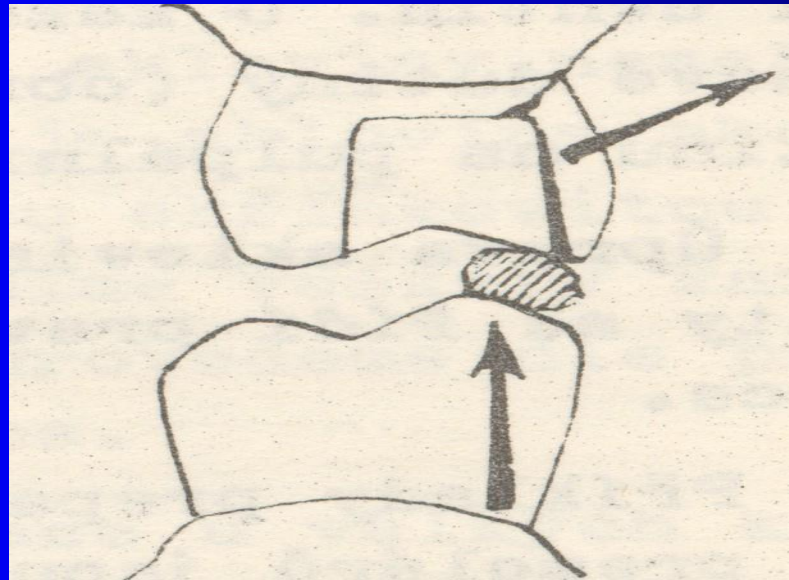
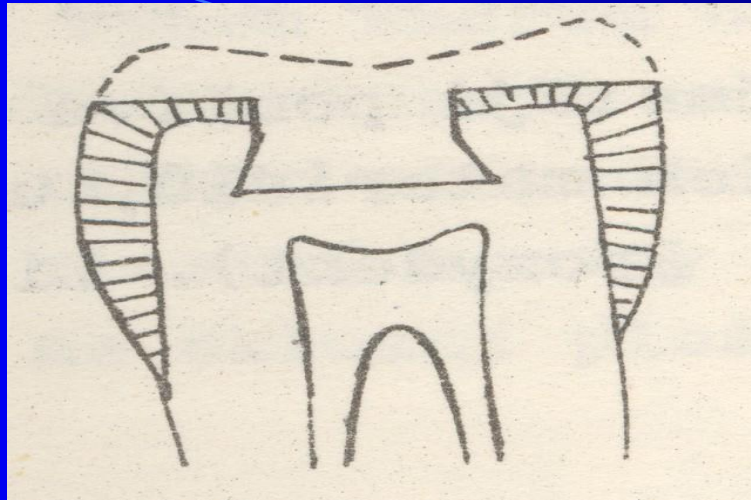


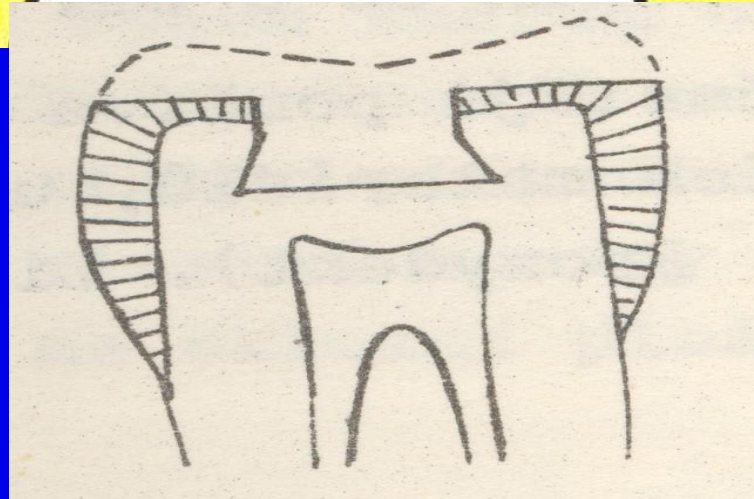
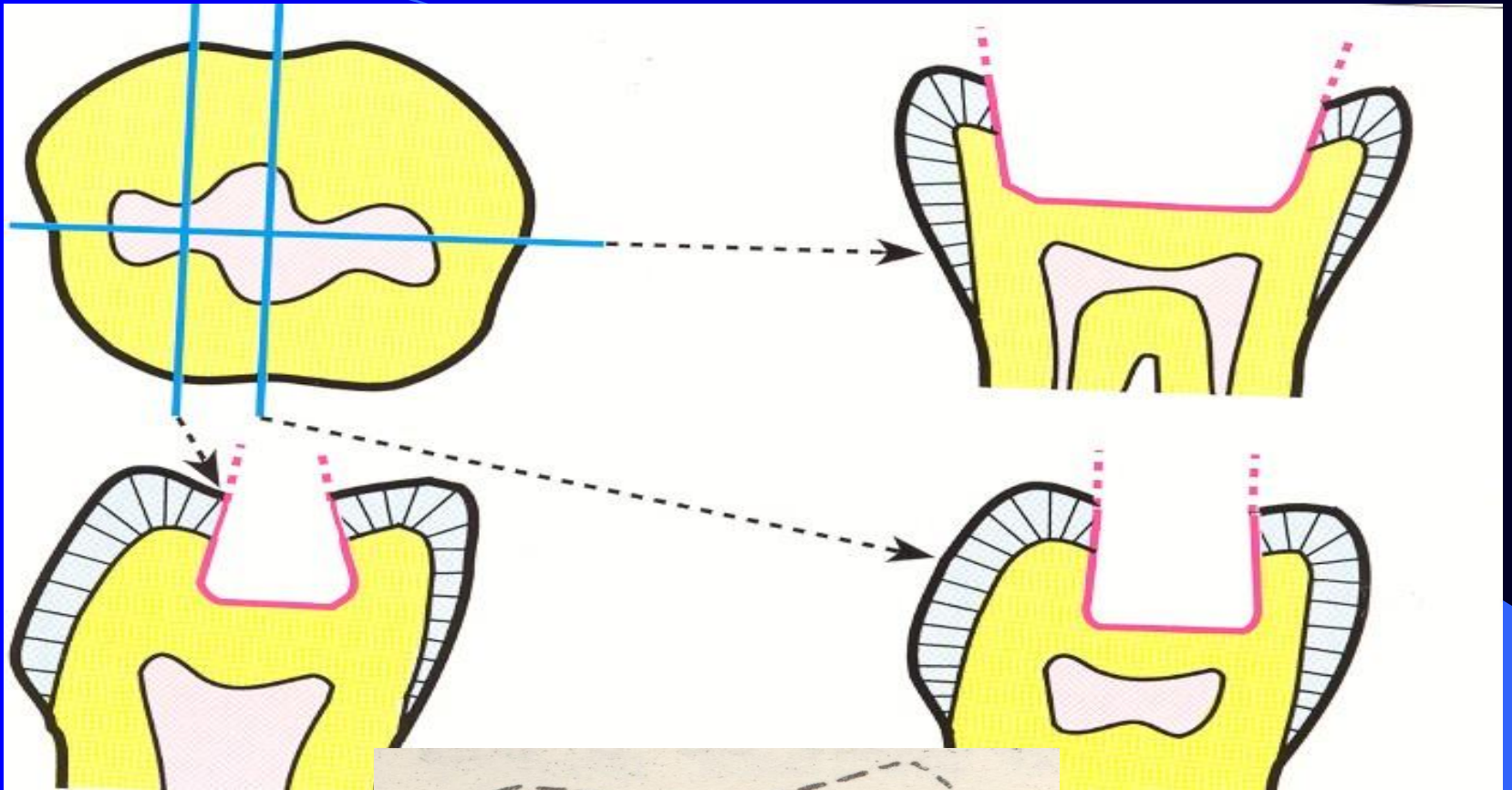




Resistance principles

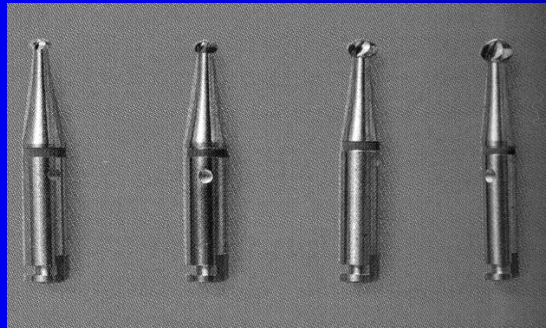
- Box – space for amalgam 1,5 – 2 mm
- Keep the facial and lingual margin extensions as minimal as possible between the central groove and the cusp tips.
- Extending the outline to include fissures, thereby placing the margins on relatively smooth sound tooth structure.
- Minimally extending into the marginal ridge without removing dentinal support.
- Never leave the enamel undermined
- All corners are round, the bottom smooth.



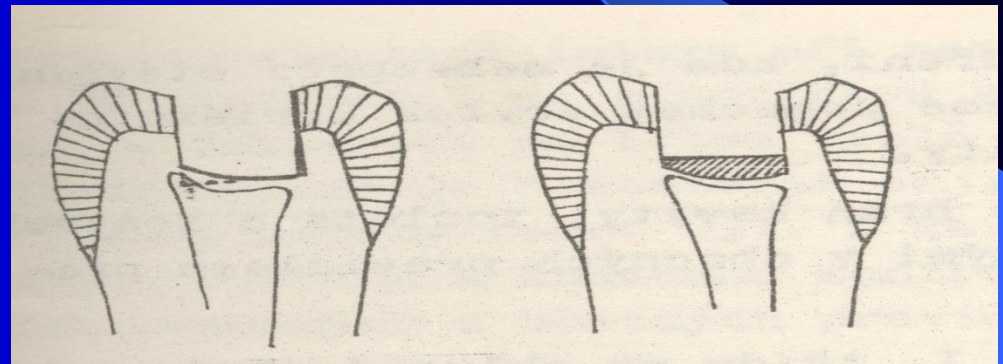
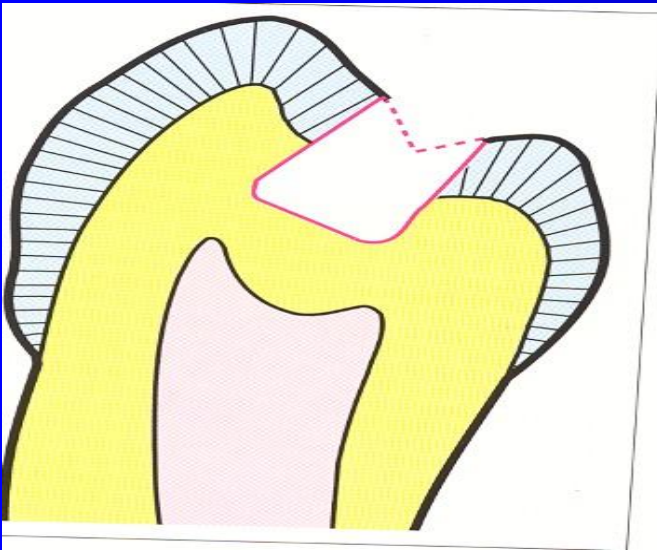


Removal of carious, infected, dentin and remaining defective enamel.

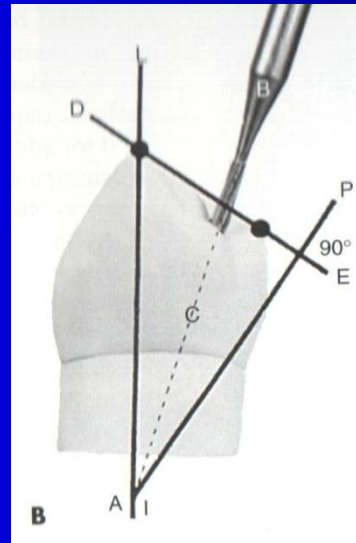
- Spoon excavator or a slowly revolving, round carbid bur of appropriate size.



The pulpal wall and pulp chamber



Correct direction of the bur

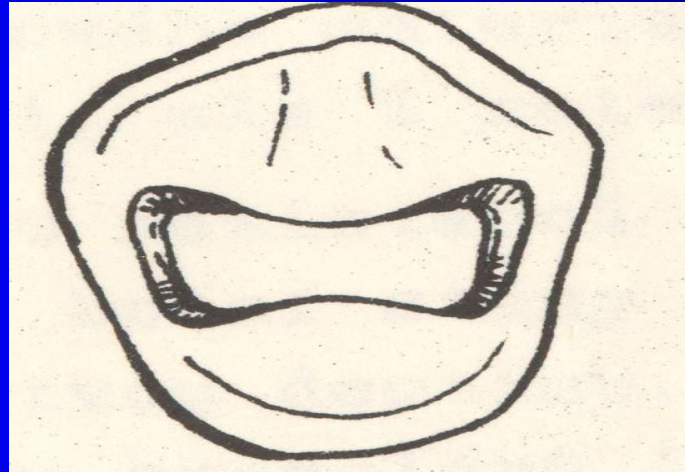


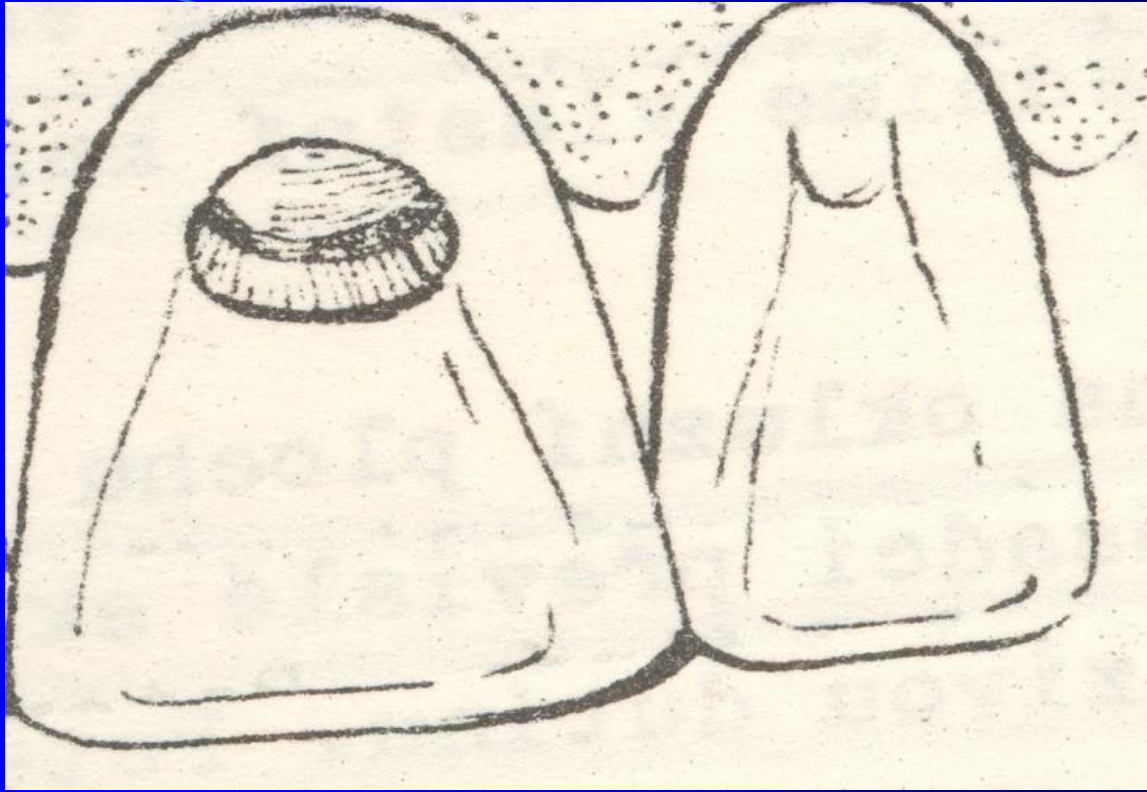
Finishing and polishing

- Fine grit diamond bur.

Preparation of borders and final check

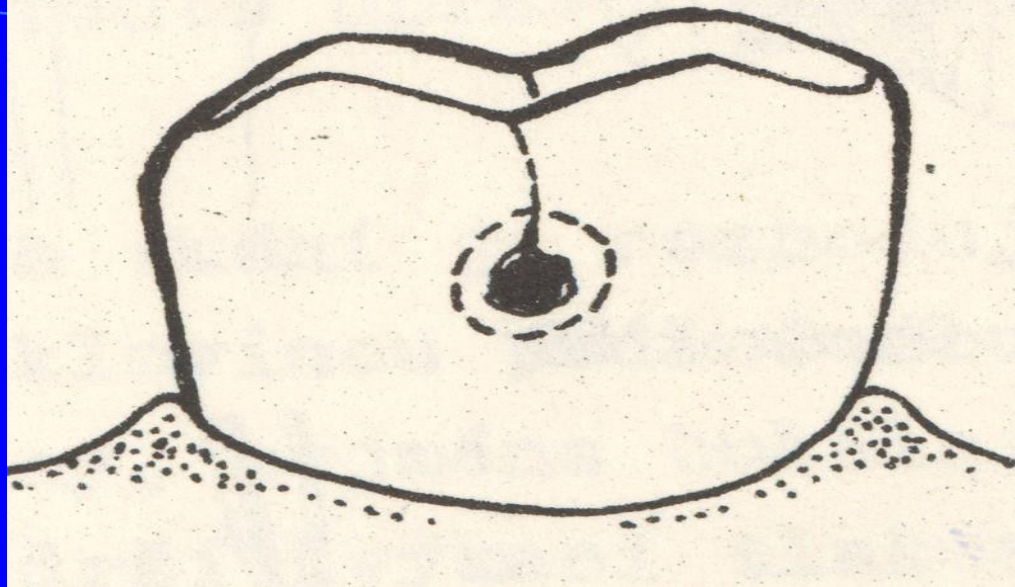
Smoothen (red coted diamond)
20.000 rpm.



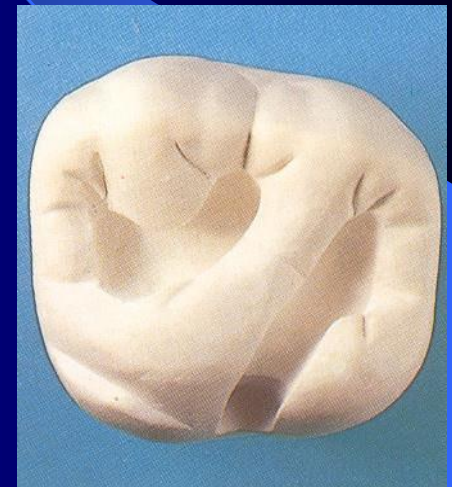
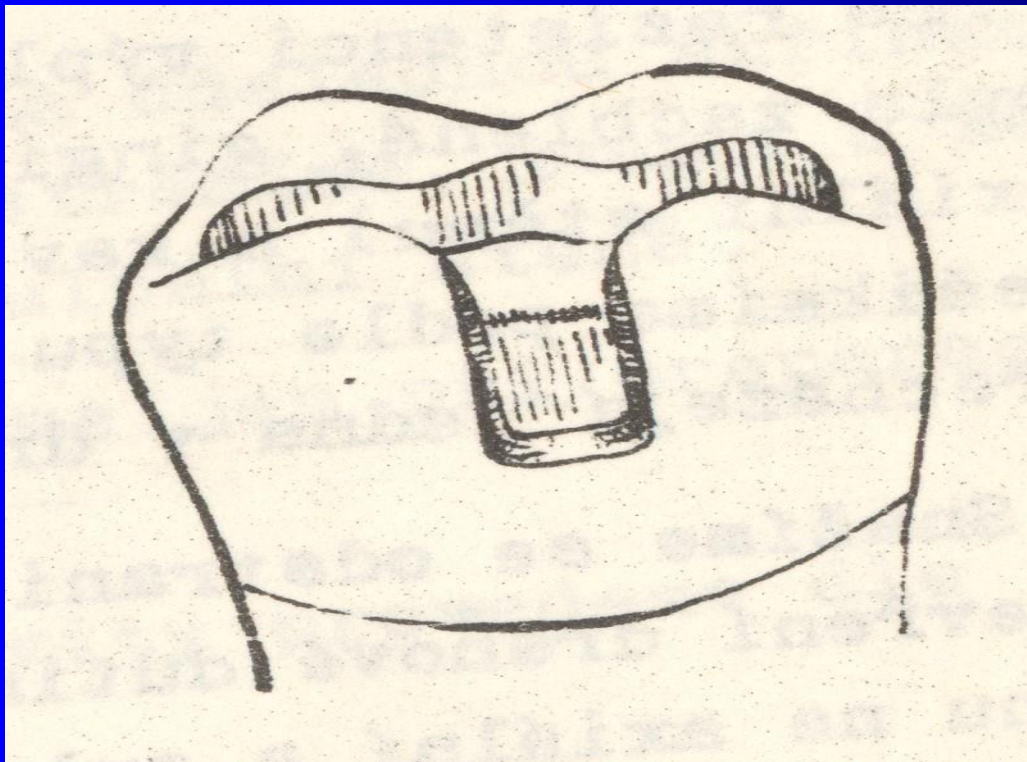


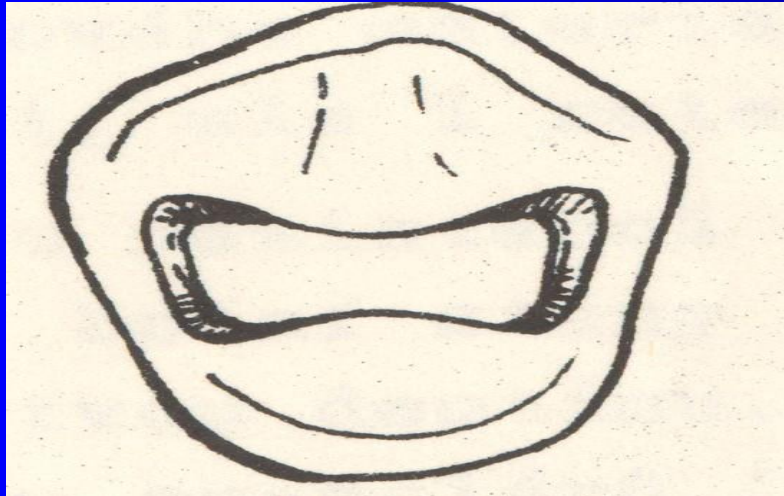
F.Coecum

Preparation is limited on carious lesion only
undercuts



Combination of
Cavity in f.coecum
and occlusal cavity







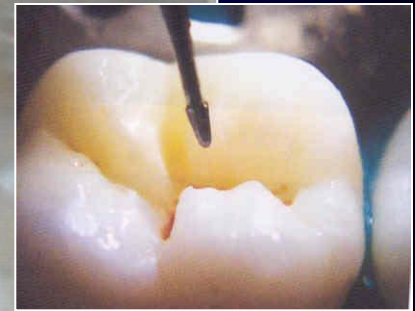
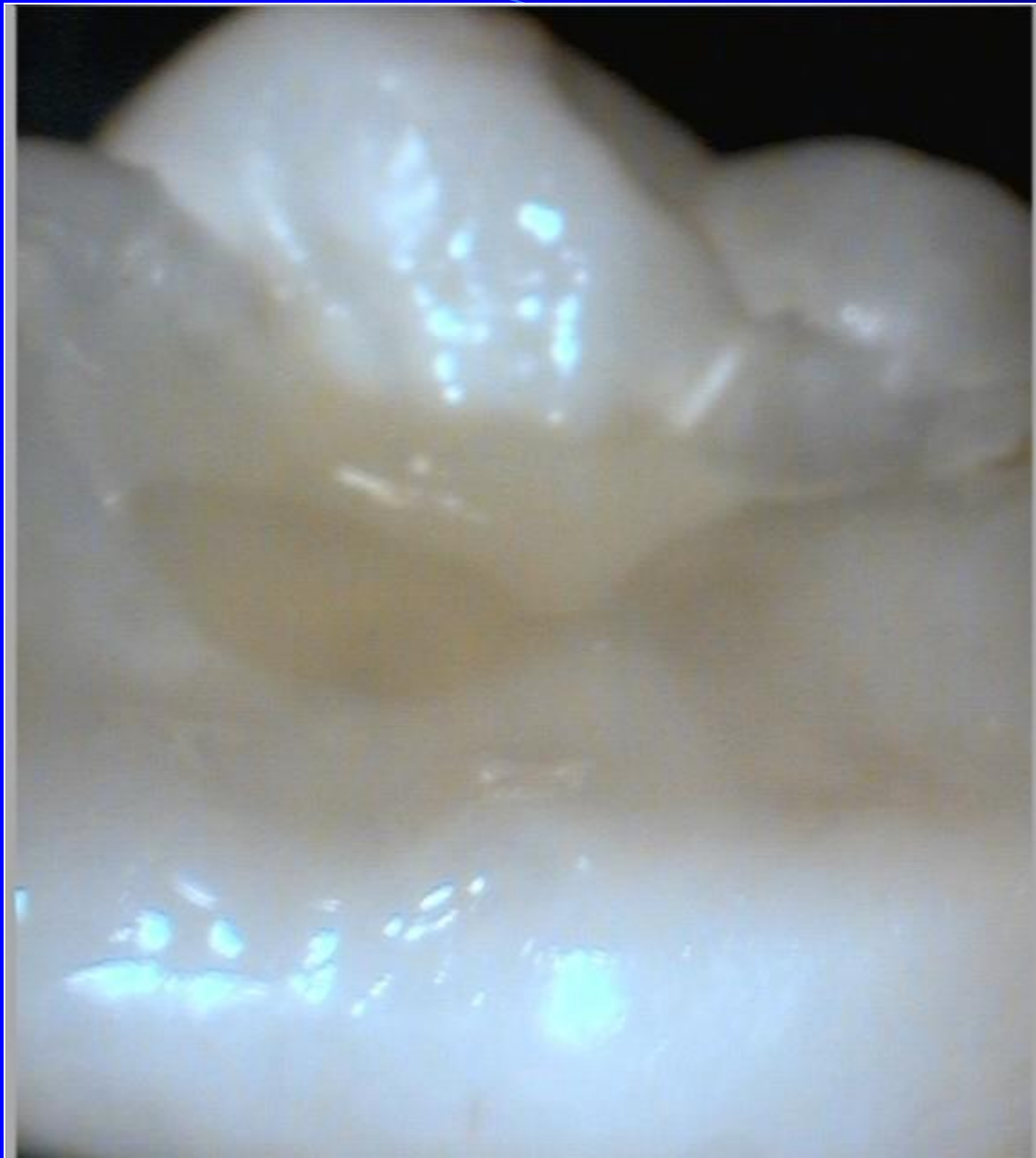
Preparation for composit

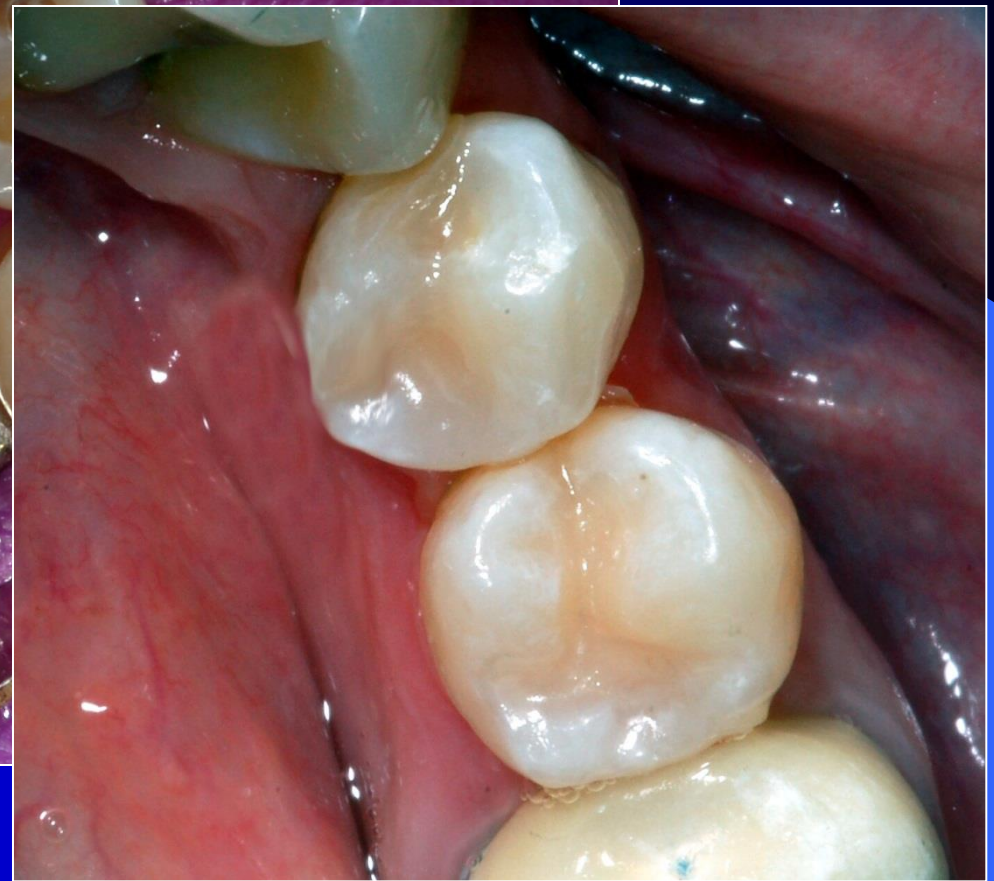
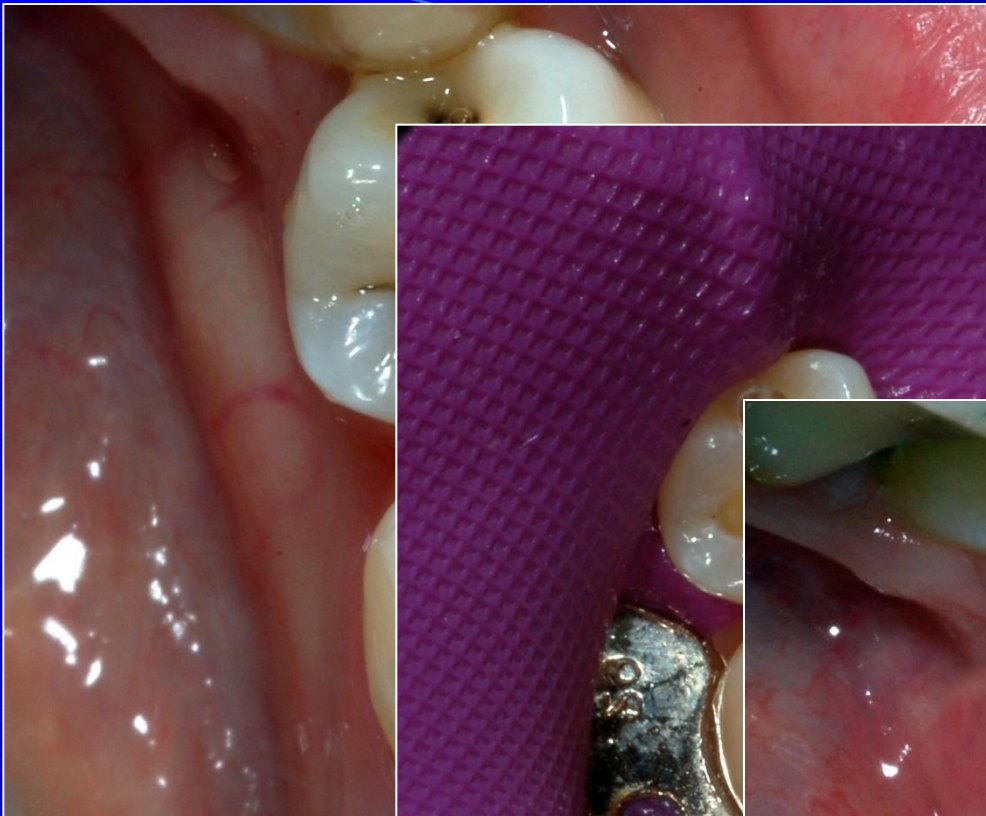
Cavity is limited on the carious lesion

It has a form of deeper dish

No undercuts

More single cavities can be prepared





Preparation for inlay

- Inlay is a rigid filling
- It is fabricated out of oral cavity in dental lab
- It is luted into the cavity using luting material -cement
- Preparation is different – the walls are divergent

