

Posterior teeth

All pit and fissure restorations.

They are assigned in to three groups.

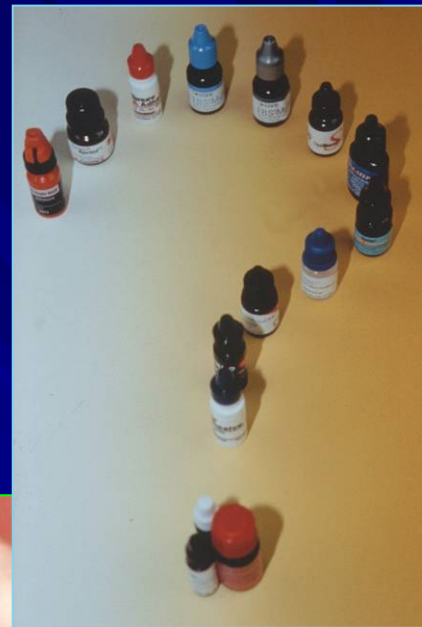
R. on occlusal surface of premolars and molars

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

R.on lingual surface of maxillary incisors.

Longevity of fillings

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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

Materials: Amalgam, composite.

Amalgam:

Pertinent material qualities and properties

Strength

Longevity

Ease of use

Clinically proven success

Clinical technique

- 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 or obliqua are not affected, it is recommended not to prepare them.

Resistance principles

- 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.
- Eliminating a weak wall of enamel by joining two outlines that come close together
- Enamel.
 - Never leave the enamel undermined
- All corners are round, the bottom smooth.

Retention principles

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

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

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

Indications

- Aesthetically prominent areas of posterior teeth
- Small - moderate classes I. that can be well isolated
- Good level of oral hygiene is necessary

Contraindications

- 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
- Abutment teeth for removable partial dentures
- Temporary or caries control restorations.

Clinical technique

- From the occlusal surface using the fissure bur (or diamond burs)

Outline

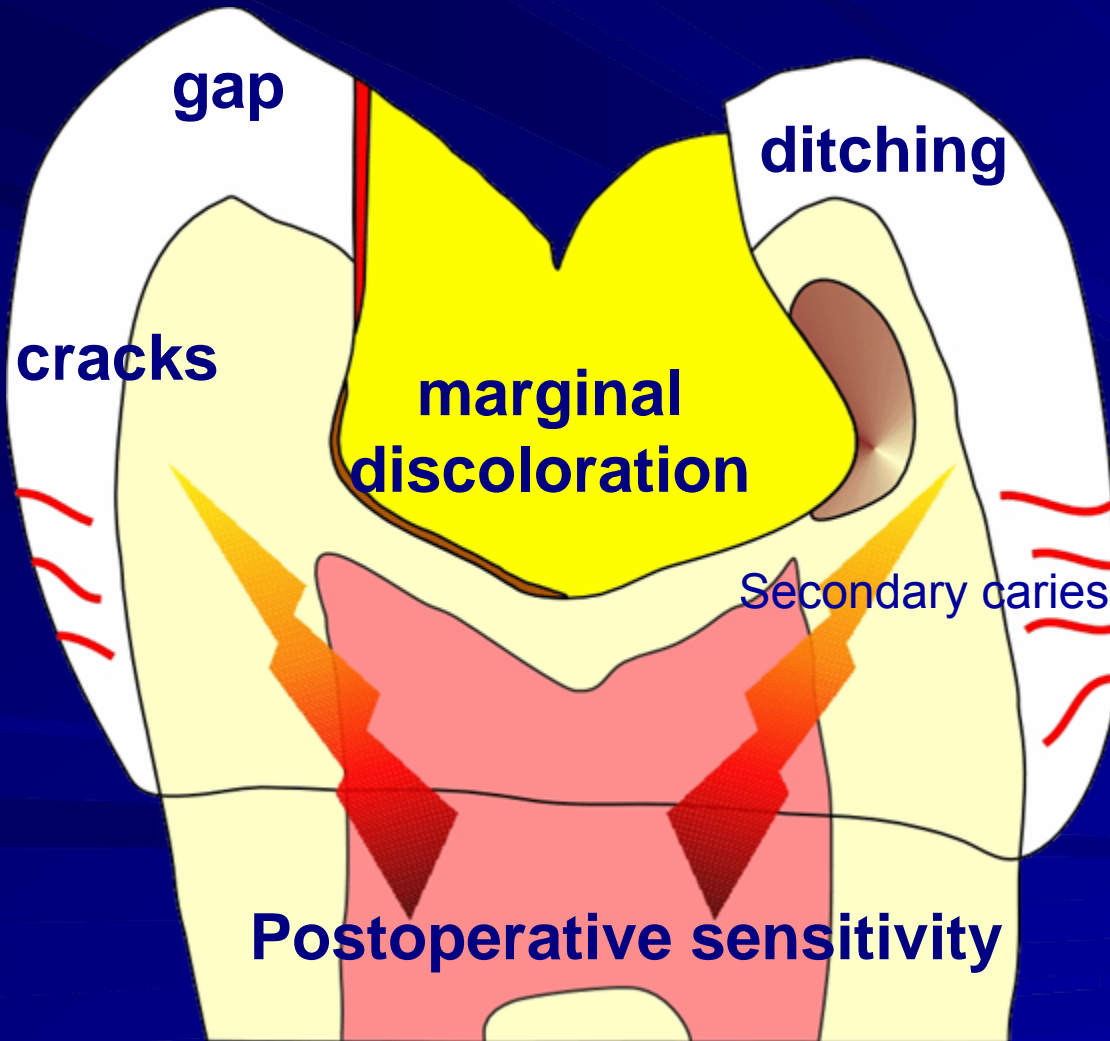
- Outline includes the caries lesion only
- Surrounding fissures open and seal

Retention principles

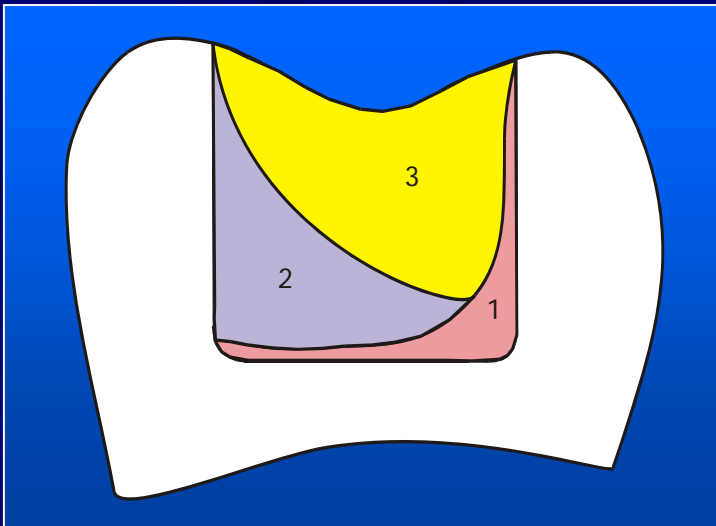
- Prepare the box or deep dish – the bottom is in dentin
- Do not prepare any undercuts!
- Do not bevel enamel, finish the border with diamond bur inly.

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

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



Placement of the material with respect to C-factor of each layer

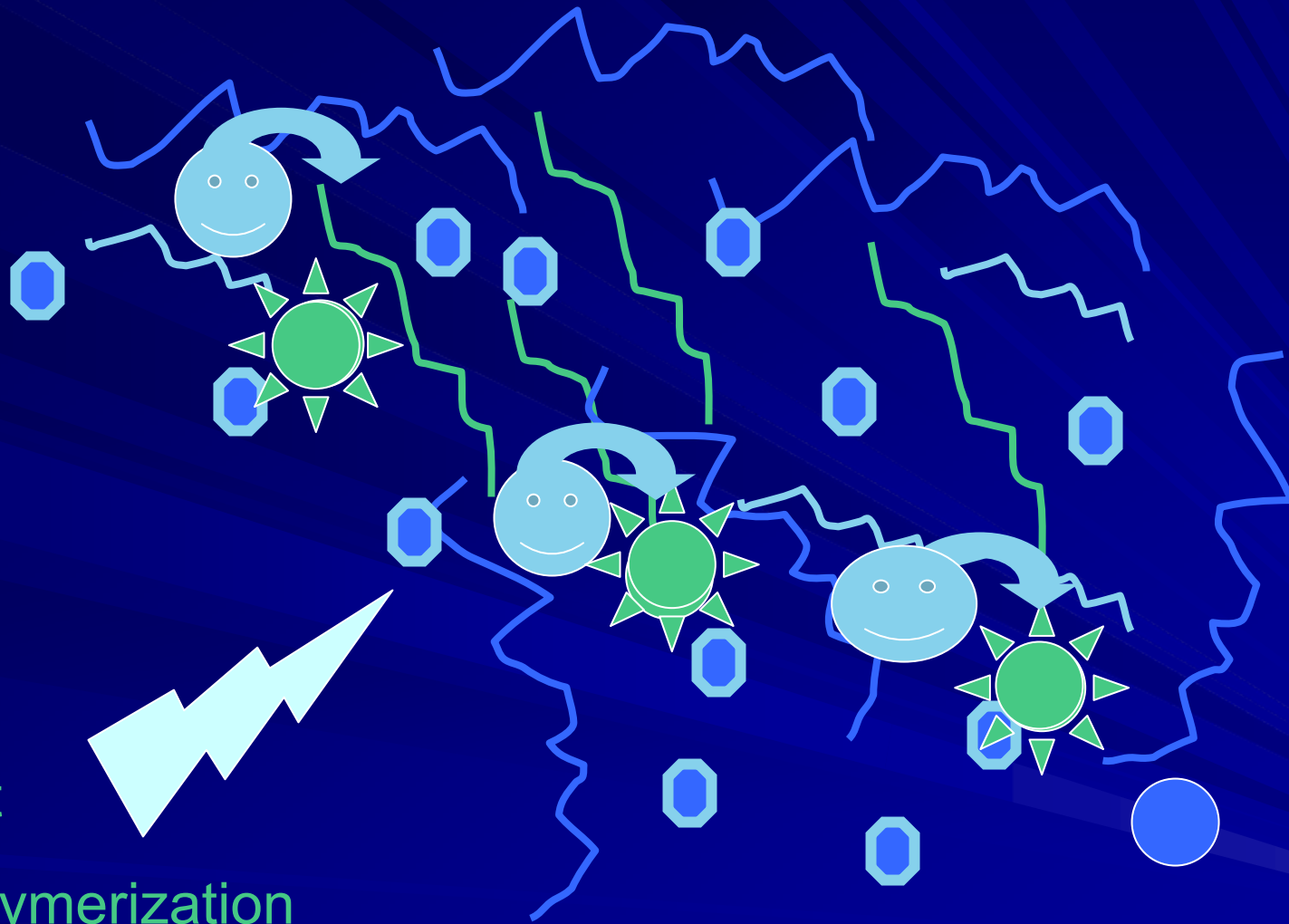


Forces of polymerization shrinkage depend on

- Mode of polymerization

Phases

- Pre-gel
- G-point
- Post -gel

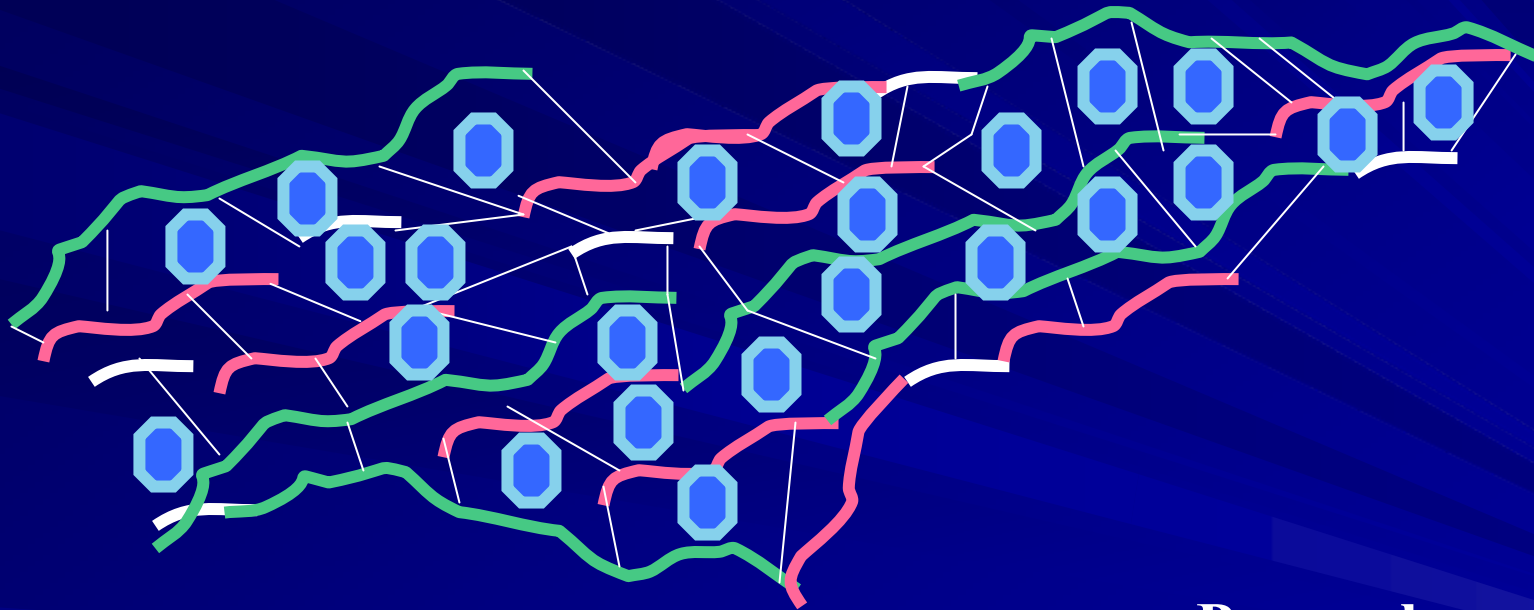


Light

Polymerization

Monomer → Polymer

Pre gel phase should be long – soft start !!!!



Pre -gel

Gel

Post -gel

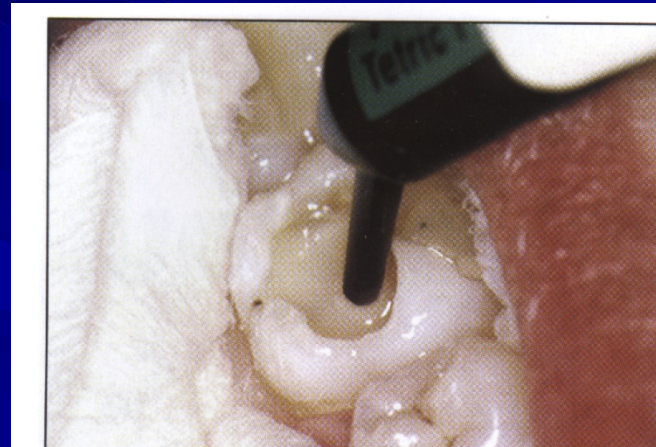
Marginal adaptation

- Placement of composite material
- Dry operating field
- Adhesive systems



Flow materiály - význam

1. **Vyrovnání zátěže**
(protistresové vlastnosti)
2. **Vyblokování podsekřivin**
3. **Adaptace ke stěnám**
4. **Estetické důvody**
5. **Ochrana adheziva**

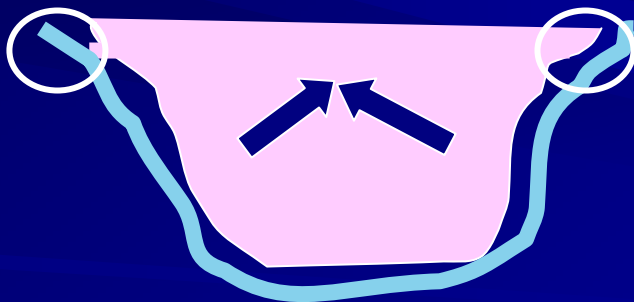


Temperovaný kompozit

C-faktor

= konfigurační faktor

Plocha adheze / volný povrch výplně



ne^vřiznivý C-faktor

Adhesives

- Acid etching technique
- Selfetching adhesive systems

Adhesives

■ Acid etching technique

Etching

Washing

Priming Bonding

Adhesives

■ Selfetching adhesive systems

Priming

Bonding

Adhesives

- Active and passive bonding

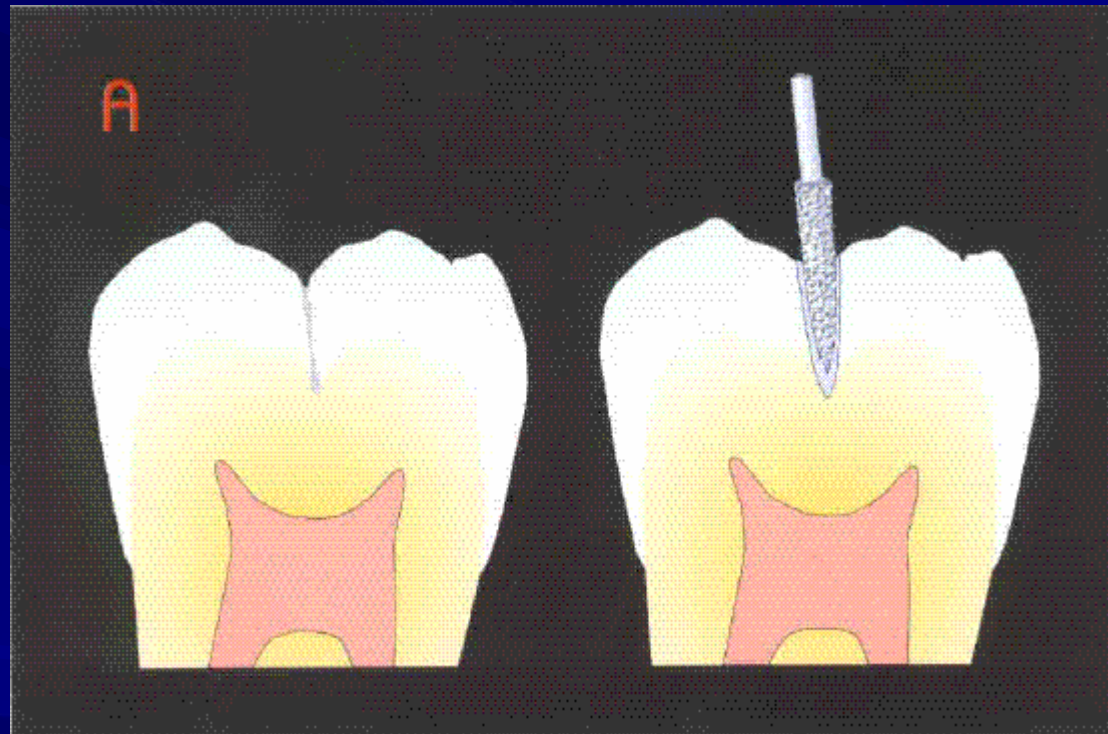
Active – rubbing with microbrush

Passive – without any rubbing

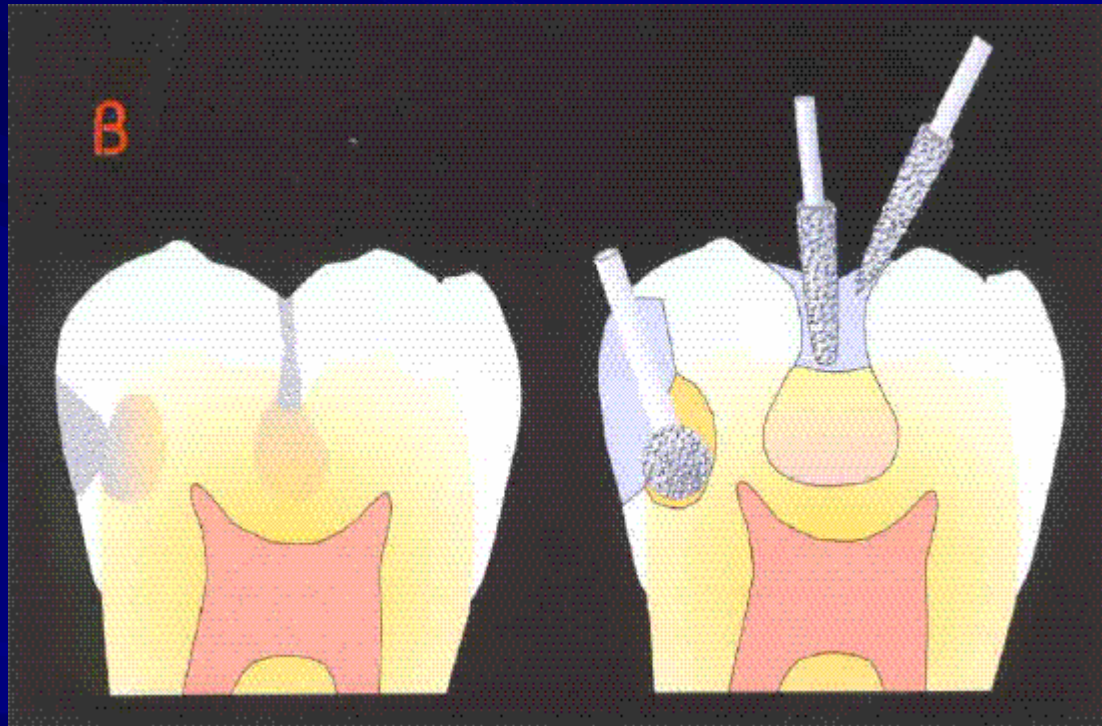




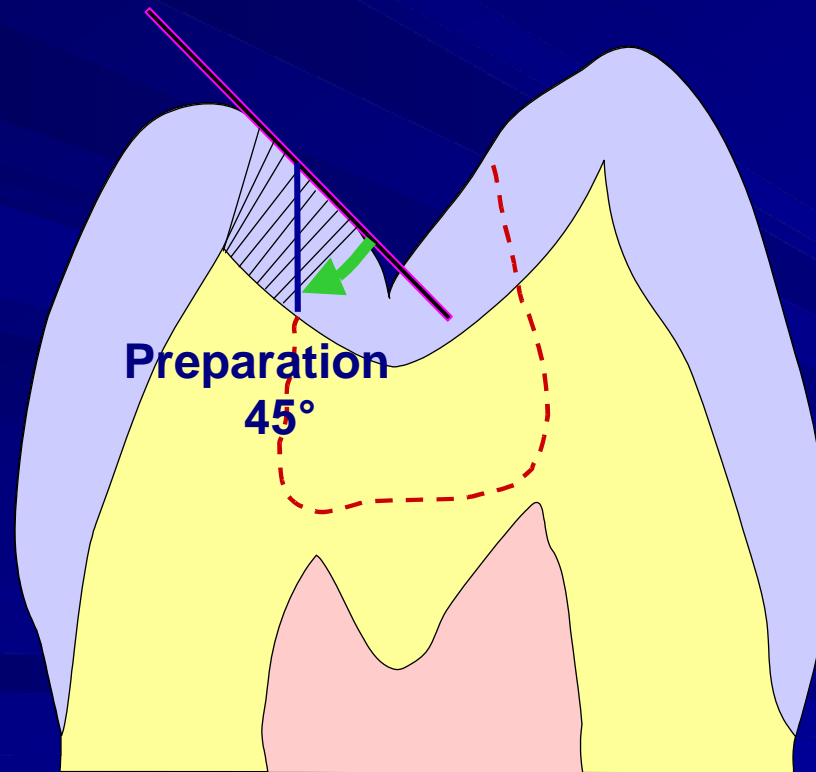
Adhesive preparation in a fissure

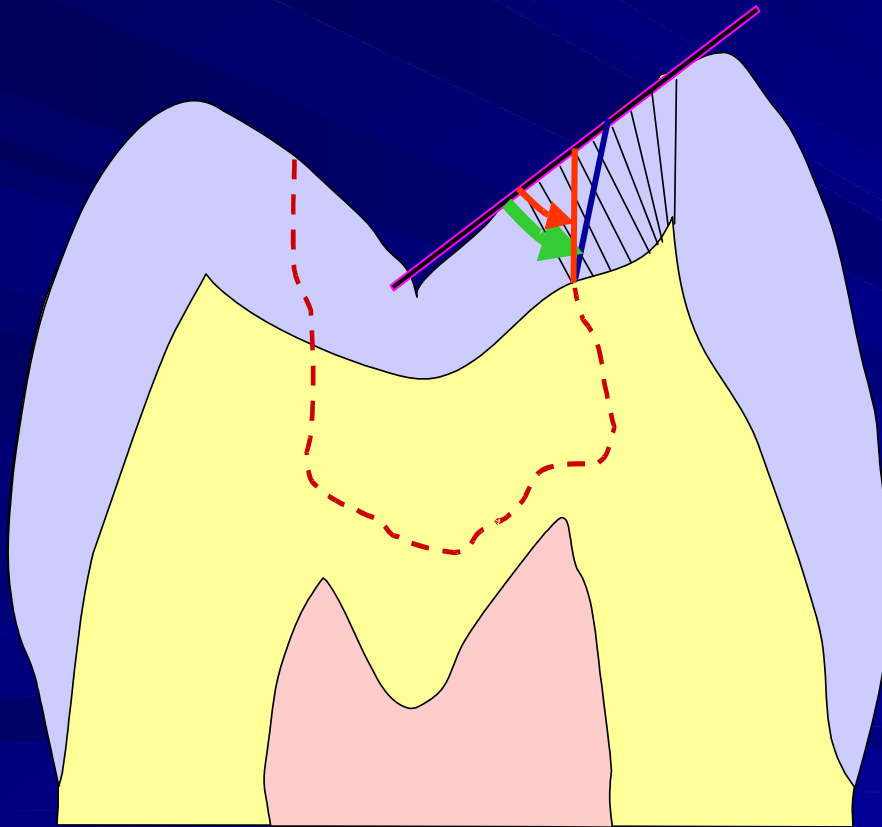


Adhesive preparation

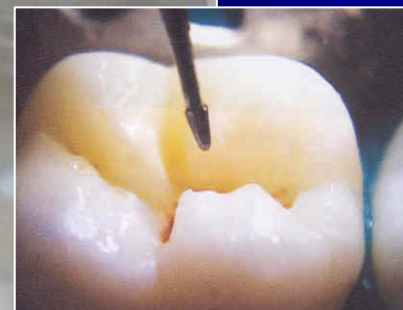
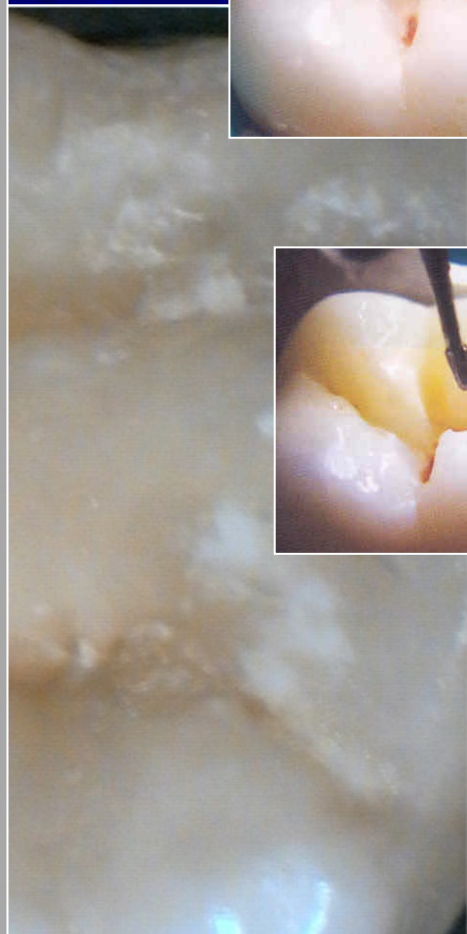


Preparation of enamel borders





Next to cusp
50-60°,
Never cover the cusp



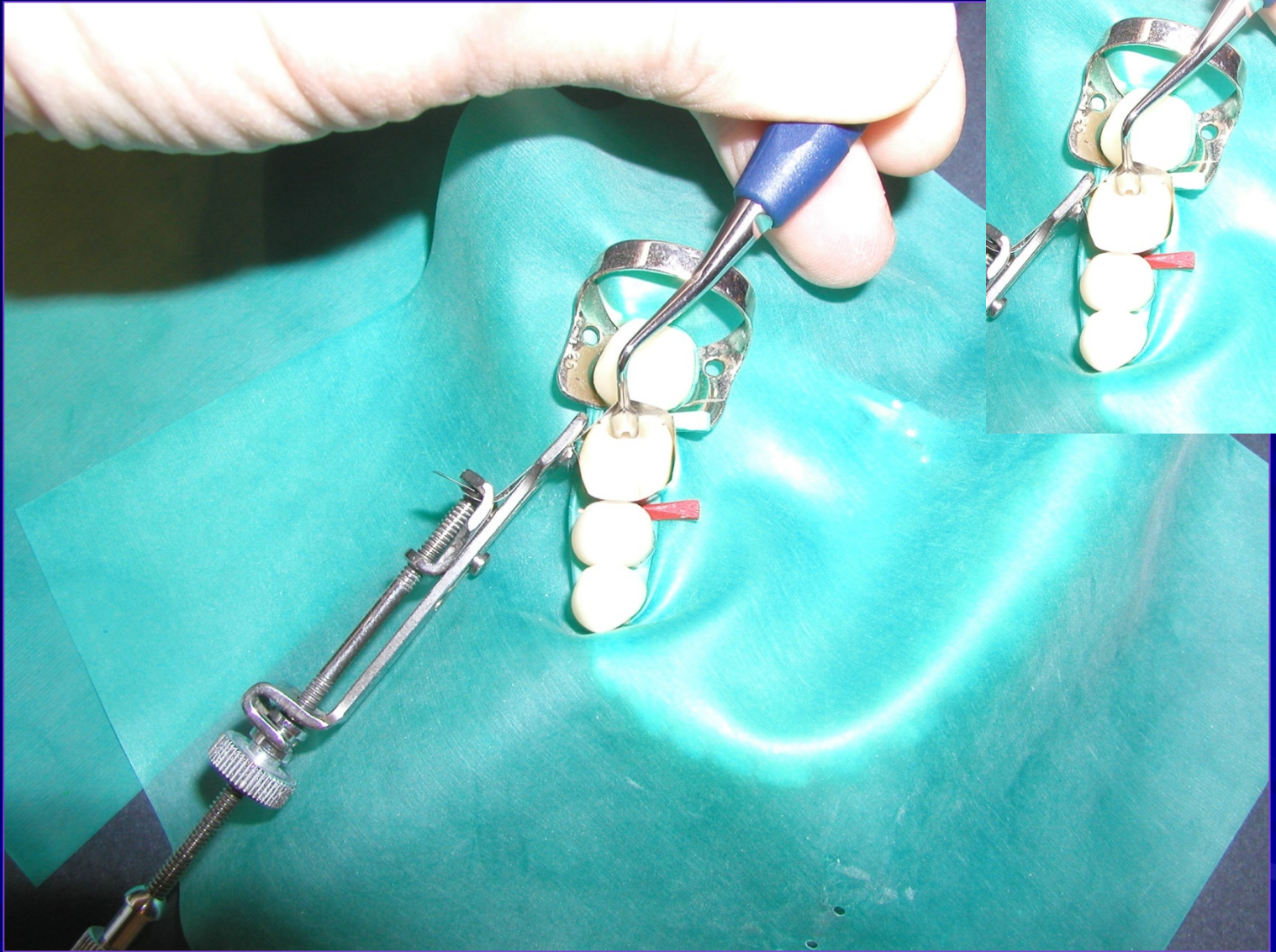
Kompozitní výplň II. třídy



Bod kontaktu??









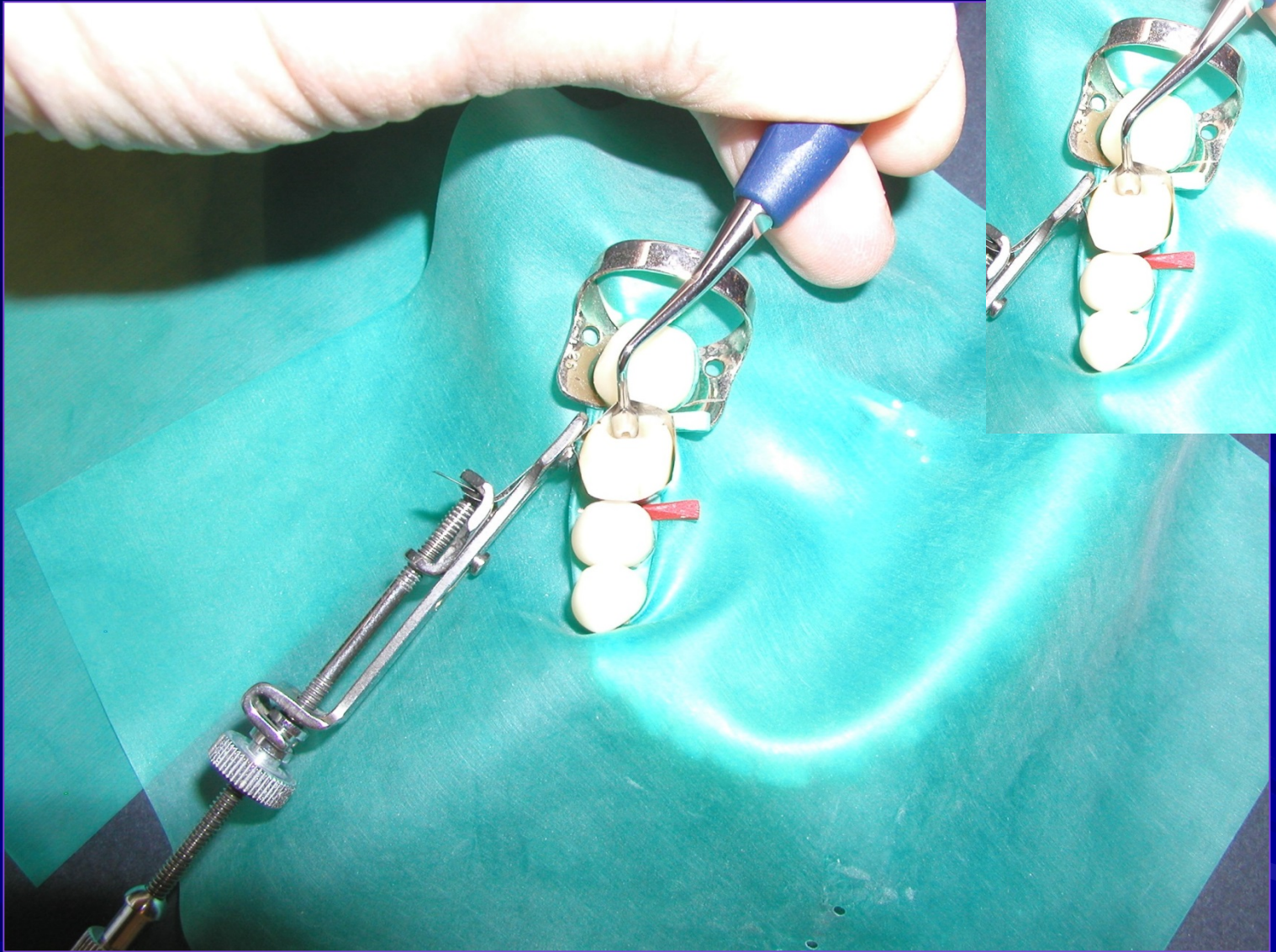






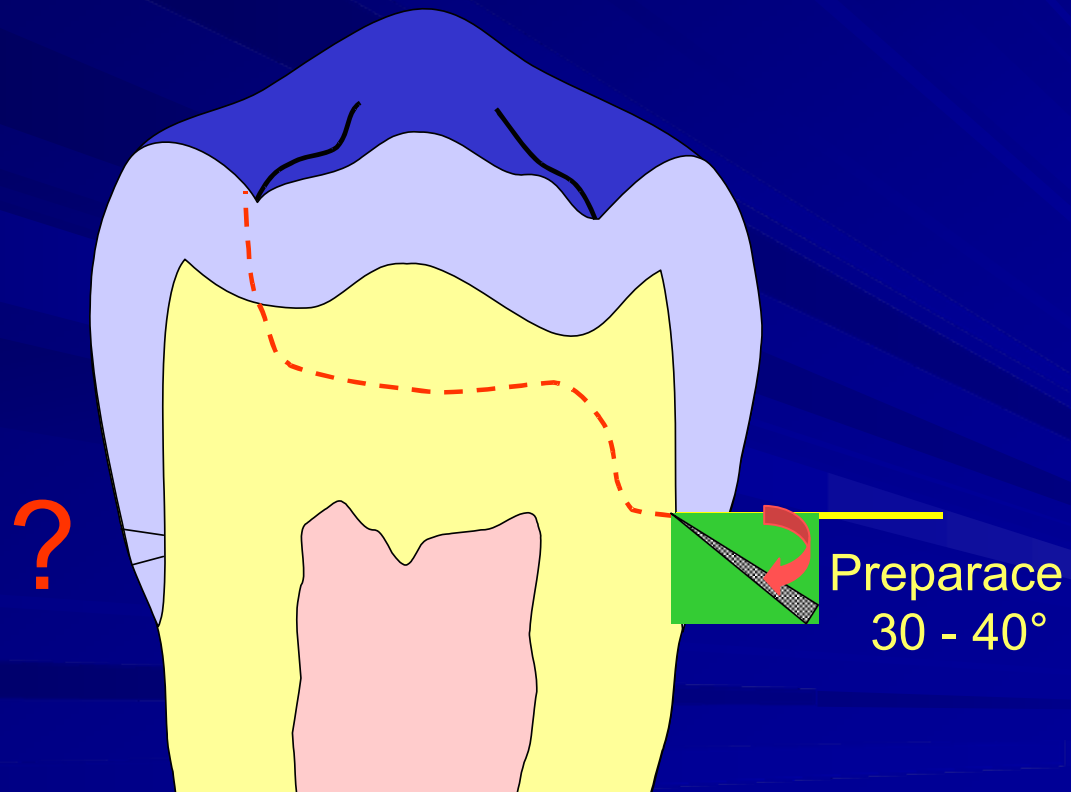






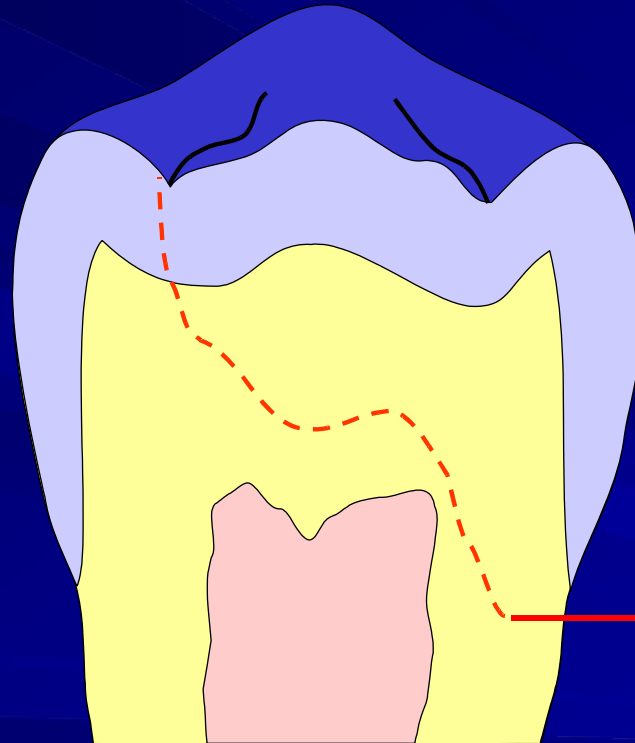
Cervikální okraje

Ve sklovině



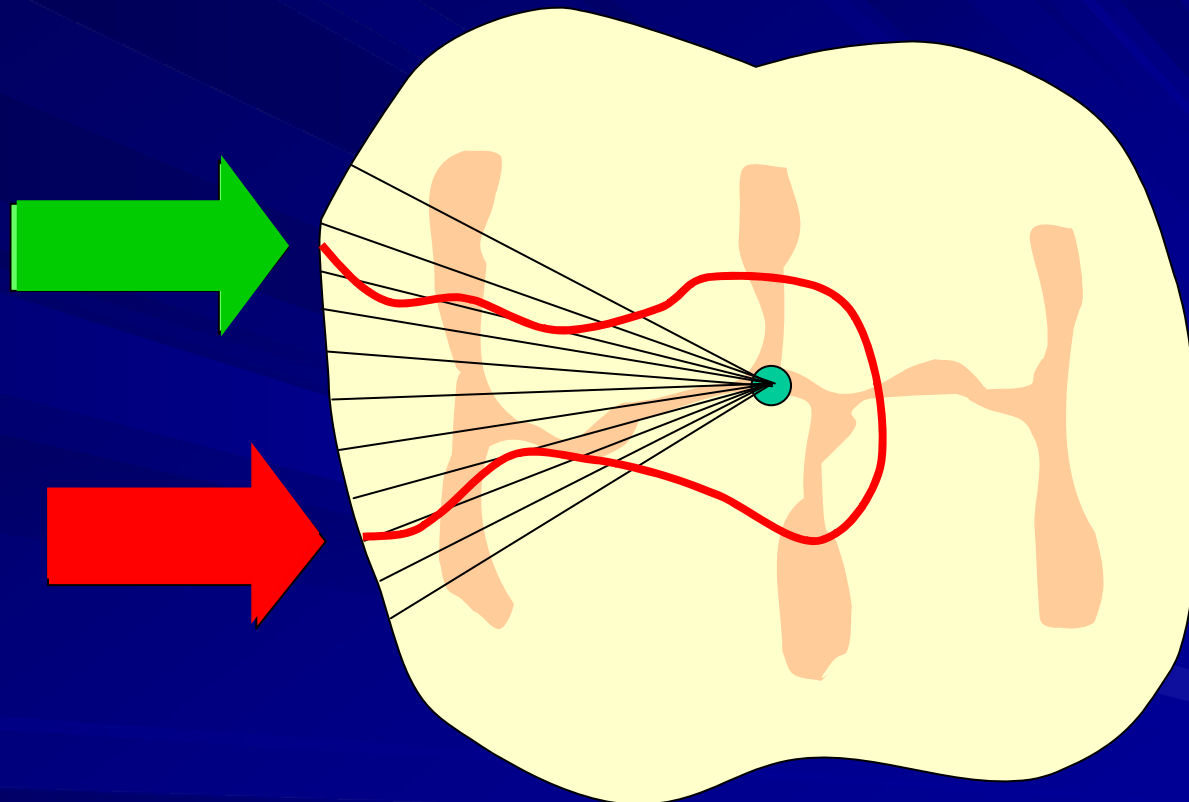
Cervikální okraje

V dentinu

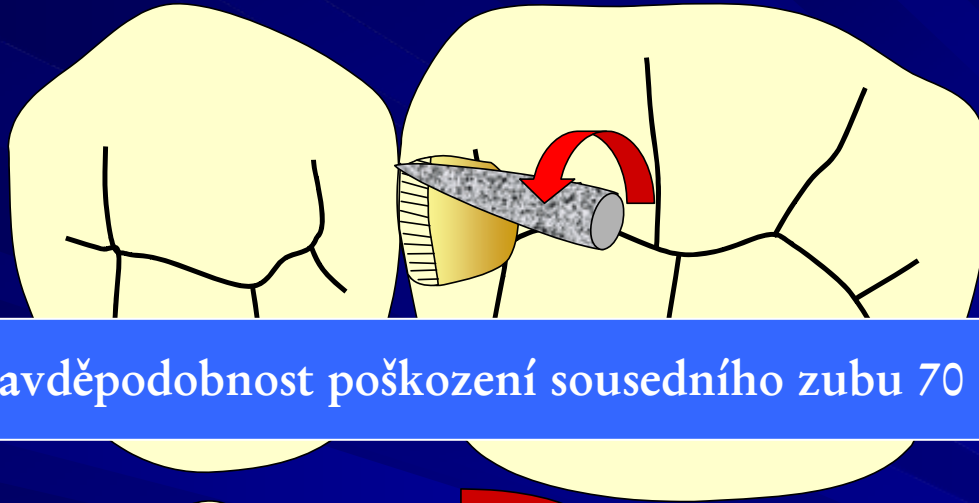


Preparace
nešikmit!!!

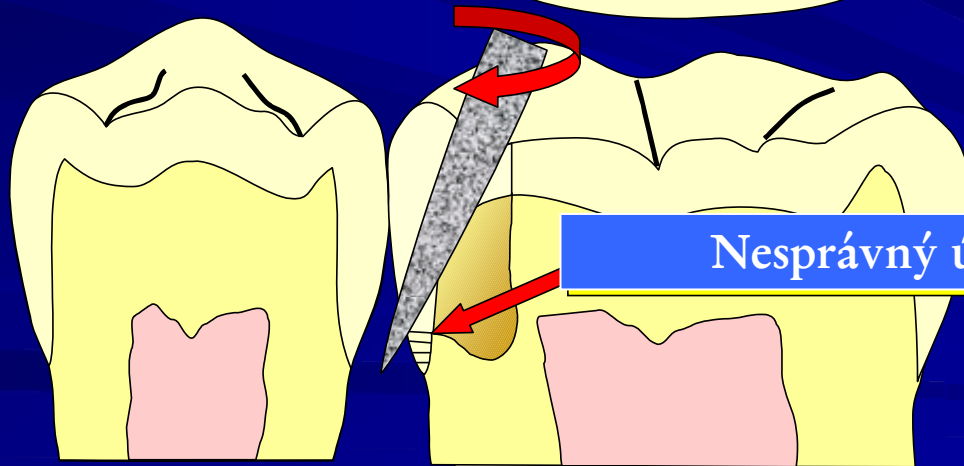
Interproximální vertikální okraje



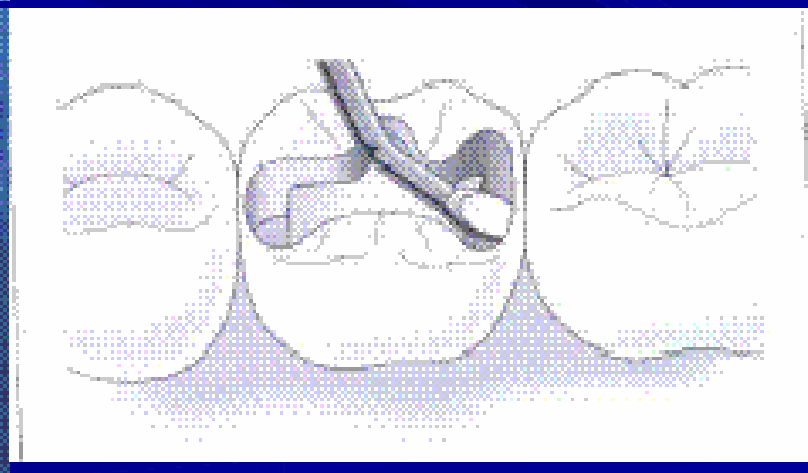
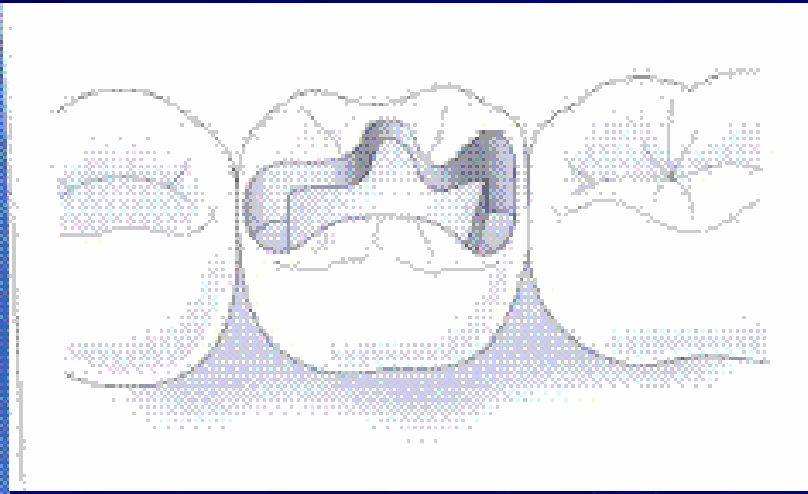
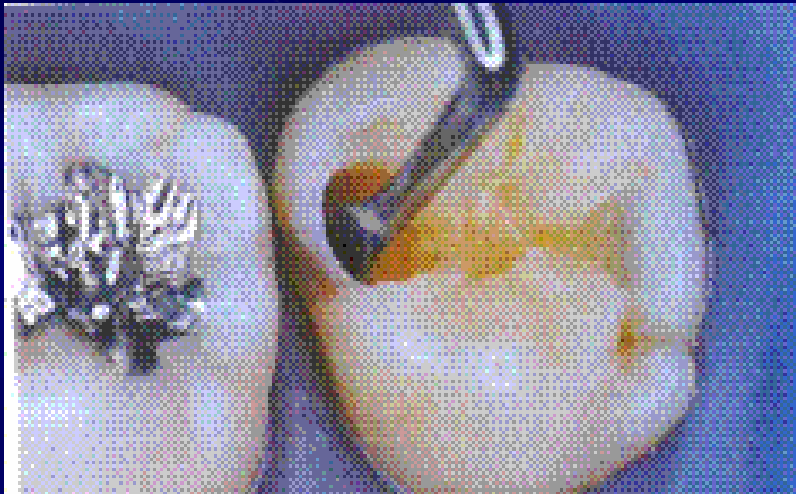
Preparační technika



Pravděpodobnost poškození sousedního zubu 70 – 100%



Nesprávný úhel preparace



Filling and Caries Excavation



Proximal Preparation with SonicSys



Final Preparation of Cavity



Approximal Caries



Approximal Caries

















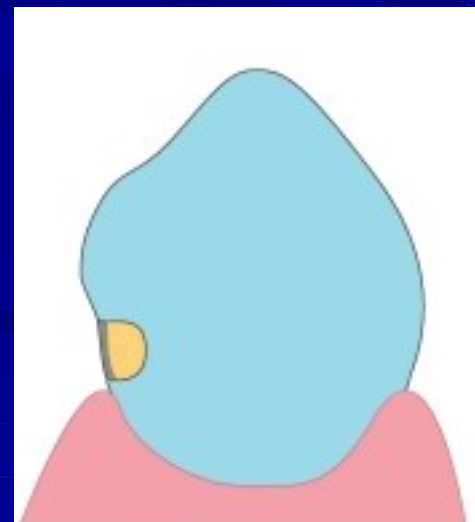
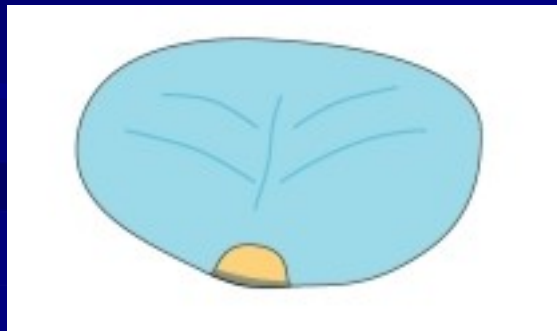
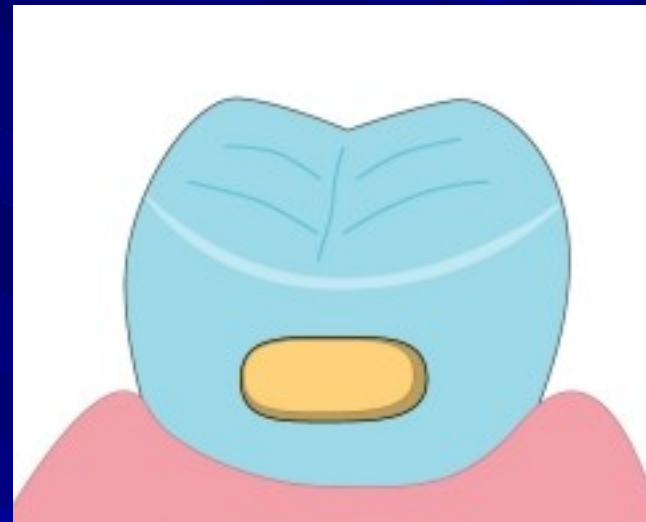
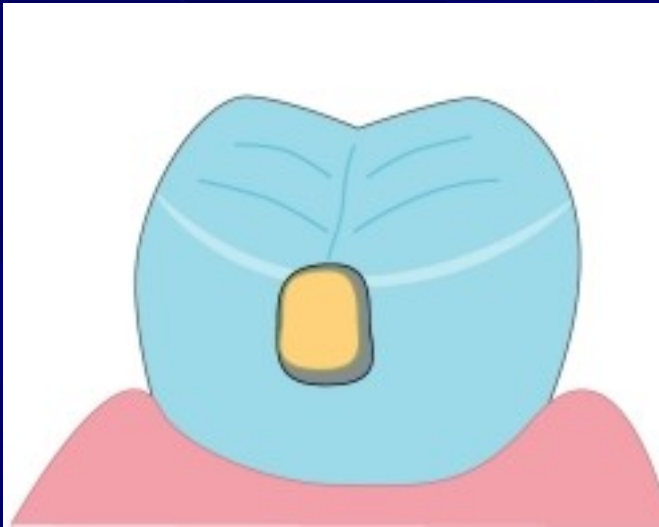


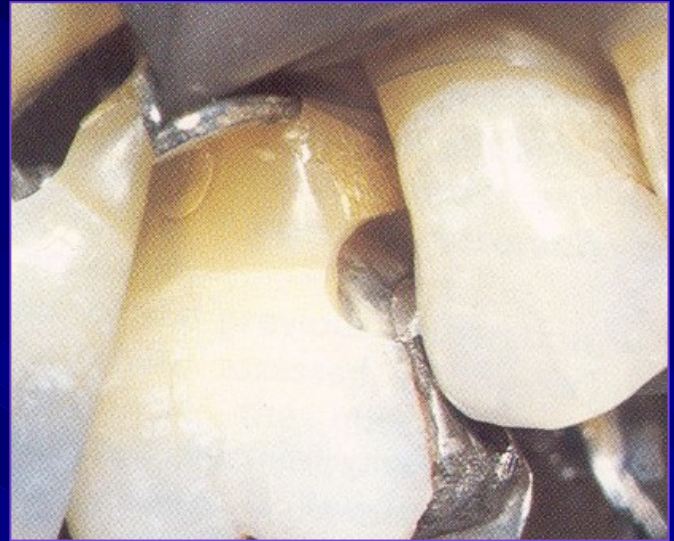


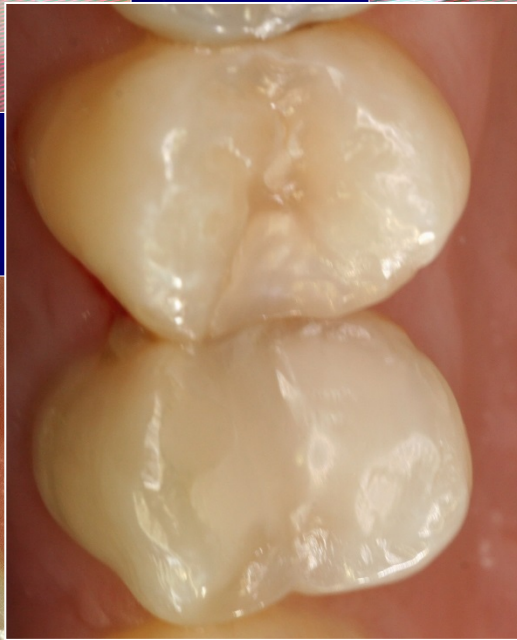




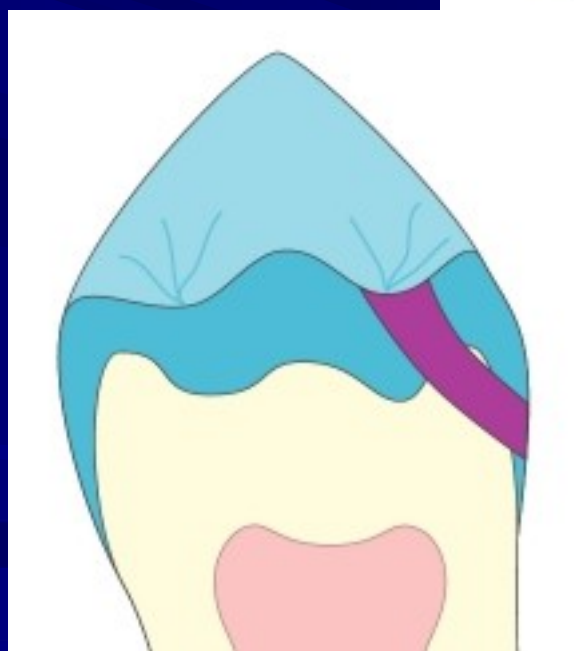
Adhezivní slotová preparace

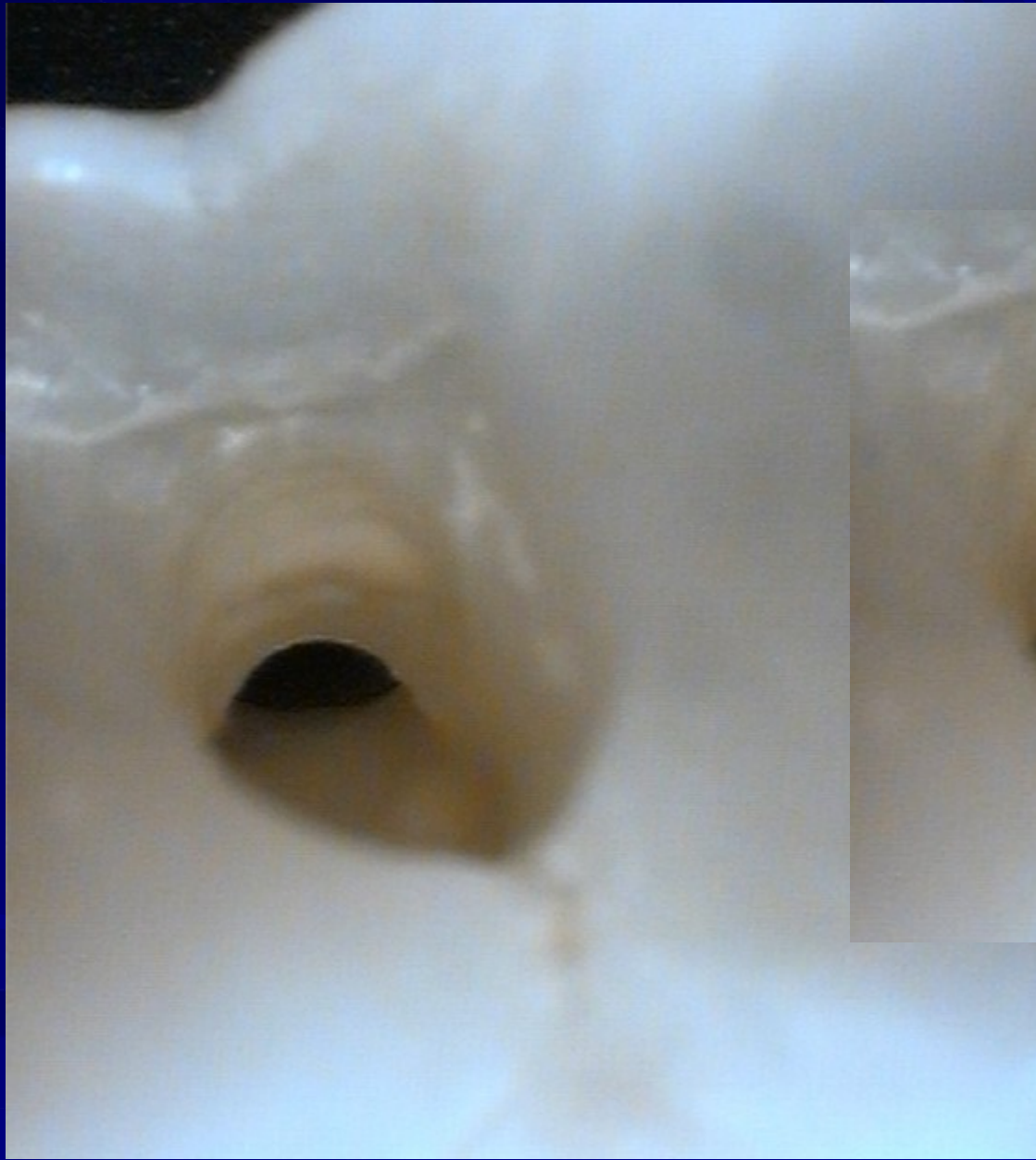


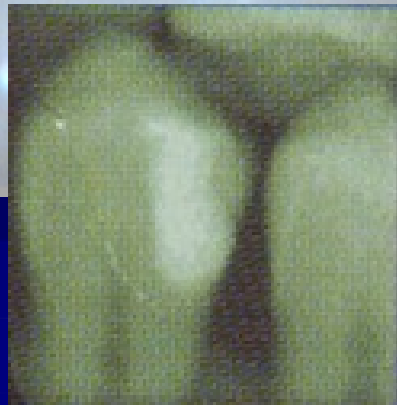
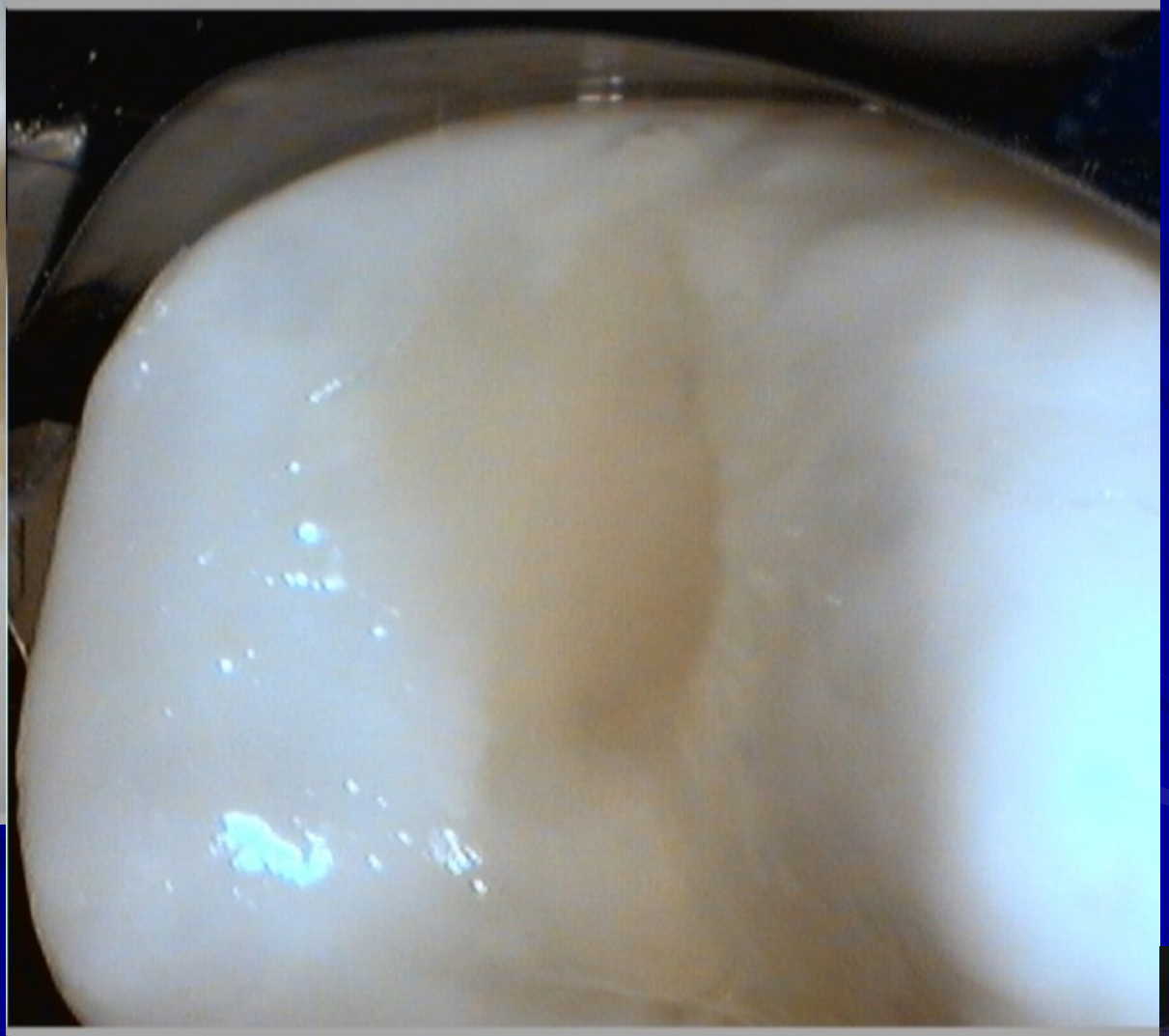
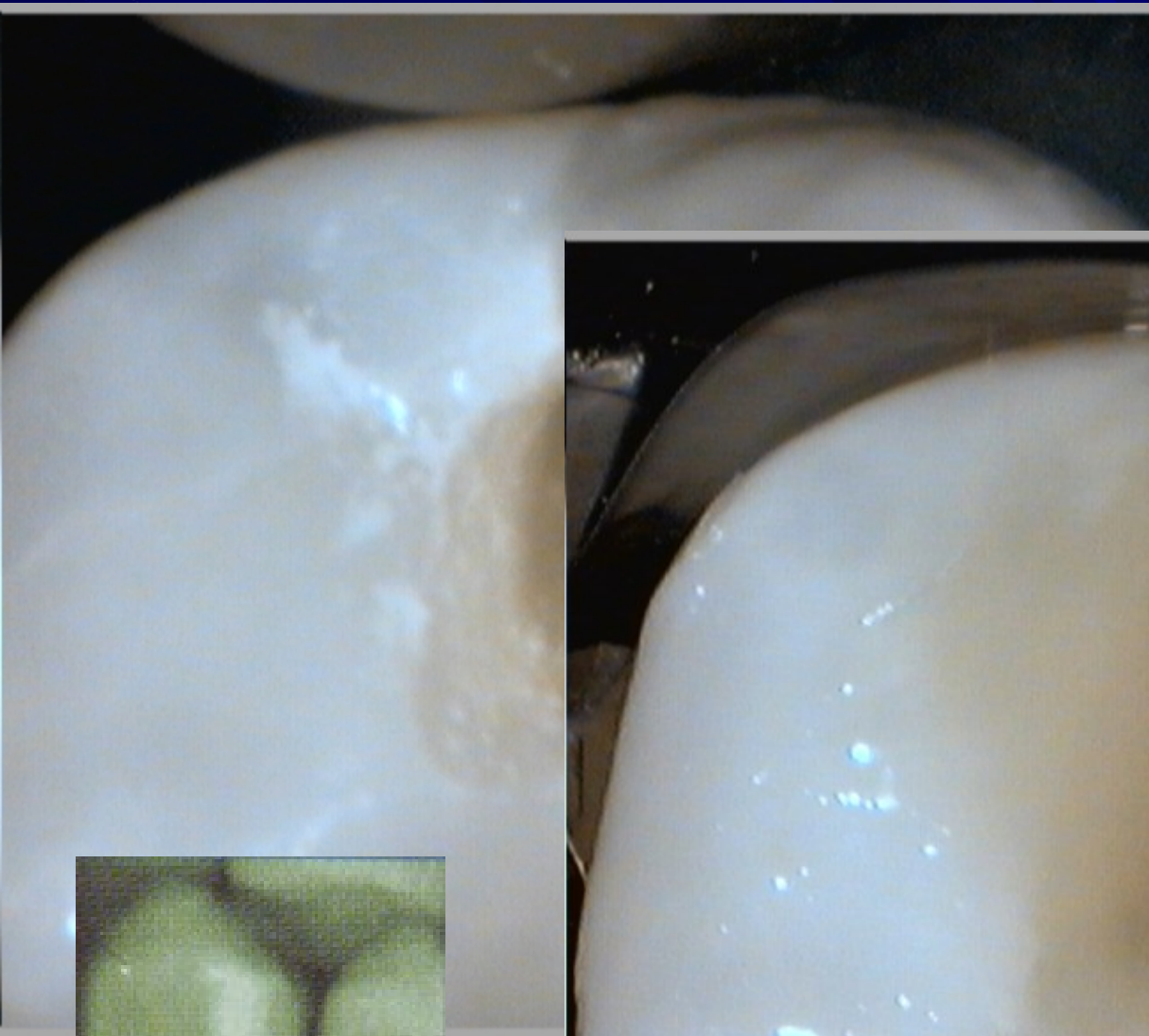




Tunelová preparace









Úspěch tunelu????

1. Nízké riziko sklonu k novým kazům
2. Spolupracující pacient
3. Okrajová lišta bez infrakcí
4. D2 - D3



Úspěch tunelu????

1. Lupové brýle nebo mikroskop
2. Miniaturní instrumenty
3. Dezinfekce kavity
4. Jedině GIC v kapslích
5. BW post op



➤ ART

