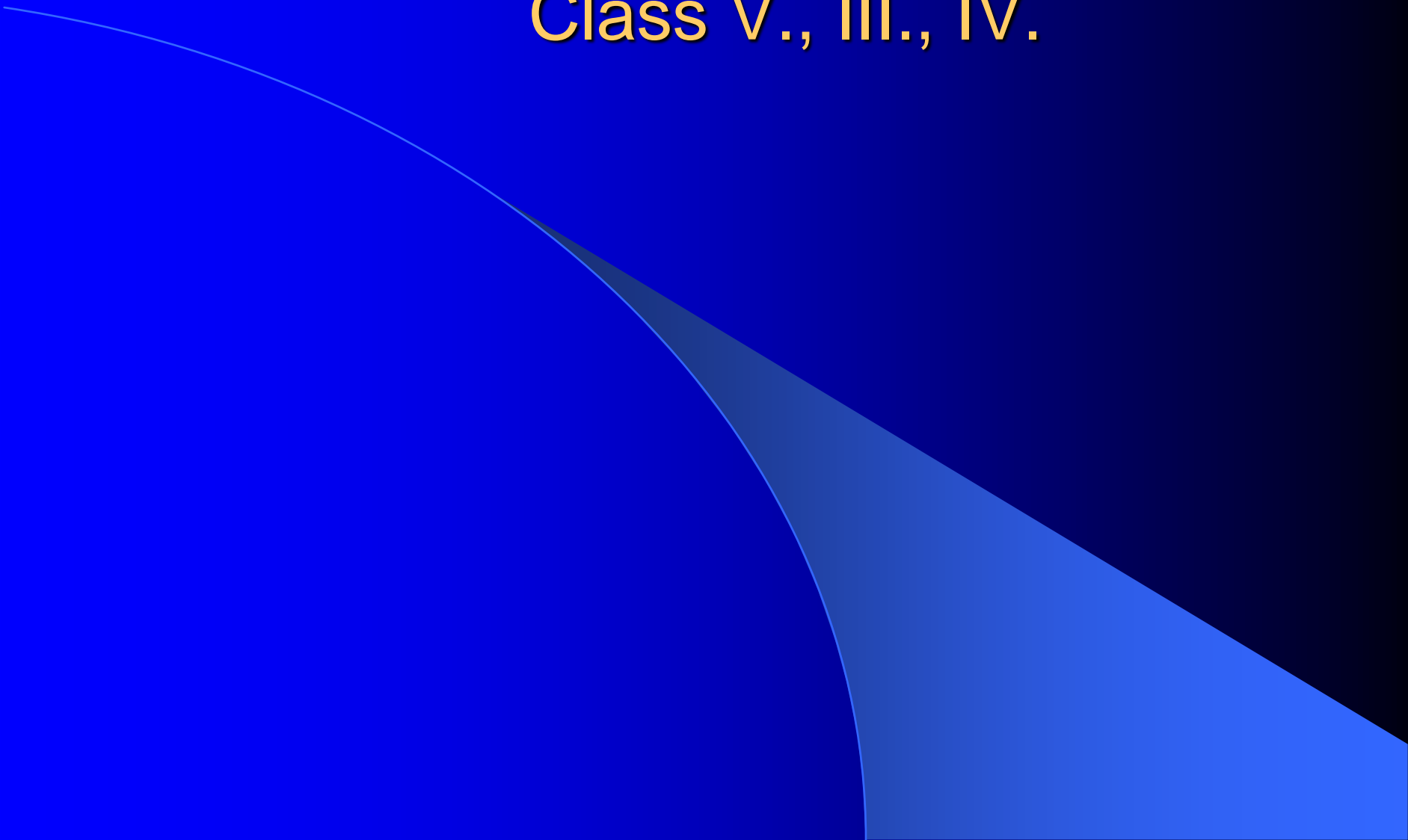


# Preparation and making fillings

## Class V., III., IV.

A decorative graphic element consisting of a blue gradient shape that starts as a thin line on the left and curves downwards and to the right, ending as a solid blue area at the bottom right corner of the slide.

# Class V.

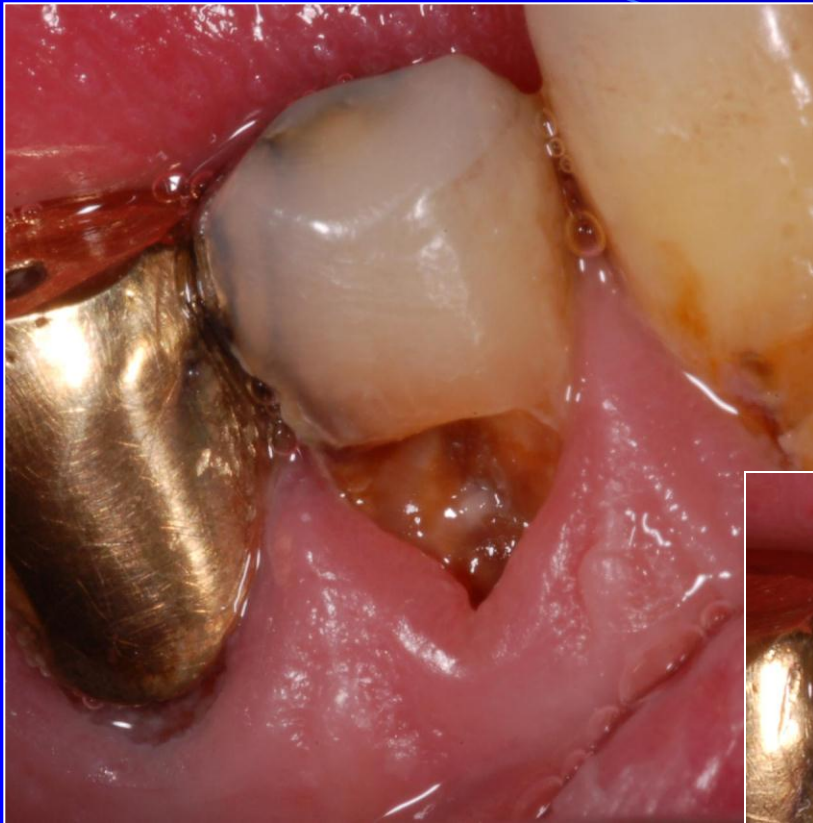
- Cervical defects
  - Dental caries
  - Non carious lesions (erosion, abrasion, V shaped defects)

# Types of defects

- Caries
- Erosion
- Abrasion
- V shaped defects
- Erosion







# Choice of material

- Amalgam (posterior area)
- Composite (mainly in anterior teeth where the defect is situated in enamel)
- Glassionomer: caries defects, esp deeper, situated out of enamel, higher caries risk

# V.Class Amalgam

- Posterior area





# Access

- Elimination of the undermined enamel
  - Burs or diamonds (pear), tapered fissure bur
- Separation of the gingiva – temporary filling (guttapercha, fermit, clip, zinc oxide sulfate cement, cavit, provimat).
- Ablation of ingrown gingiva – surgical (scalpel, laser, high frequency current)

# Cavosurface margins

Gingival: axial depth of 0,5 mm inside the DEJ.

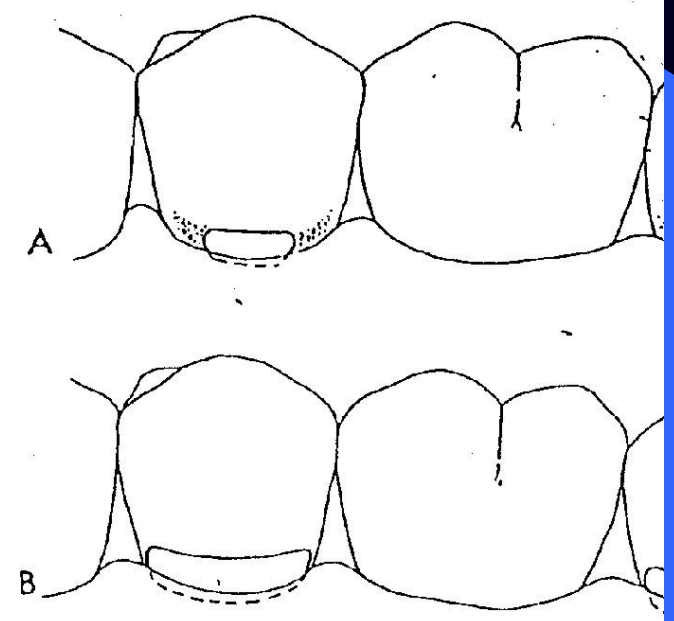
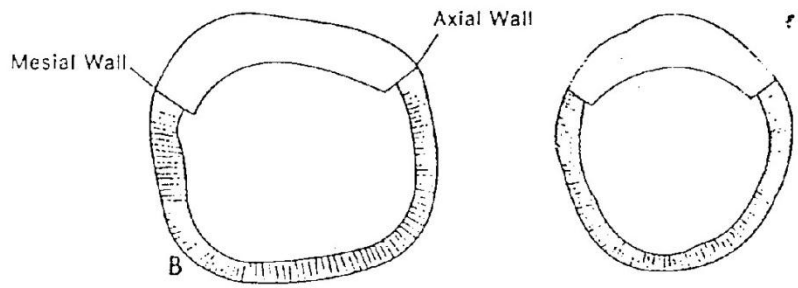
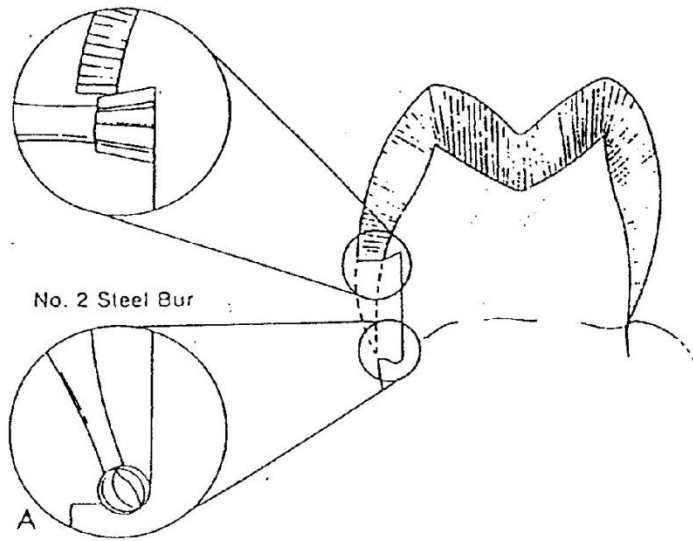
Extention of the preparation incisally,

Gingivally: 0,5 mm subgingivally

mesially and distally: to axial walls

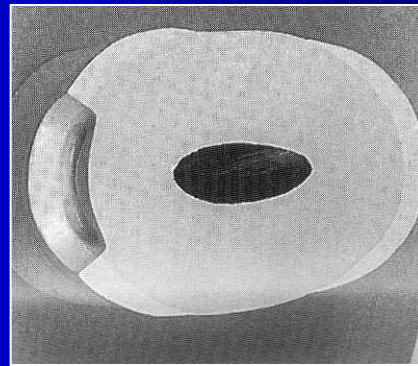
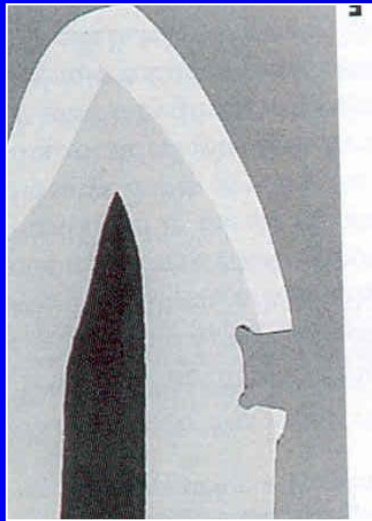
Or: untill the cavosurface margins are positioned in sound dental structure. (small cavities, good oral hygiene)

Total depth: 1 – 1.25 mm. If on root surface -0,75 mm



# Retention

- Box 0,75 – 1,25 mm deep, undercuts,



# Depth

Gingivally: axial depth of 0,5 mm inside the DEJ.

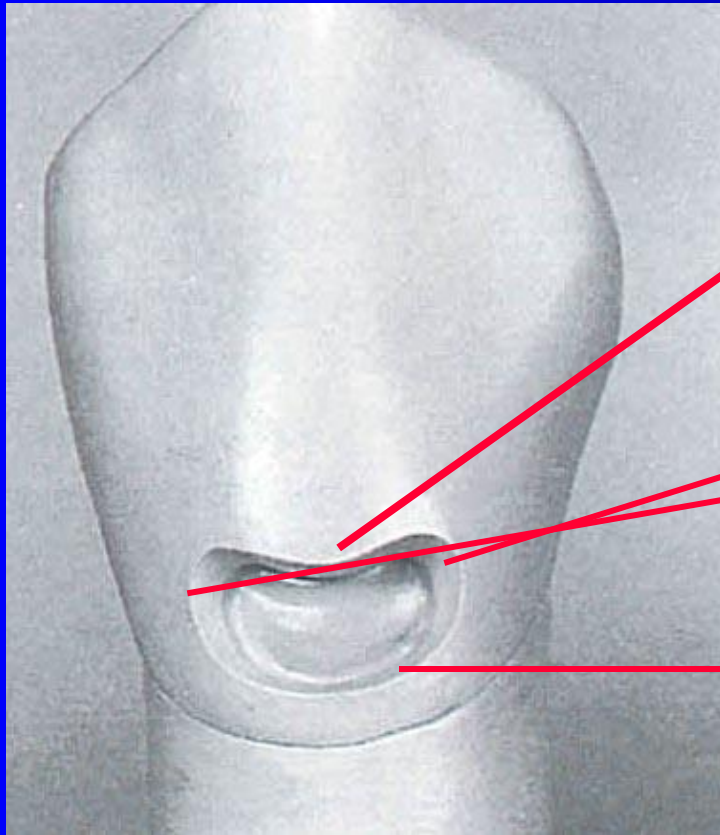
Total depth: 1 – 1.25 mm. If on root surface -0,75 mm

# Resistance

No occlusal forces



The bottom of the cavity follows the convexity of the crown.



Occlusal margin

Mesial and  
distal margin

Gingival margin

# Filling

Base – pulpal wall

Amalgam – portion by portion, condensor with straight front, burnisher (spatula).



# Class V. composit

- Aesthetic area
- Margin in enamel



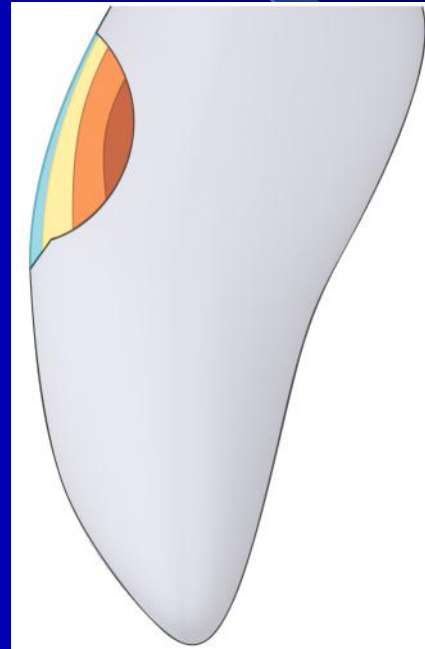
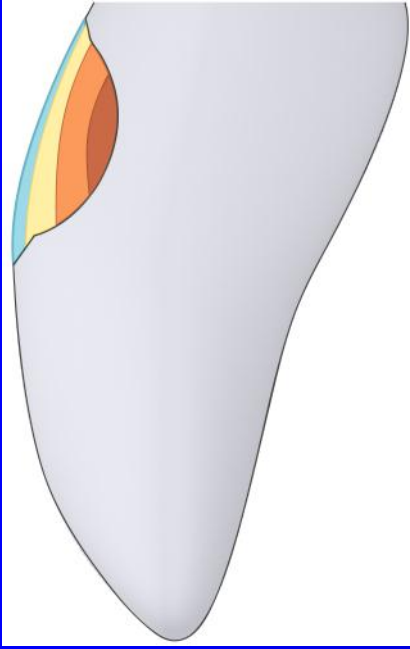
# Preparation for composite, making filling

Cavity is limited on caries lesion only

Enamel must be beveled

Etching, priming + bonding

Placement of composite



# Matrices

Transparent cervical matrices

Matrix band acc. to Belvedere







← Laser



← laseri nastroj



# Class V. glassionomer

- Cavities with margins in cementum
- Or also in enamel or partly in enamel (in patients with worse level of oral hygiene)



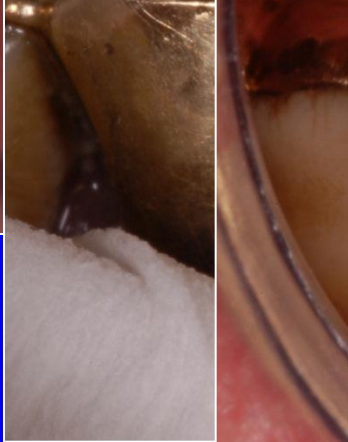
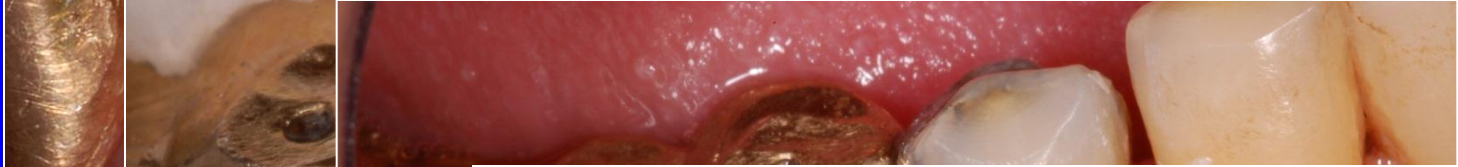
# Glassionomer

- Bonds chemically
  - Release fluoride ions
  - Thermal expansion similar to dentin
  - Acceptable aesthetics



# Preparation for glassionomer making filling

- Cavity is limited on carious lesion only
- Margins should be smoothed (no bevel)
- Conditioner (polyacrylic acid) -20 s
- Washing
- Placement of glassionomer (one bulk)
- Matrix (transparent or aluminium cervical matrix)

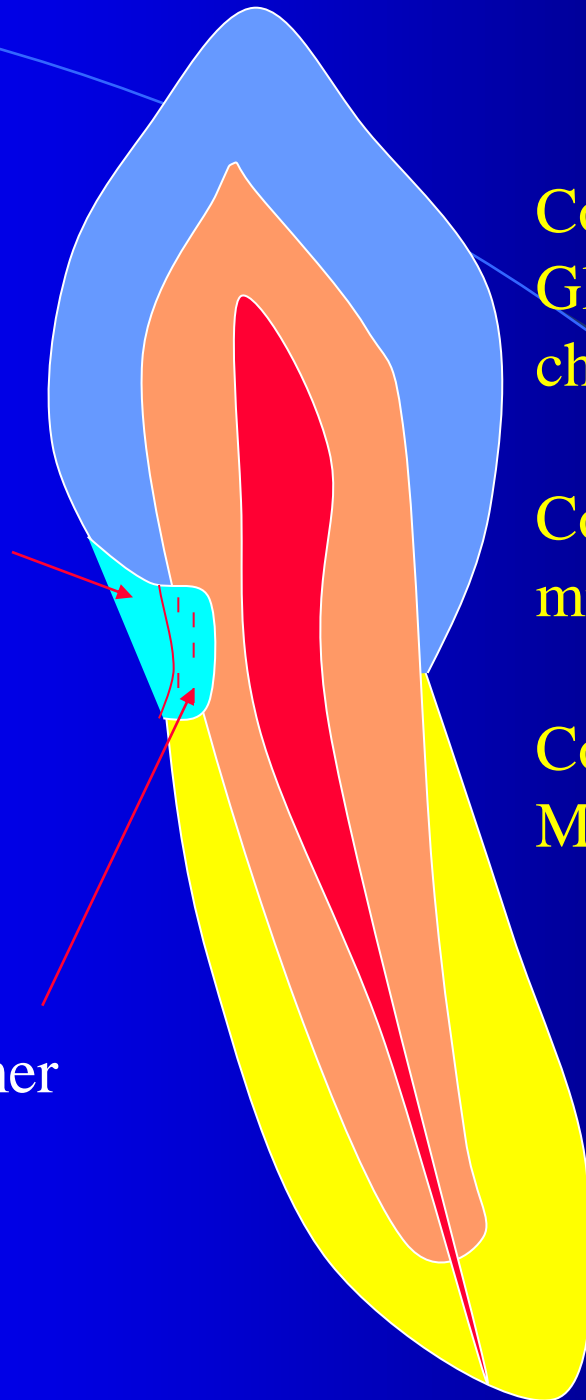


# Combination of materials

- Glassionomer – replaces lost dentin
- Composite – replaces lost enamel

Composite

base of glassionomer

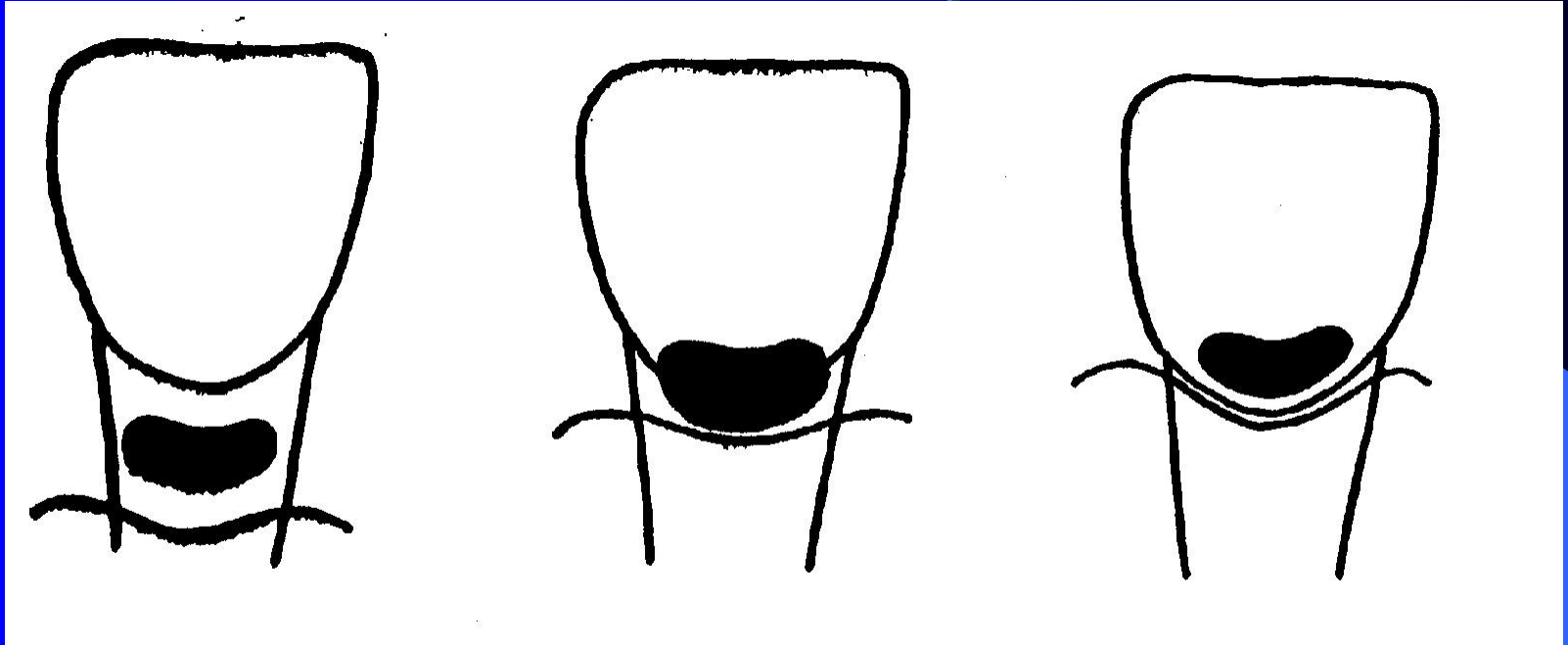


Connection  
Glassionomer – tooth:  
chemical

Composite – tooth:  
micromechanical

Composite – glassionomer  
Micromechanical.

# Choice of materials



Glassionomer

Combination

Composite

Or amalgam in posterior area

# Class III.

Proximal surface of frontal teeth (incisors and canines) without loss of incisal edge

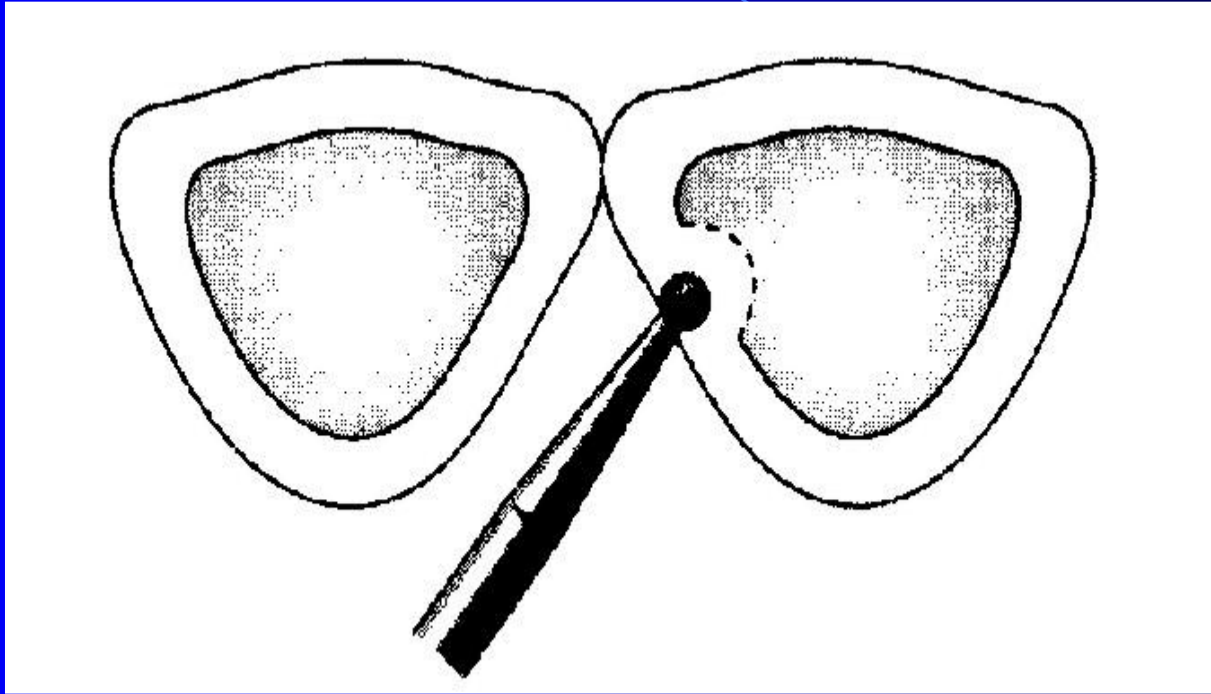


# Access to the cavity

- **Through the enamel from the oral side**
- **Removal of old filling**
- **Separation of teeth - wedges**
- **Removal of hyperplastic gingiva**



# Access

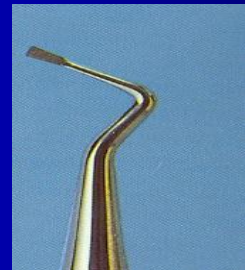


Round bur or diamond,  
from oral side,  
the caries lesion  
on proximal wall must be reached



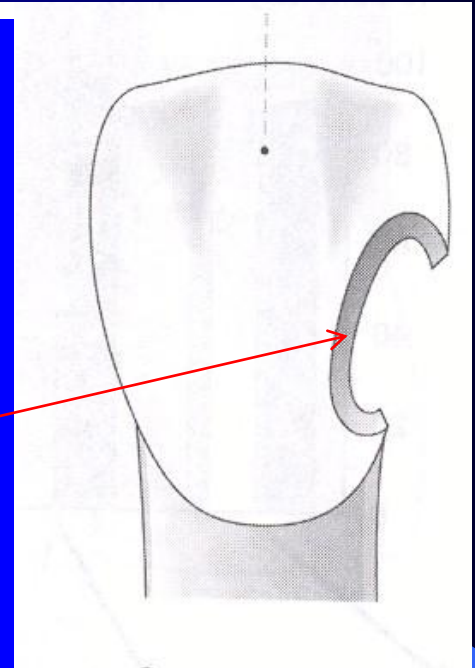
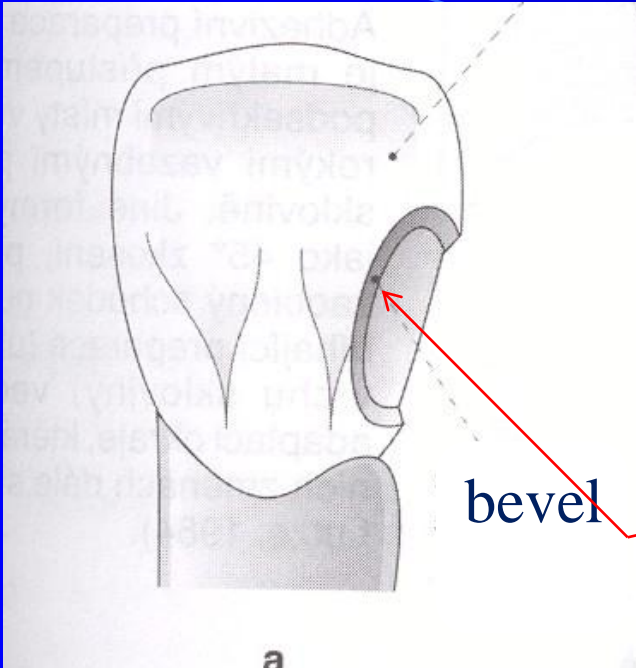
# Cavosurface margin

- Cavity is limited on carious lesion only
- Margins must be beveled



# Retention

- Margins must be beveled – micromechanical retention



Dry field!!!!



# Etching of enamel and dentin



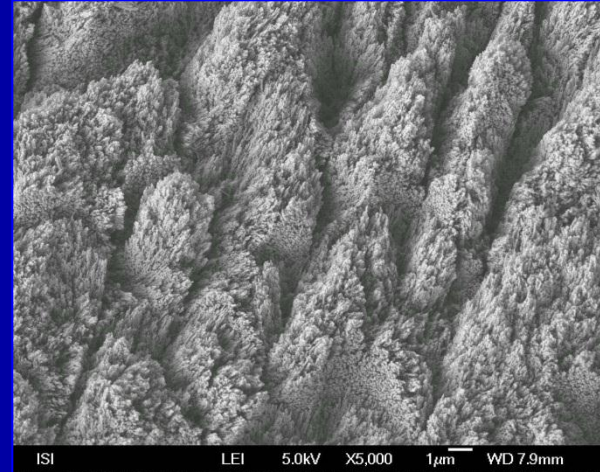
# Bonding



# Surface Morphology for Adhesion

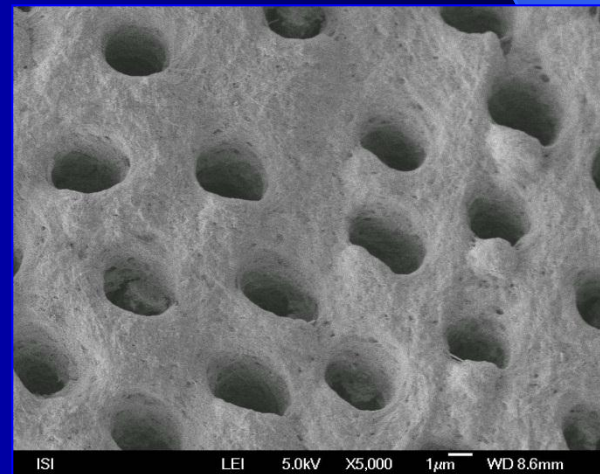
## ➤ Enamel

- regular surface with opened inter/intraprismatic spaces



## ➤ Dentin

- no smear layer
- opened dentinal tubules
- collagen with microscopic spaces (after etching)



# Preparation





# Preparace kavity



# Acid etching – protection of the tooth



# Matrix and wedge, bonding



# Palcement of the composite







# Layering of the composite

- Palatal wall (matrix in situ) – enamel shade
- Dentin shade
- Enamel shade

Matrix has been removed





# Finishing



Ultrafine diamonds.  
Flexible discs

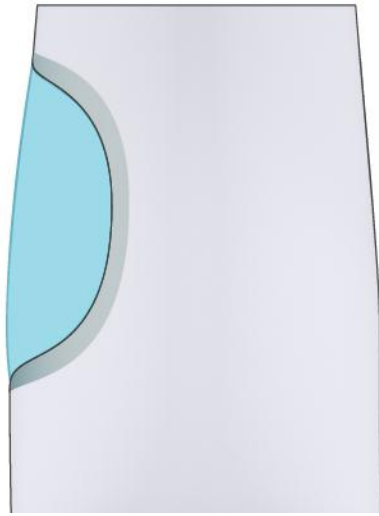
# Polishing



Rubber cups,  
brushes

# Finished filling







# Class IV.

*Defects on proximal surfaces  
premolars and molars with loss of  
part or complete incisal edge*

*Dental caries*

*Trauma*



**Access**



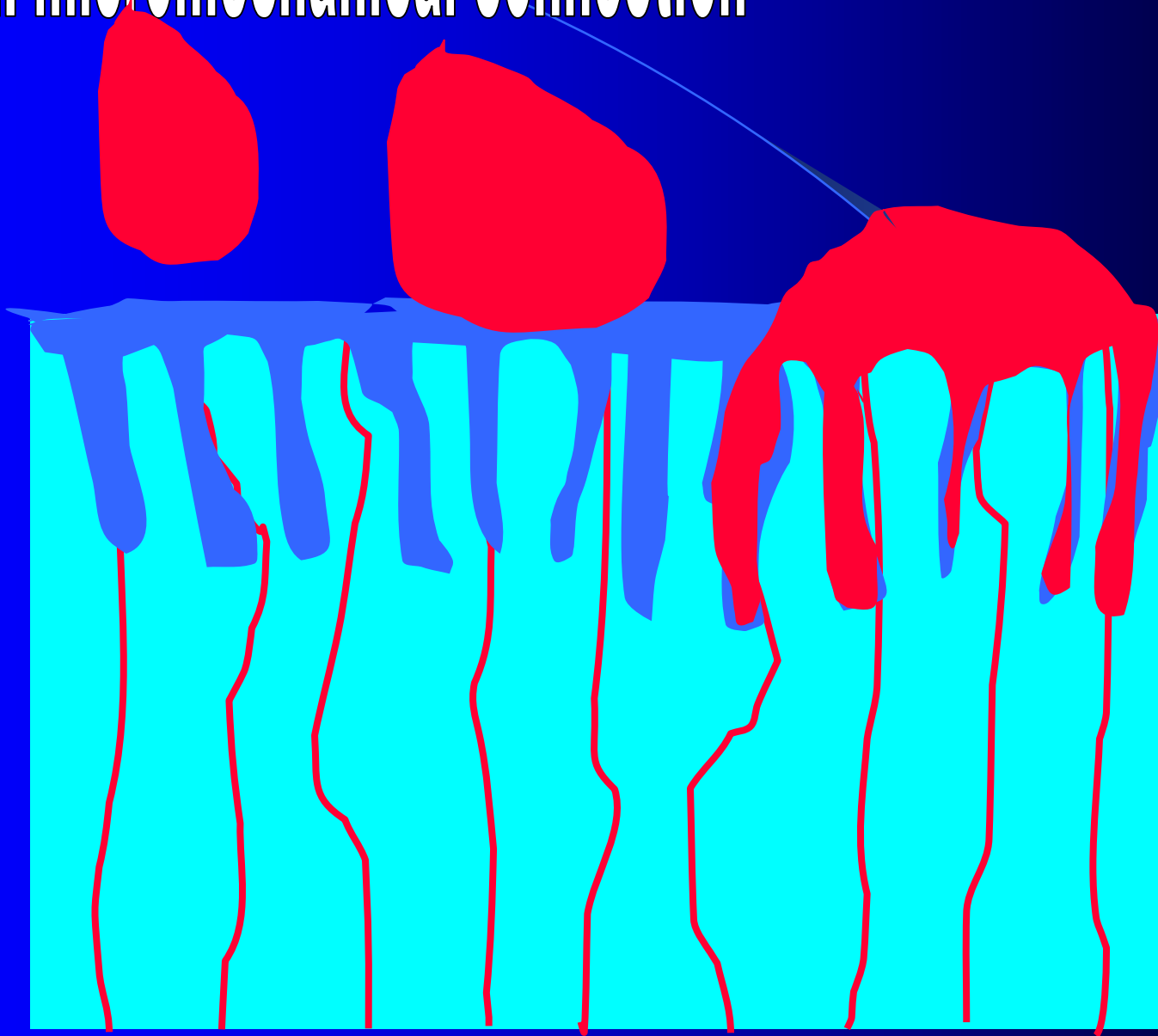
# Cavosurface margin

Preparation is limited on the defect



Compoiste is plastic material  
of only choice

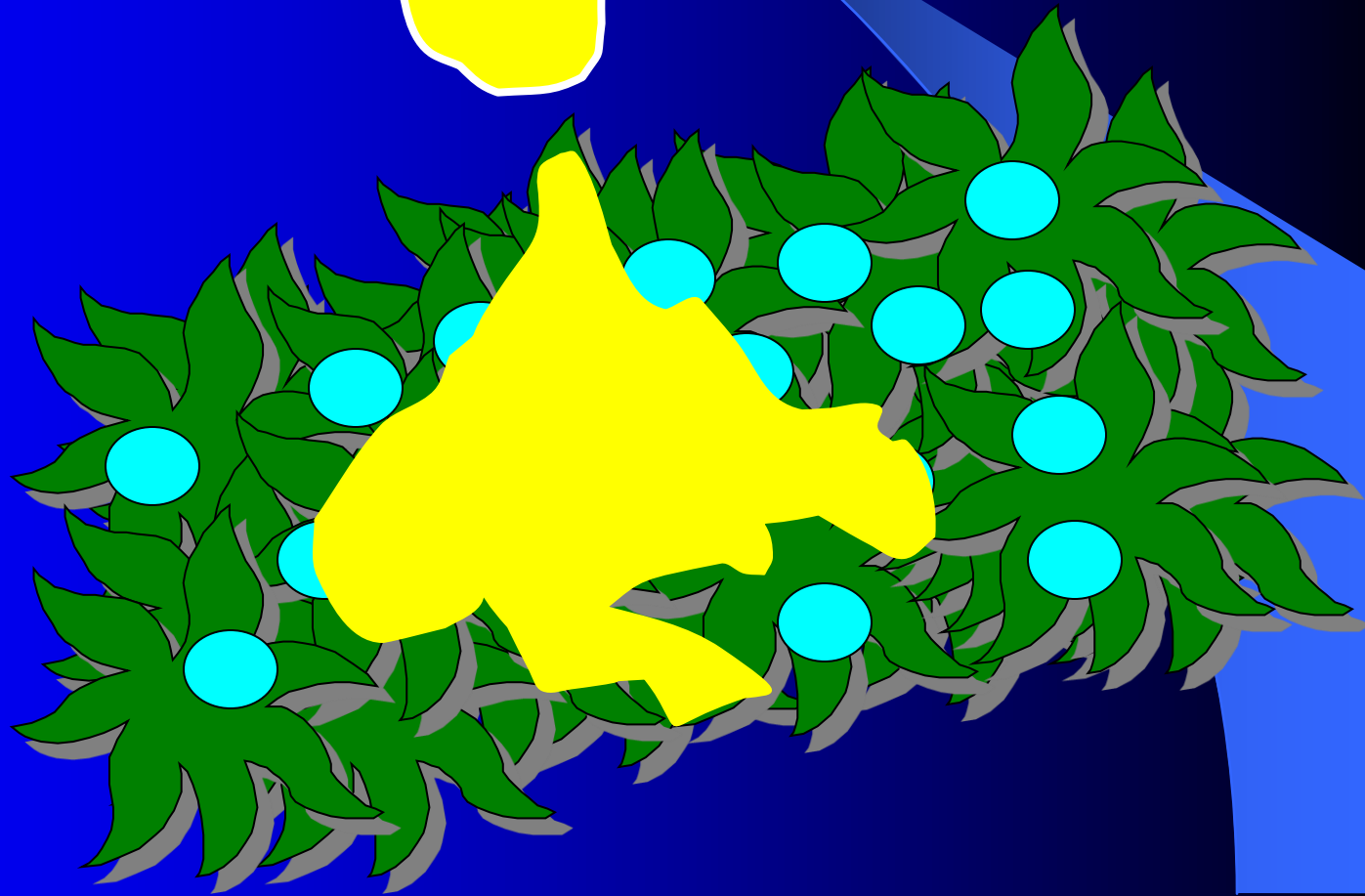
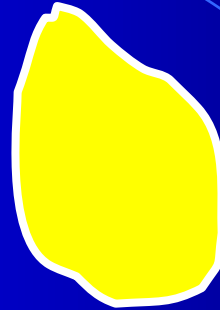
# Enamel: micromechanical connection



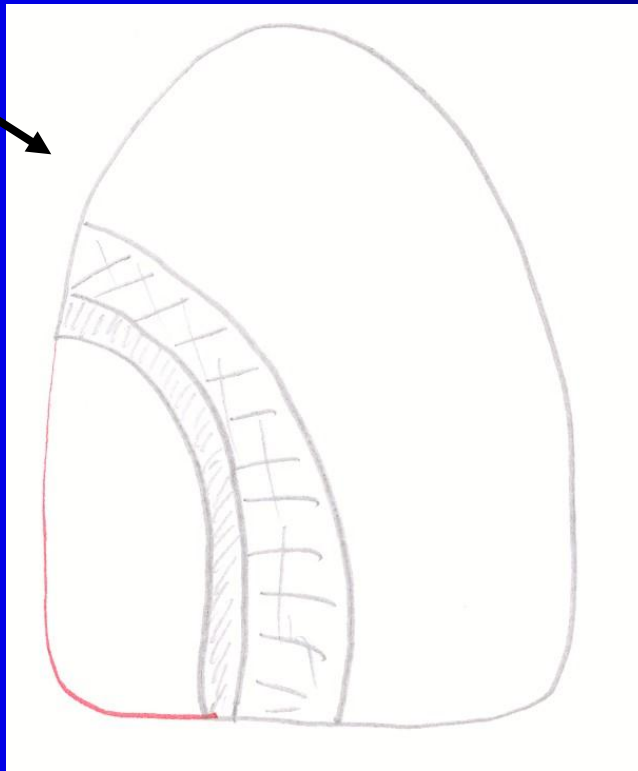
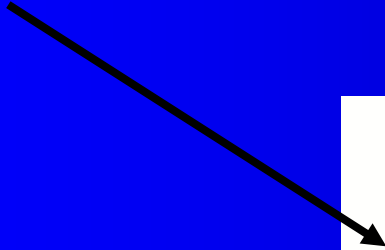
# Dentin

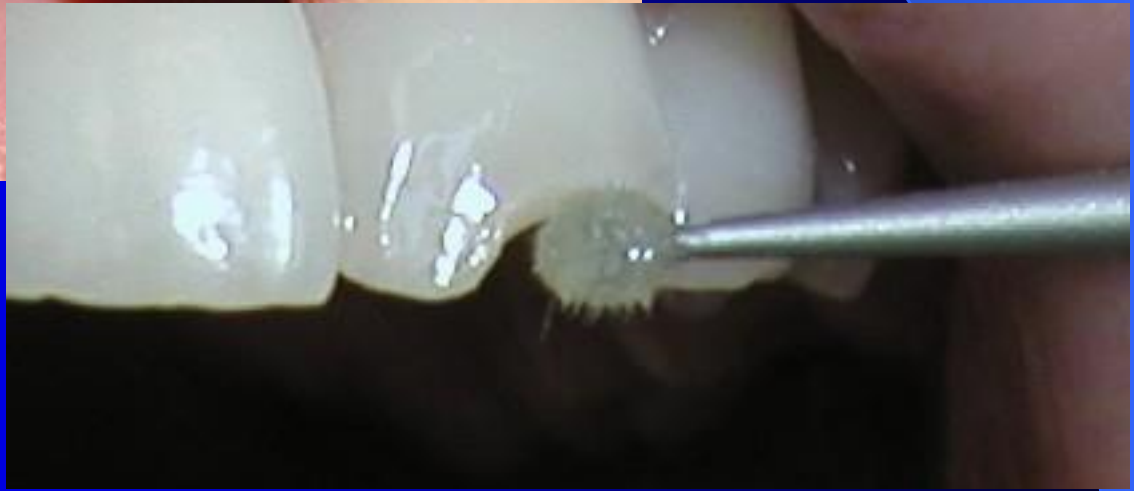
Micromechanical connection

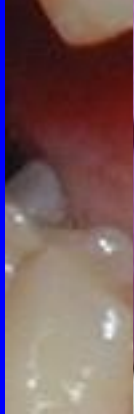
Primer and  
bond

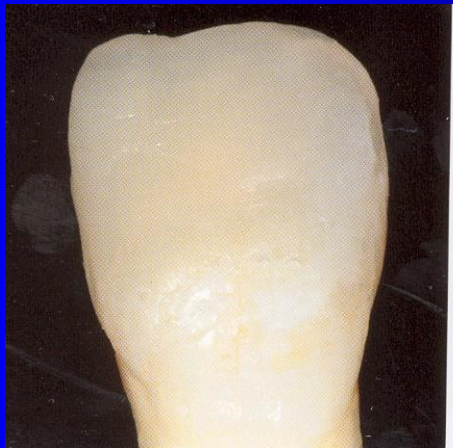
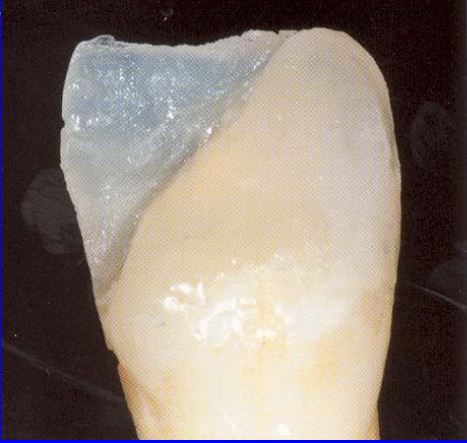


The enamel must be beveled











# Silicone matrix



Oral surface



Incisal edge











