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Preclinical dentistry I.

Class I. modifications

Modifications of the class I.

- Composite

- Inlay

Preparation for composite

The cavity is smaller – more narrow depending on the size of the carious lesion. The shape is a box with rounded edges.

Undercuts are not prepared, the walls are smooth.

In the case when the lesion is small the cavity could be limited on carious lesion only, fissures going to the lesion are opened and sealed.

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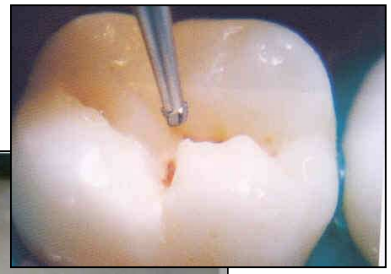
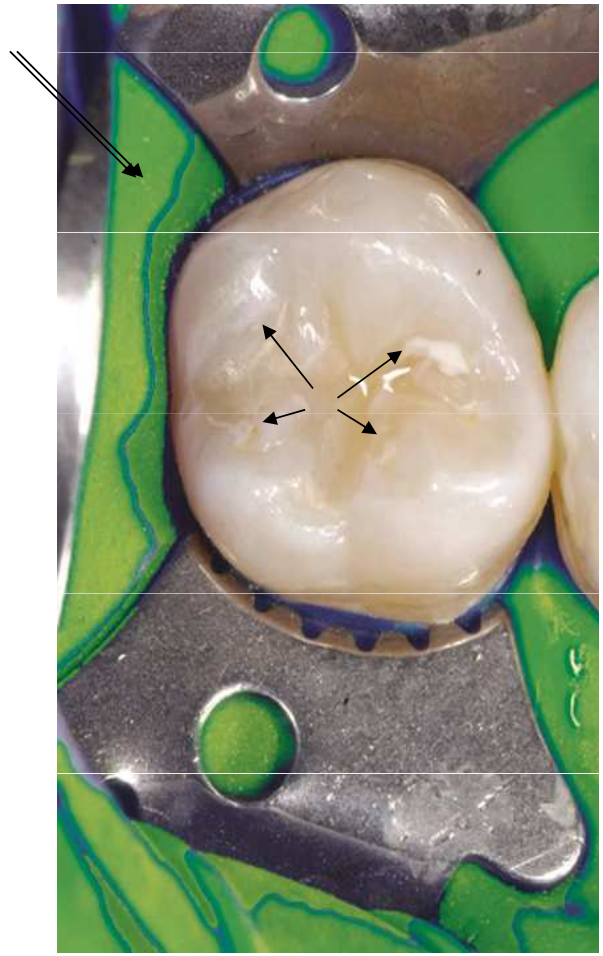


Sequence of operation

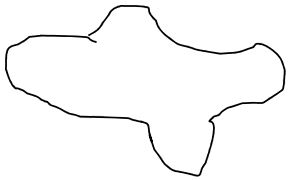
- Preparation
- Acid etching (enamel 30 s, dentin 10 s)
- Washing (10s at least,better as long as the etching lasted in enamel)
- Removal of access of water
- Application of the primer
- Application of the bond
- Layering of the composite material
- Finishing and polishing



The filling is built cusp by cusp

Preparation for inlay

- Inlay is a rigid filling
- Made out of cavity (dental laboratory) and luted into the tooth
- Preparation is different: box with walls that are slightly divergent
- Preparation is slightly asymetric – orientation by application into the cavity is then easier



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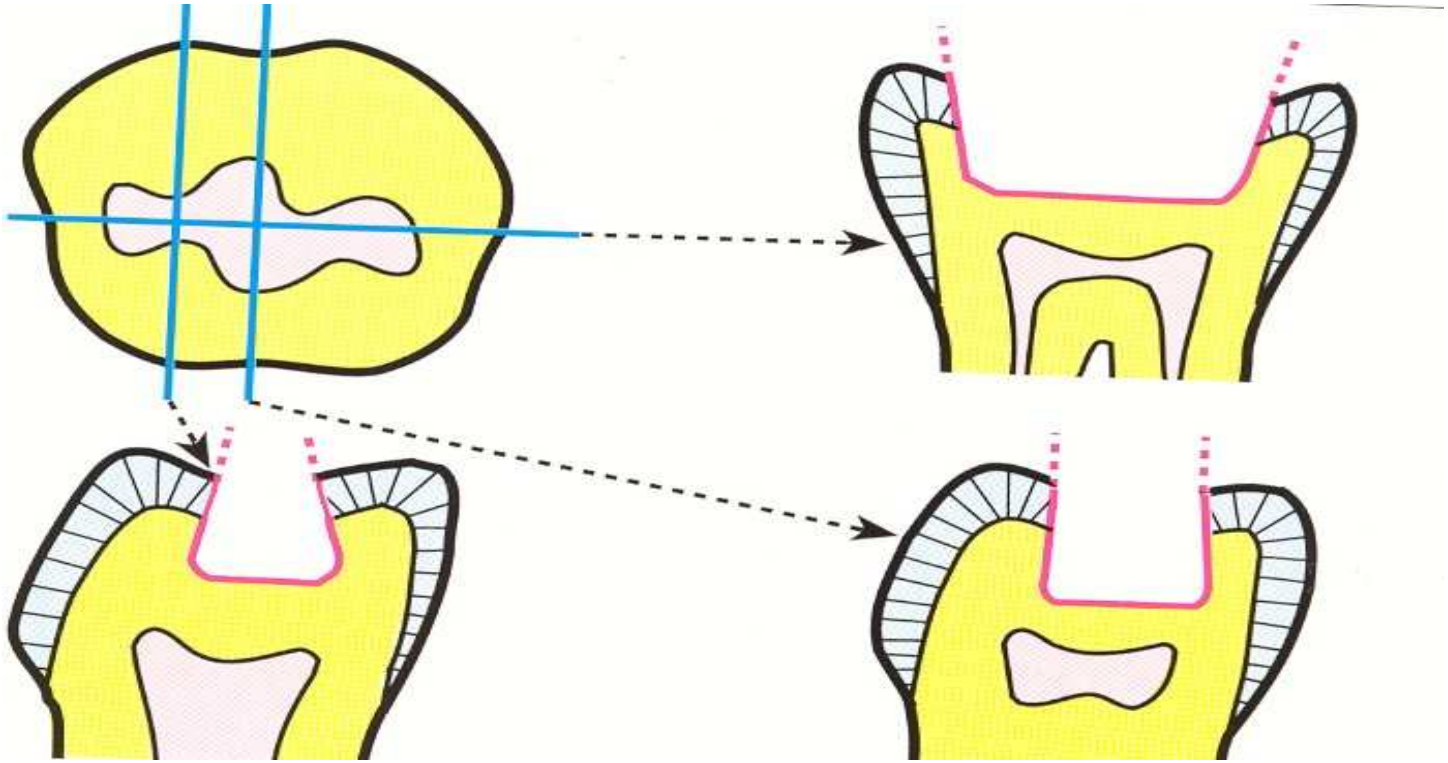

Inlay

- Can be made of metal alloy
- or comopsit or ceramics

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Indication

– Large defects that can not be restored with plastic fillings

Inlay - disadvantages

1. More hard dental tissues are lost
2. The fabrication is more difficult

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Contraindication

1. Small and shallow cavities
2. High caries risk.
3. Frontal area

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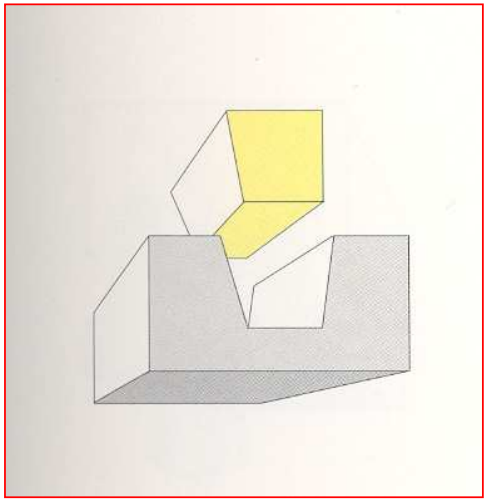
Classification

Inlay

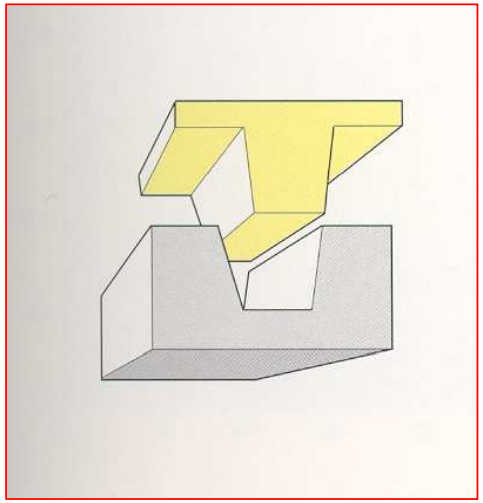
Onlay

Overlay

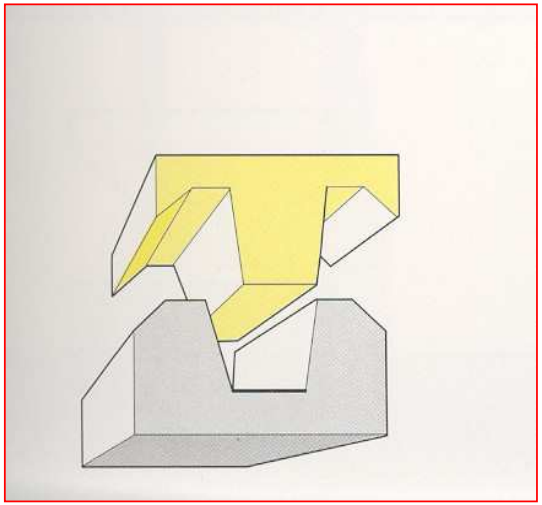
Inlay



Onlay



Overlay



Basic rules of the preparation

- Box
- No undercuts
- Slight divergency of walls

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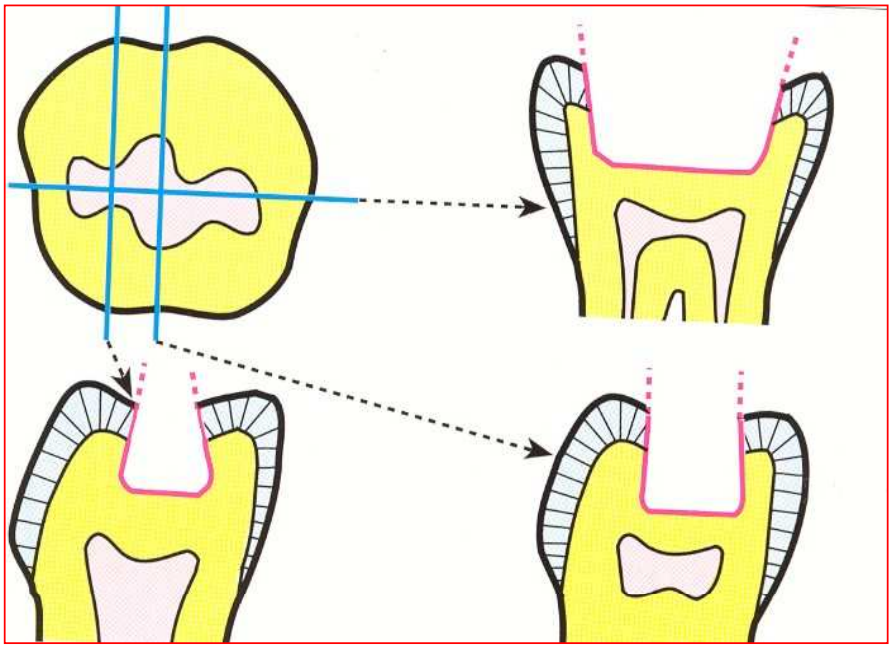

Usnadňující forma

Metal inlay - fabrication

- Direct method

- Indirect method

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Direct method

- Cenral cavities only

- Wax pattern is made directly in oral cavity

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Direct method

1. Phase in dental office

Preparation

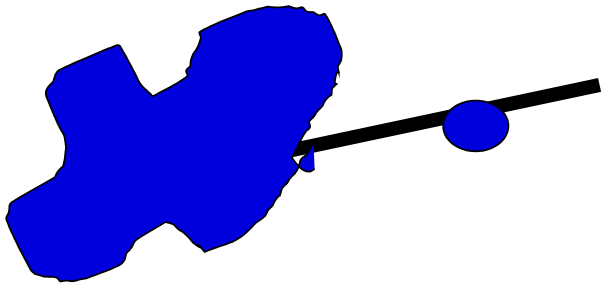
- Isolation
- Modellation
- Sprue pin with the reservoir
- Taking from the cavity

Phase in ental lab

- Investment
- Casting - lost wax method
- Finishing, polishing)

2. Phase in dental office

- Trying
- Luting



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Indirect method

1. Phase in dental office

Preparation
Taking impression – elastomeric materiál, antagonal impression – alginate, registration of intermaxillary relationships - wax
Phase in dental lab
Making the model –gypsum
Modellation of the wax pattern
Investment
Casting - lost wax method
Finishing, polishing)

2. Phase in dental office

- Trying
- Luting

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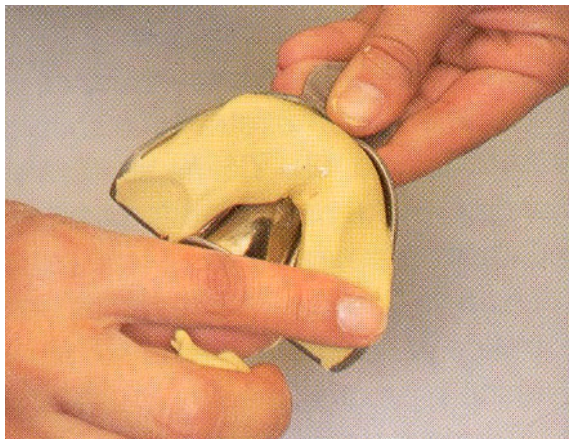
Impression – elastomeric material



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Antagonal impression

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Registration of intermaxillary relationship - wax

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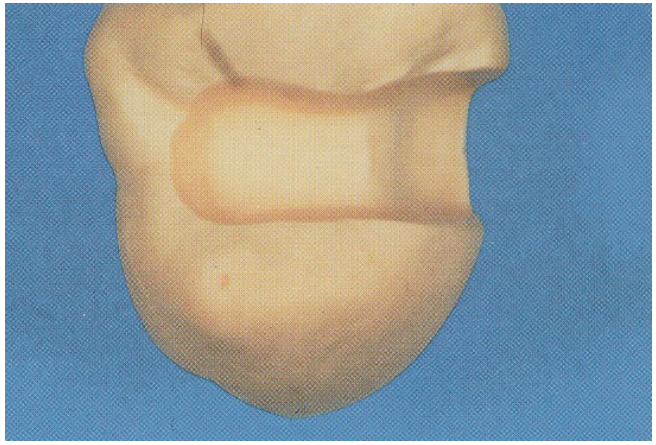
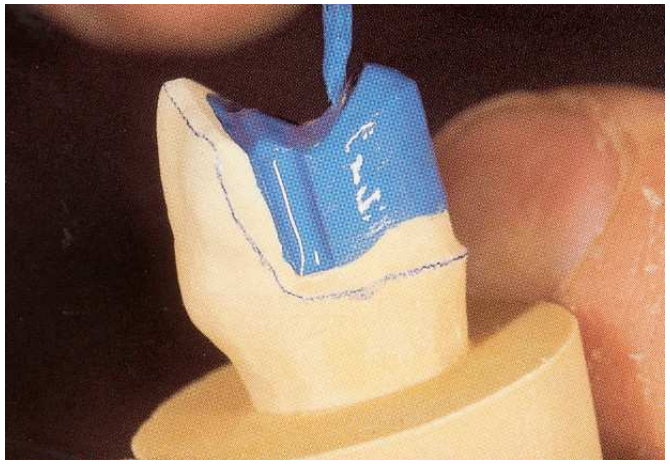
Wax pattern on the model





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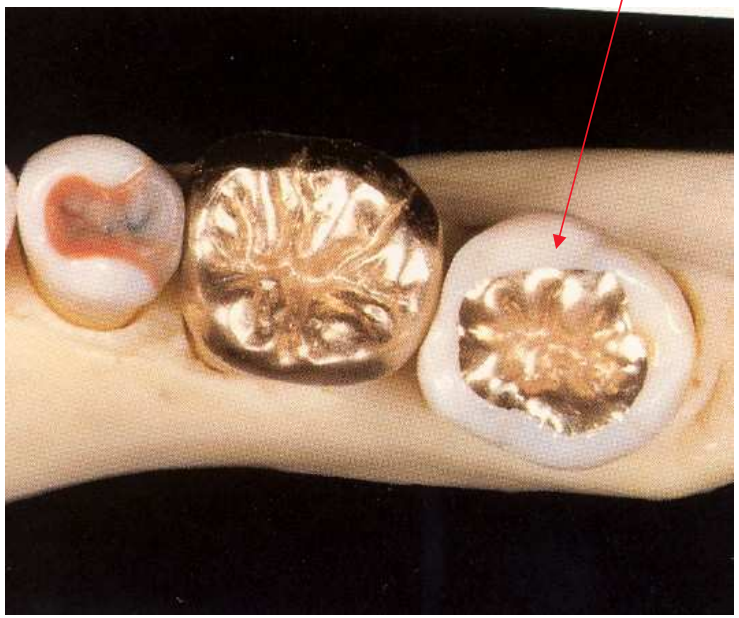
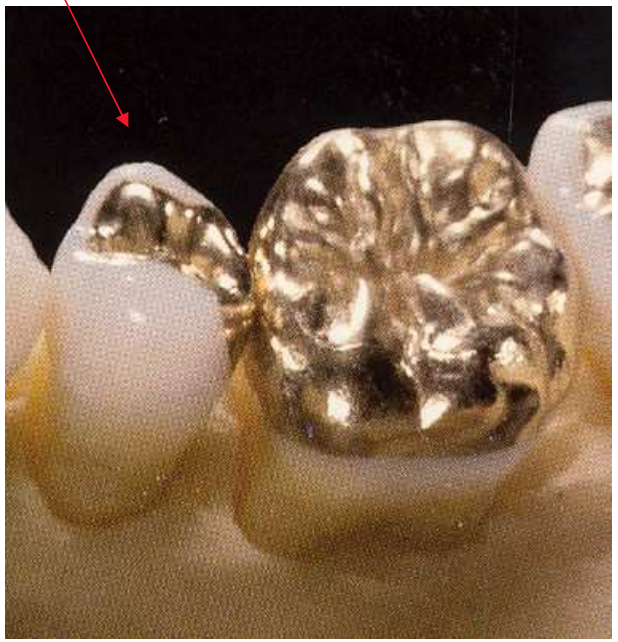
Inlays made of metal alloy





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Cementation

- Trying, checkig
- Polishing of the borders using special instruments
- Cementation

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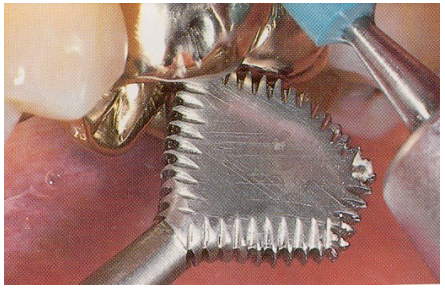

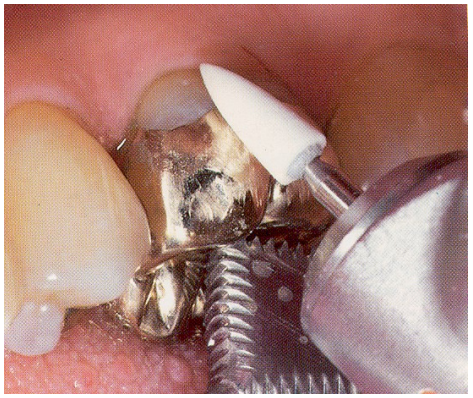

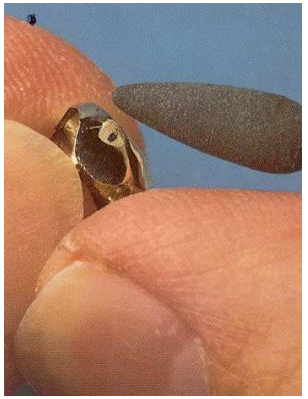

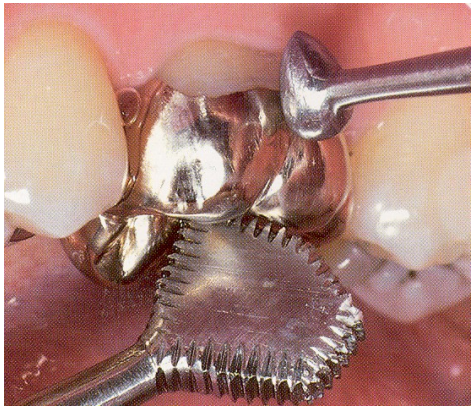

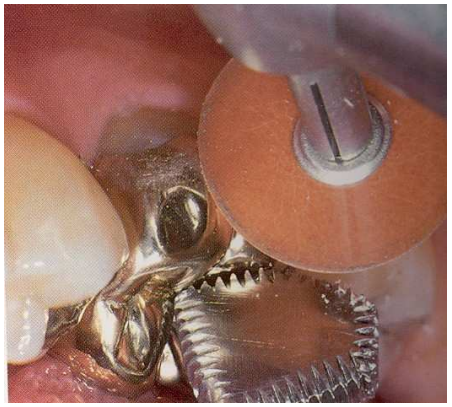

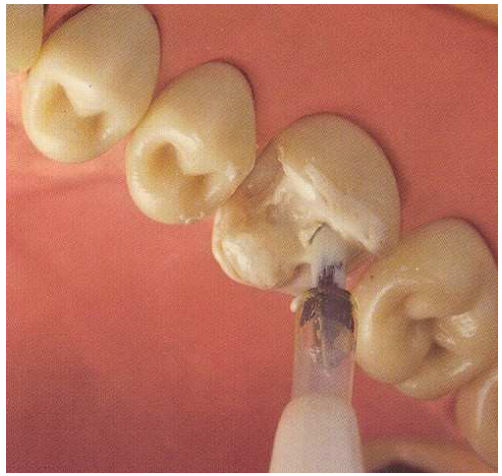

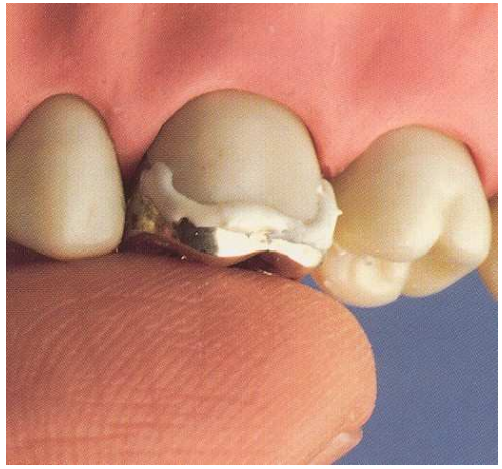

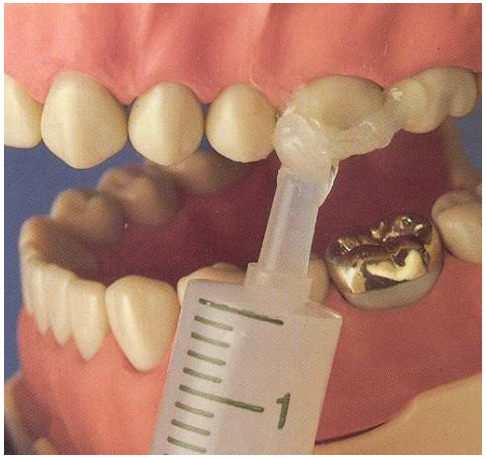
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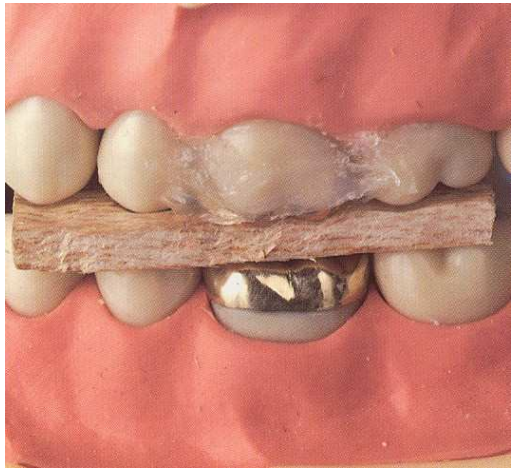
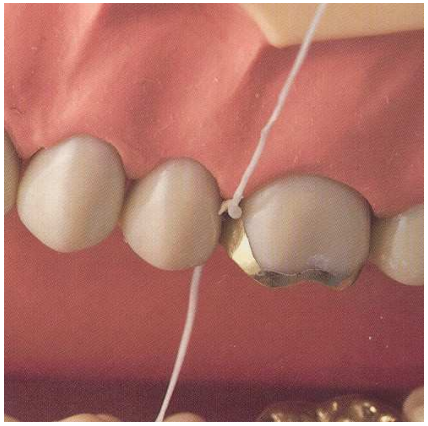
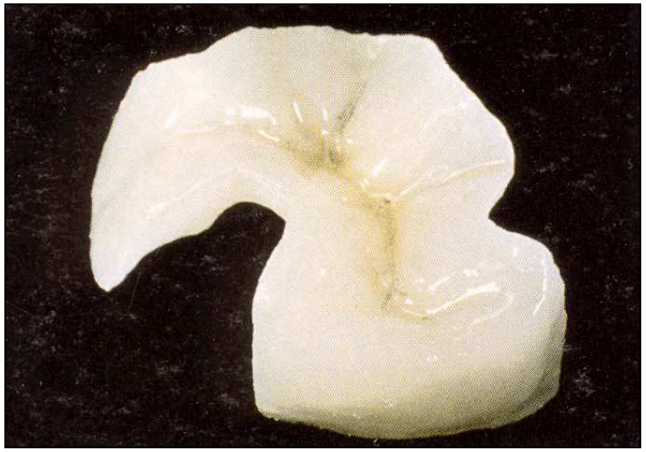




Non metallic inlays



Composite

Ceramics

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Non metallic inlays

- Indirect method
- Special procedures
- Cemented using special composite materials – composite cements. These materials are usually dual curing.
- This cementation is adhesive cementation: hard dental tissues sre etched, primed and bonded. Restoration are etched (hydrofluoric acid) or sandblasted, treated with silane afterwards

(Silane helps to the retentnion)

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