#### **Class II. - modifications**

Compound cavity

Slot

 Large restoration with cusps replacement



#### Kavita okluzální

#### Kavita aproximální

MO, OD



MOD





Grooves in proximal box A groove in gingival wall Divergency of axial wall to the gingiva Autoretention





#### **Slot preparation**

- Small slot
- Limited on proximal ridge
- No large cavity on occlusal surface
- Grooves
- Divergency of proximal walls to the gingiva





#### Slot for amalgam

- Access to the caries lesion
- go through the enamel wall
- breaking out of the proximal enamel
   lamella
- excavation of carious dentin



#### Autoretention

#### Rule of the gingival wall



Rule of the gingival wall

90% angle towards the pulpal wall outer line beveled if in enamel horizontal groove









### **Slot preparation**

Indication: Small cavities, good level of oral hygiene.

 Contraindication: Large cavities, high risk of new caries lesions, bad level of oral hygiene.

# Large preparation with replacement of cusps



Thickness of amalgam on the cusp is 3 - 4 mm

Grooves

Pins

Slots







Slot

#### Retention in endodontic cavity







## Large amalgam restoration overlays





## Composite materials and class II.

 Indication: Aesthetic reasons, small to moderate cavities, good level of oral hygiene, isolation of operating field.

Contraindication:

Large cavities, bad level of oral hygiene, poor isolation of operating field.

## **Preparation for amalgam**



# Preparation for composite material



### Preparation for adhesive fillings

We do not bevel the cavosurface margin in occlusal cavity



#### **Gingival** wall

The cavosurface margin is beveled if situated in enamel The cavosurface margin is not beveled if situated out of enamel







#### **Adhesive slot**

































#### **Tunnel** preparation









#### **Small cavities**

- 1. Magnification
- 2. Small instruments
- 3. Capsulated GIC or composite
- 5. X-ray post op



### Inlays – class II.

Rigid fillings – made in dental lab

• Luting into prepared cavity using cements.

- Material:
- Metal alloy (usu golden)
- Comosite material
- Ceramics

## Inlays – class II.

Indications:

Large defects
Low risk of new caries lesions







## Onlay





## Overlay





### Geometry of preparation

Strict extension for prevention

- No undecuts, no grooves
- The walls are divergent to the occlusal surface !!!

The angle 6 – 15°



### Preparation

- For inlays made of the metal alloy the cavosurface margin must be beveled.
- The depht of preparation when metal alloy is used must leave the space for inlay1,5 mm
- For inlays made of composite or ceramics the cavosurface margin is not beveled, the thickness of the material must be appr. 3mm.

All this rulea are important for resistance

## For inlays the impression must be taken

• Elastomeric materials

• Register of intermaxillary relations

 impression of the antagonal dental arch – alginate material.





















#### Cementation of metal inlays – zinkoxidphosphate cement





















#### Cementation of composite or ceramic inlays – adhesive Cements These cements are based on composite material.































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