Class II. cavity preparation

Class II.: Defects affecting one or both proximal surfaces of posterior teeth.
Symptoms

- No symptoms
- Increased sensitivity (cold, sweet)
- Retention of food
- Defect (caries lesion is open – the enamel is broken)
- Bite sensitivity (when carious lesion is open)
Diagnosis

- Visual changes of tooth structure
- Transillumination
- Radiography
4 stupňový grading
Preparation - amalgam

- Conventional preparation acc. to the Black´s rules
- Slot preparation
- Large preparation – cusp(s) involved
Preparation - adhesive materials

- Conventional preparation for composites
- Adhesive slot
- Tunnel preparation
Conventional preparation

Occlusal cavity

Proximal cavity - box
Access to the cavity

From the occlusal surface

Through the undermined enamel

Separation using wooden wedges is useful
Pre op
Access to the cavity

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Cavity border and extension for prevention

Proximal box:
Axial wedges
Under the free gingiva

Occlusal
Class I. cavity preparation
American rule
Zásada retence

- Kotvení pomocnou kavitou na žvýkací ploše – kotvení na rybinu

- Obráceně divergentní preparací kavity aproximální

- Preparace rýh a zářezů
Autoretention

Grooves
Resistance

- No undermined enamel
- No sharp wedges
- Isthnus is $1/3 - 1/4$ intercuspidal distance
- Angle between axial and gingival wall: $90^\circ$, or $85^\circ$
- Width of gingival wall is $1$ mm at least
- Thickness of the filling $2 - 4$ mm (4mm cusp replacing)
Excavation of carious dentin

Rounded bur

(Caries Detector, Kuraray, Japonsko; Caries Marker, VOCO, Německo)
Finishing of cavity walls

- Red coded diamond bur
- Chisel on the gingival wall (if in enamel)
Cavity control

- Goog light, miror
Isthmus

Axial wall

Pulpal wall

Gingival wall
Matrix placement

- Matrix primarily is used when a proximal surface is to be restored

The objectives:
- Provide proper contact
- Provide proper contour
- Confine the restorative material
- Reduce the amount of excess material
Matrices

- Ivory I retainer Ivory 1
- Hawe Neos retainer Ivory 8
- Tofelmire matix and retainer
Wedges

- Wooden wedges
  - tighten the matrix band
  - compress the gingiva
  - separate the teeth
Wedging

- Slip the matrix band over the tooth apical to the gingiva margin – 0.5, - 1 mm
- Tighten the matrix, check it with probe
- Place a wedge
- Turn the retainer ¼ counterclockwise
- Contour the band
Trituration!
Condensation of amalgam

- Condensor – stamen is the best one

- Power driven condensation

How big the stamen should be??
???
Base

- Zinkoxidphosphate cement
- Zinkoxidkarboxylate cement
- Glass ionomer cement
- Zinkoxideugenol

On pulpal walls only!
The base must be hardened
Amalgam

Retention
Instruments

- Preparation
- Filling
- Finishing and polishing
Cpátko tyčinkové
Ořezávač - Frahm
Carver Sapin
Carver
discoid-cleoid
Amalgam carrier