Prosthetic III.

Fixed dentures

Fixed dentures

- Restore the shape (and function)
- Cemented on/in the prepared teeth
- Can not be removed

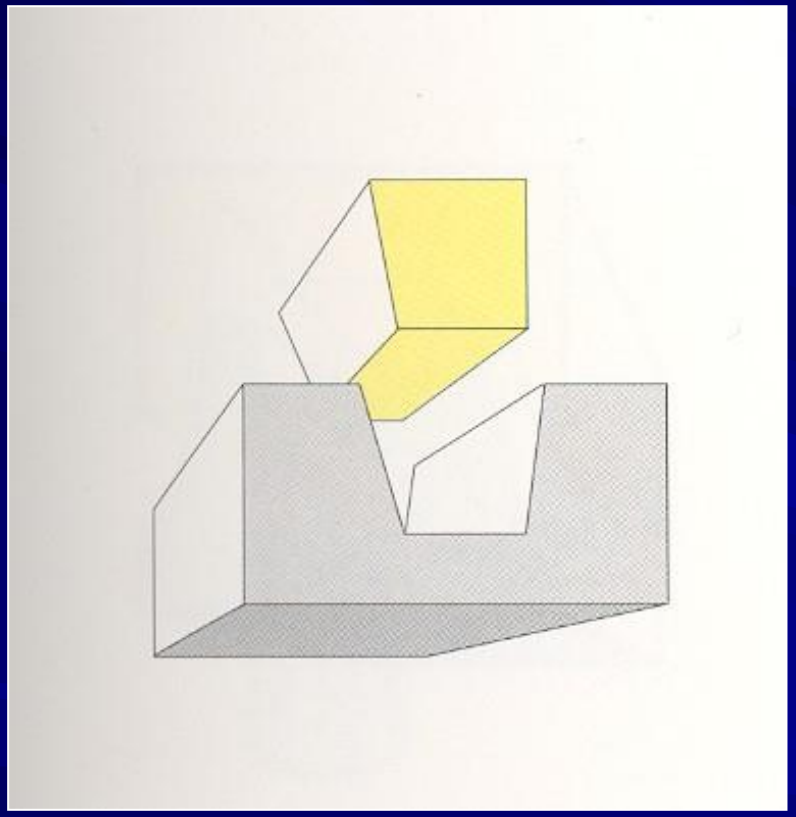
Fixed dentures

Inlays /onlays

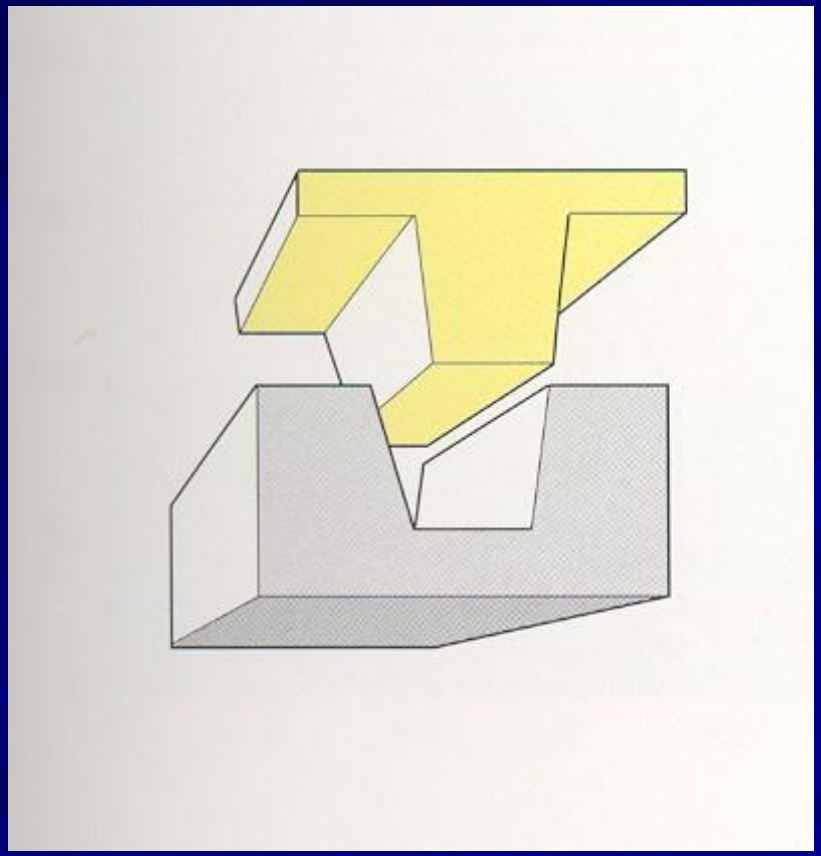
Crowns

Bridges

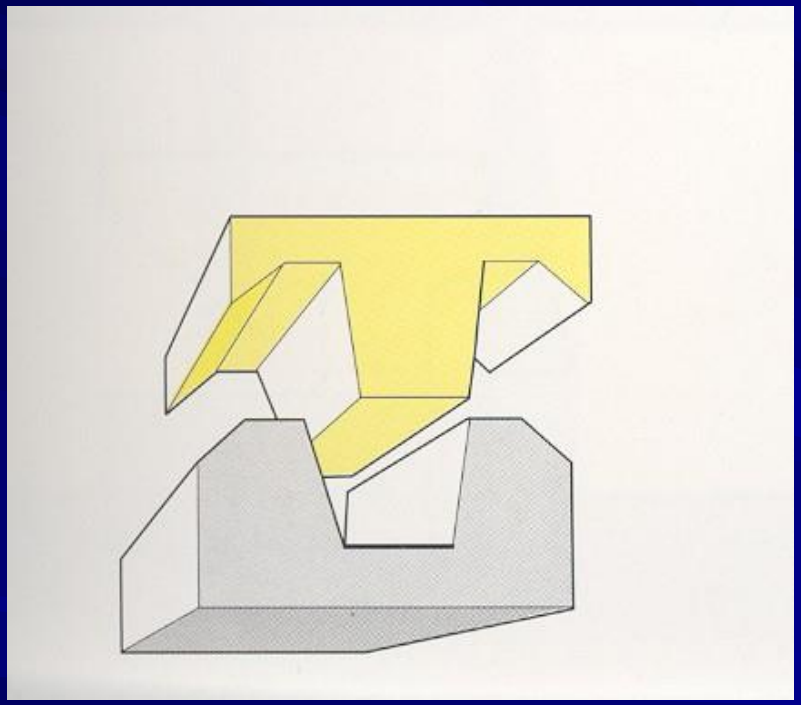
Inlay



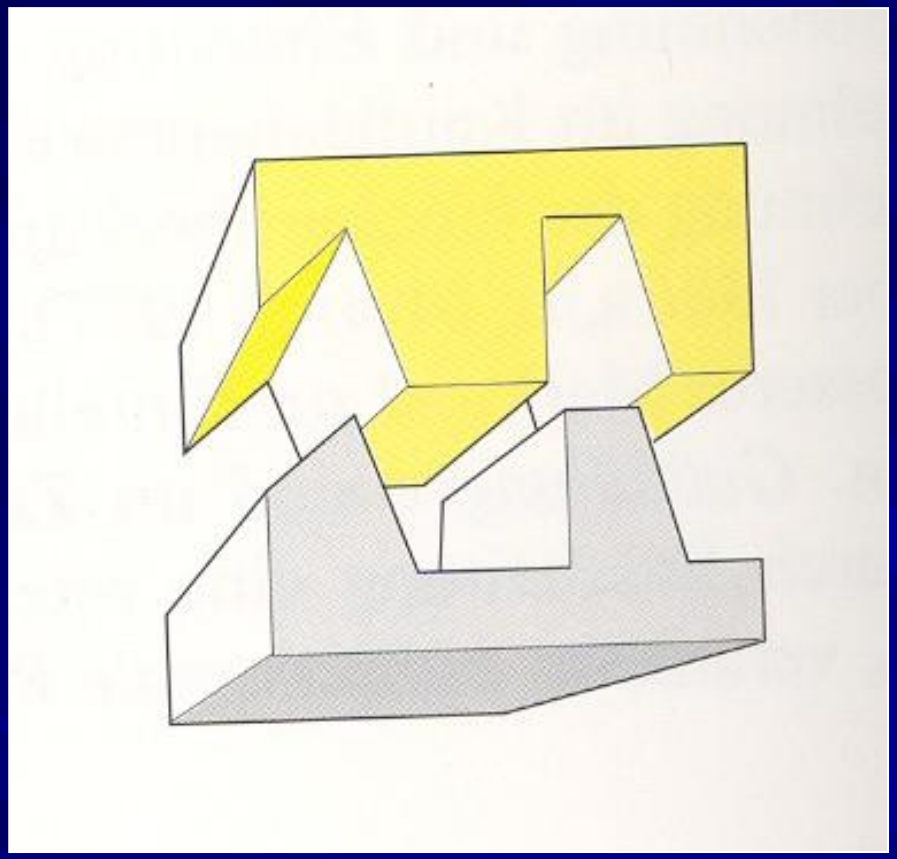
Onlay

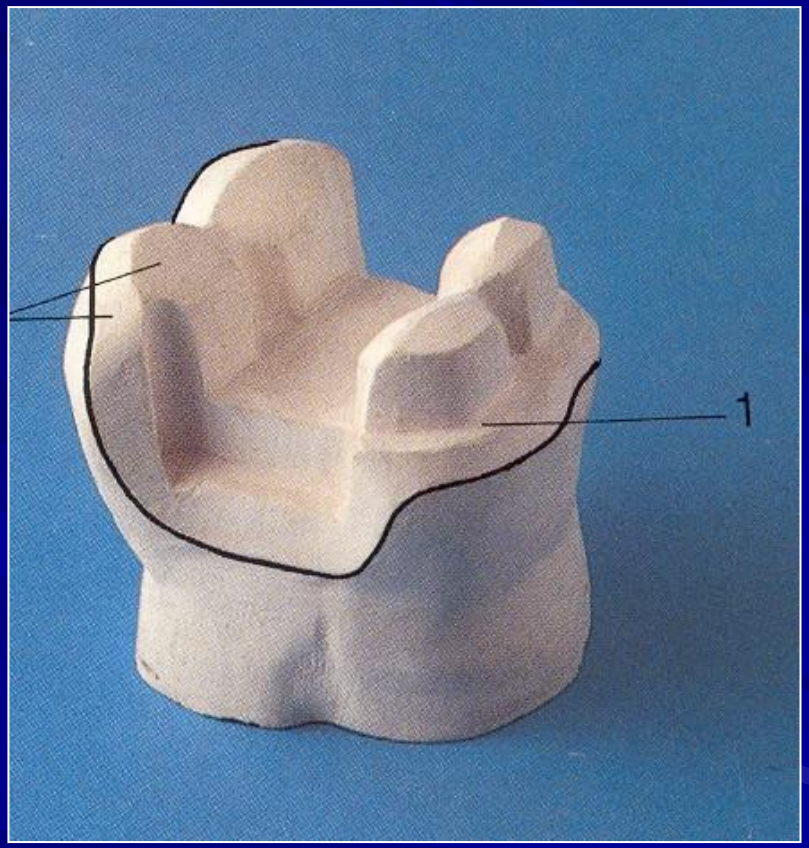


Overlay

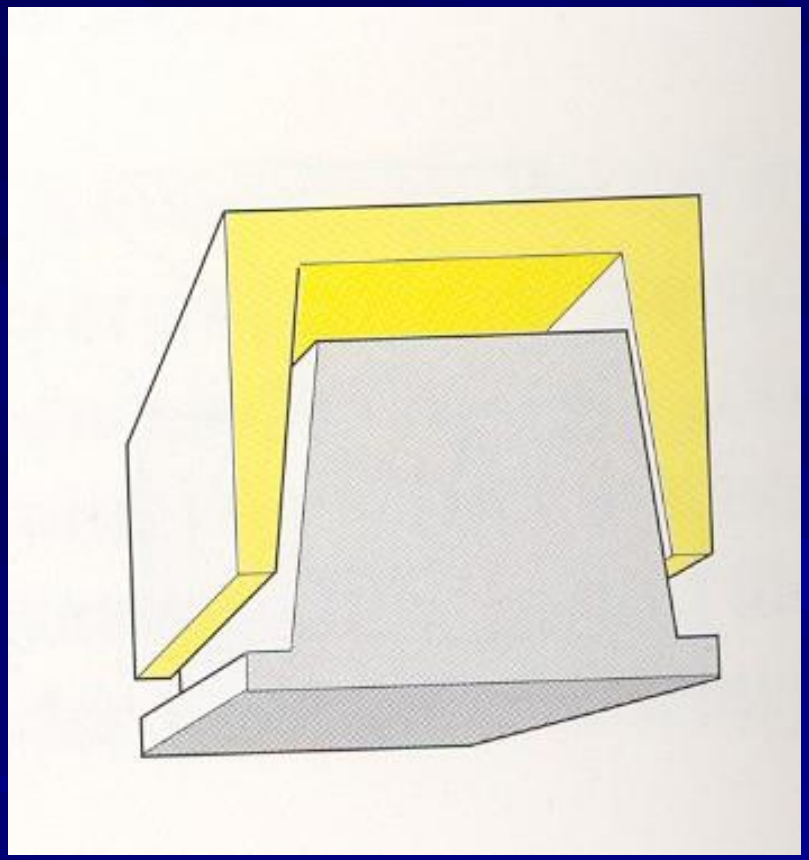


Partial crown

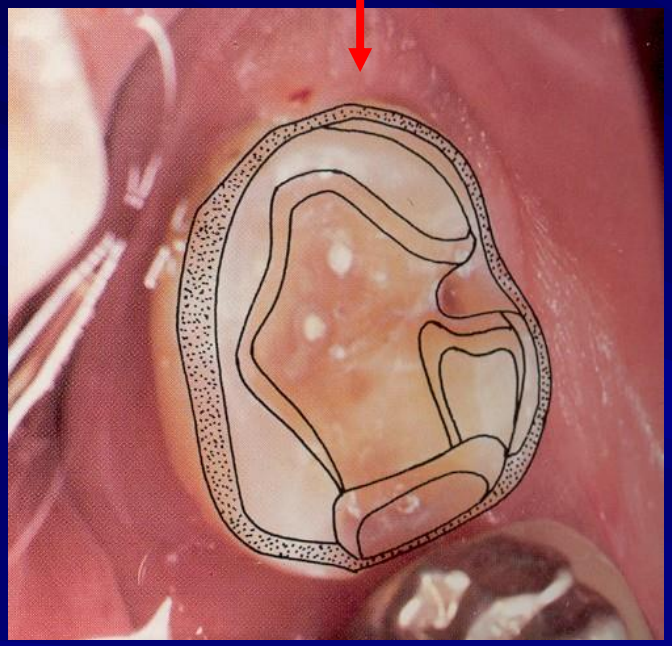




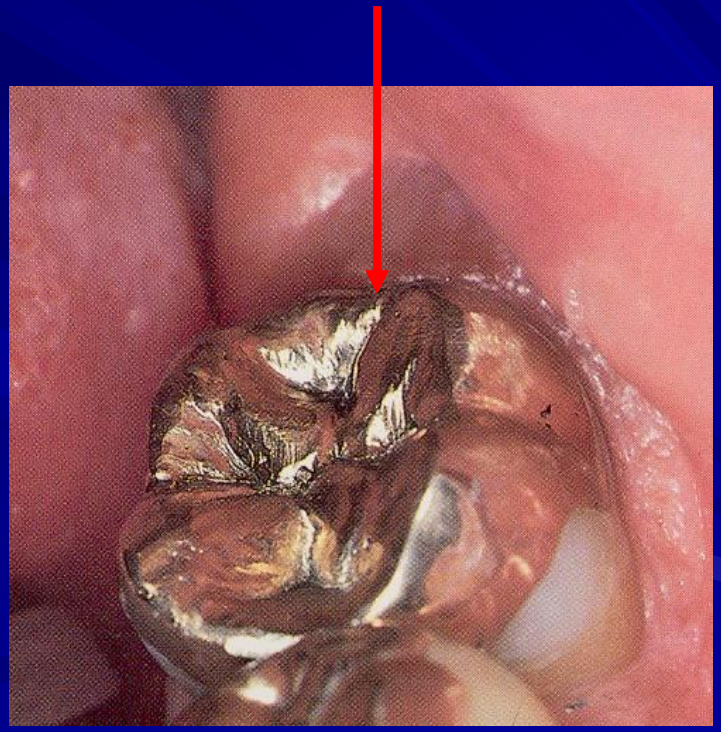
Crown

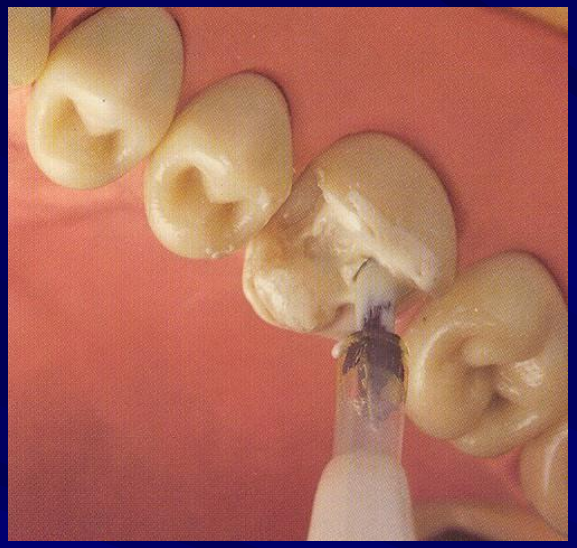


Preparation



Reconstruction in oral cavity



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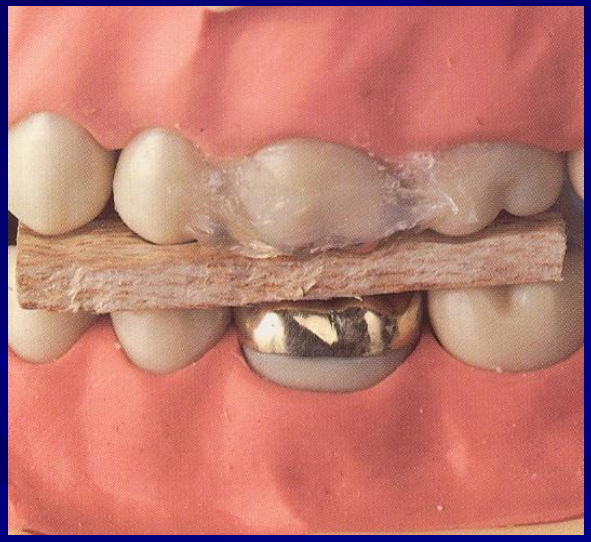


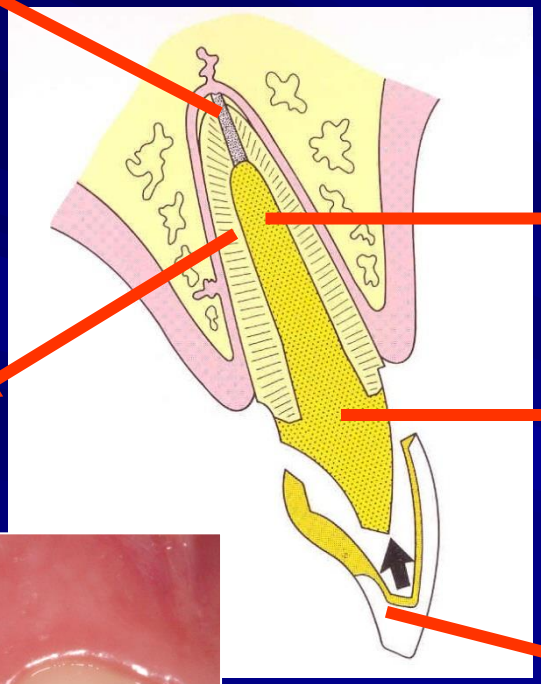
Aesthetic inlays – composite materials, ceramics

Special procedure

Indirect method always

Root canal inlay

Root canal filling



Root post

Stump, snag

Root

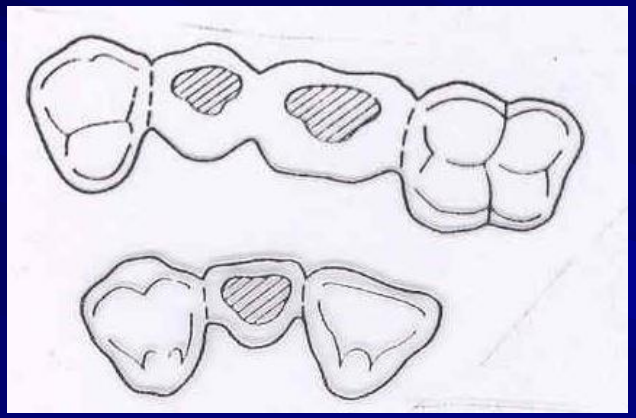
Crown

Cementation

- Zinkoxid phosphate cement
- Lentulo
- Vaseline
- Removal of access of the cement

Fixed bridge

- Replacement one or more teeth



Crowns

Restore the shape of a damaged tooth

Most frequently

- Replace the lost part of a tooth (caries, fracture)
- Protect before damage
- Anchoring of a bridge

Indications

1. Badly broken down tooth (previously restored, secondary caries, loss of vitality)
2. Fracture (large)
3. Tooth wear- erosion (chemical)
   - attrition (mechanical)
   - abrasion (patological)
   - diseases of the hard dental tissues
4. Changes in position of teeth

Types of crowns

Full crowns

One material (metal alloy, resin, ceramics)

resin and ceramics - jacket crowns

Facet crowns

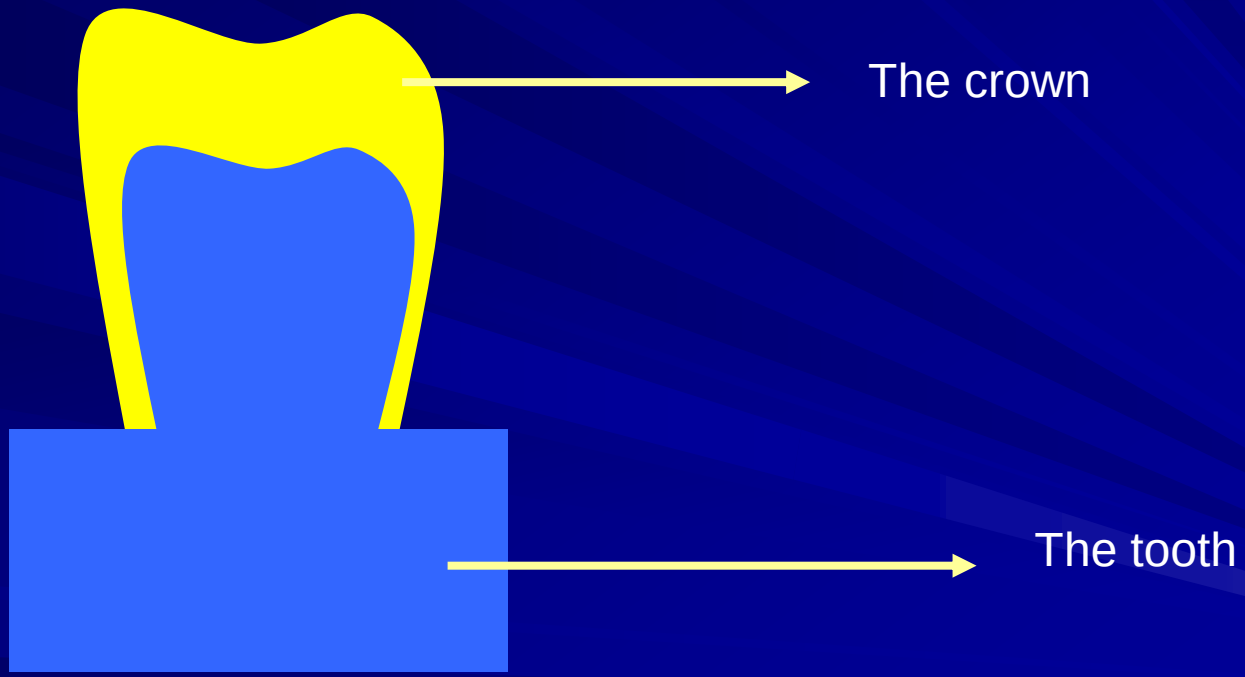
Combination of materials

Metal alloy –resin

Metal alloy – ceramics

Partially / full covered

The crown



For the crown the tooth must be prepared

Basic rules for the crown preparation

- Reduction of the hard dental tissues – space for the arteficial material (restore the form as well as the function – strong enough)

- Conical form (5° - 7 ° optimal, max 15°), no undercuts!!!! No sharpe edges!!!

Basic rules for the crown preparation

- Cervical border –must be clear.

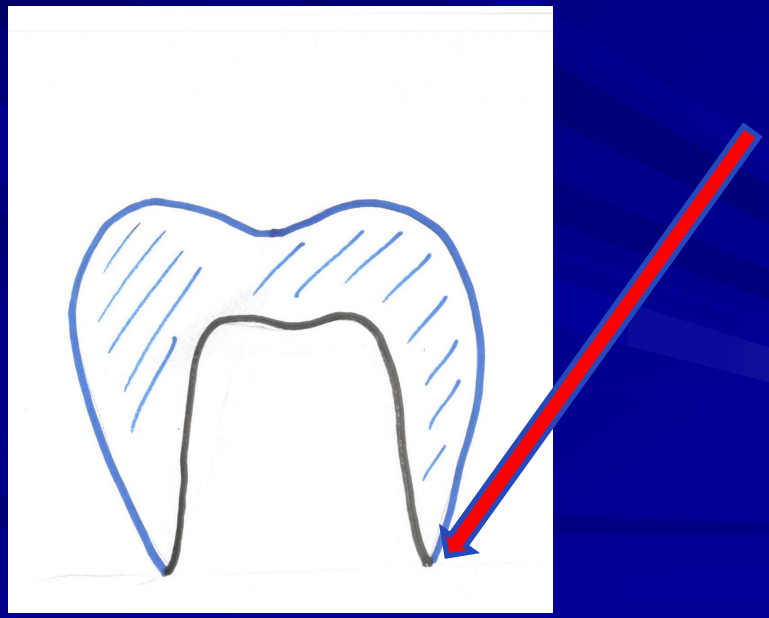
The location is:

- Supragingival
- Subgingival (0,5 mm)
- Gingival

Cervical border

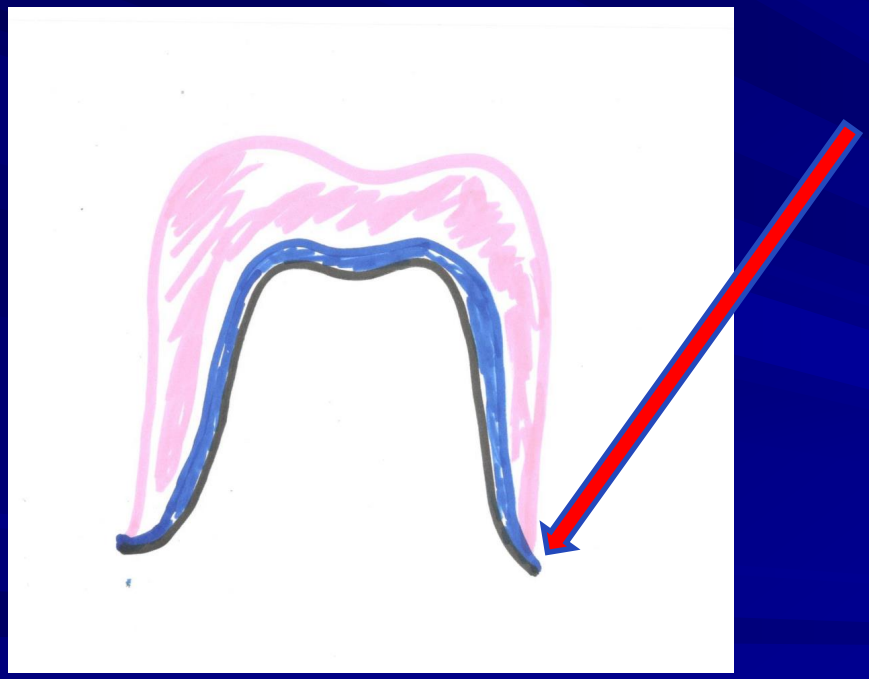
- Shoulderless – the tooth is simply tapered,

Preparation bordes can be seen



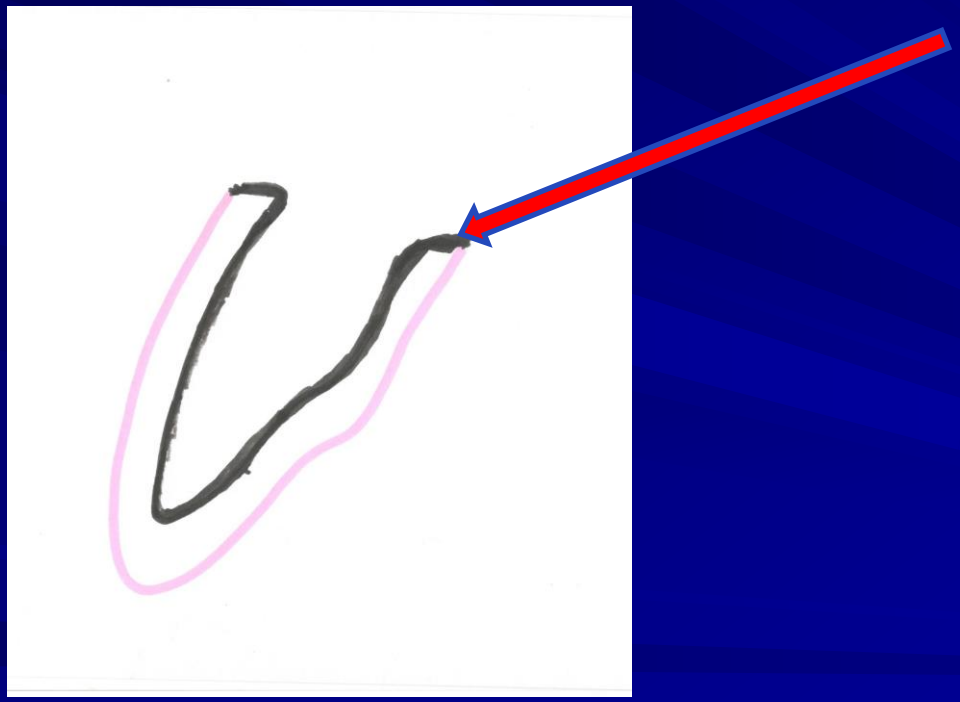
Cervical border

- Round shoulder (chamfer)

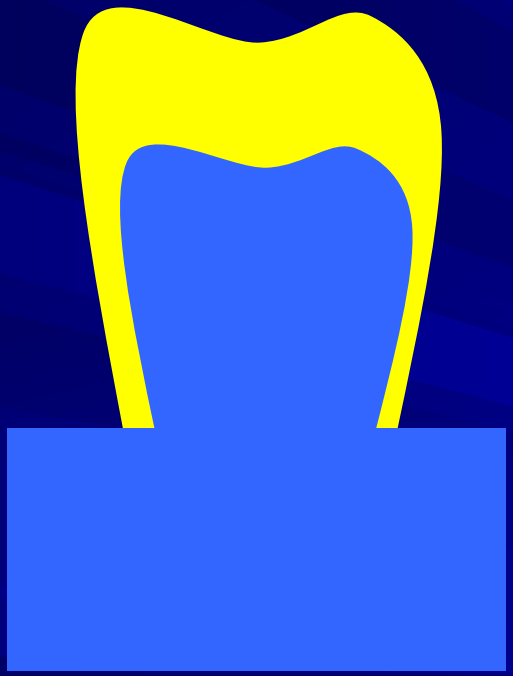


Cervical border

- Rectangle shoulder



Full metal crown



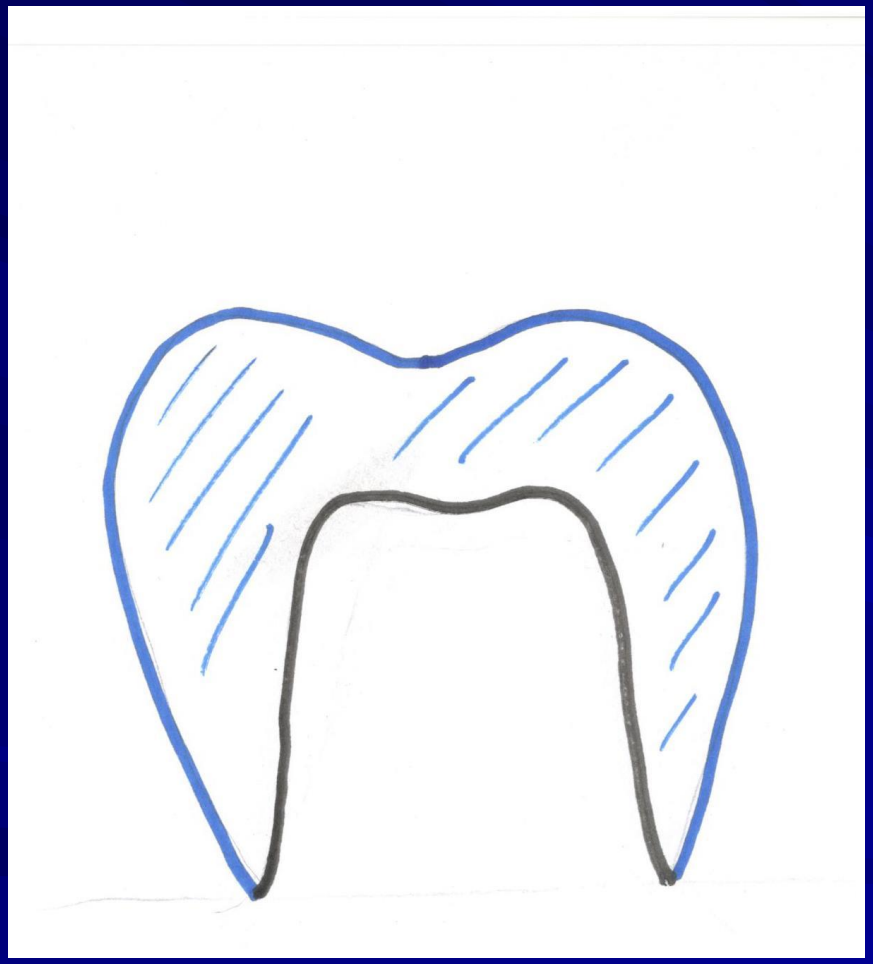
Posterior teeth

Full metal crowns

- Preparation is less invasive
- Aesthetics is bad
- The price is low

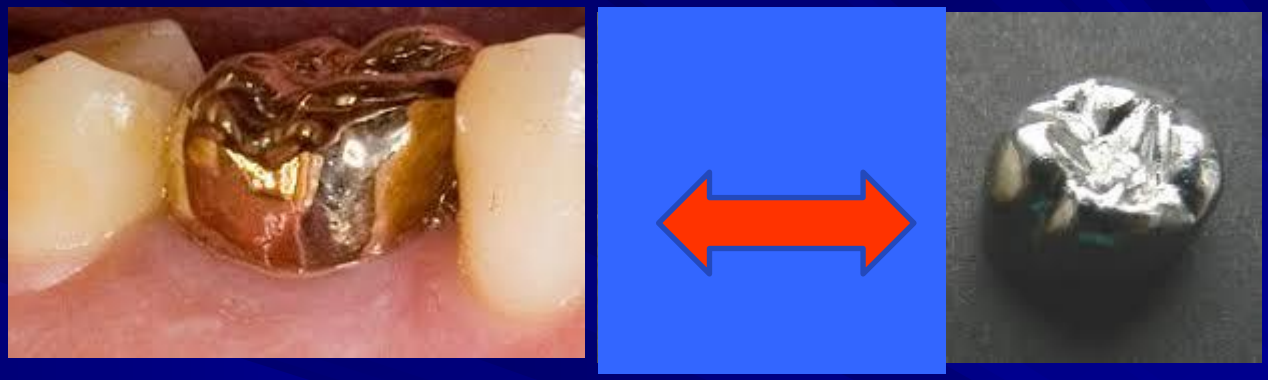
Full metal crown

- Occlusal reduction: 1 mm, following the anatomical form
- Reduction vestubulary and orally – 0,5 mm (max 1 mm)
- Round shoulder



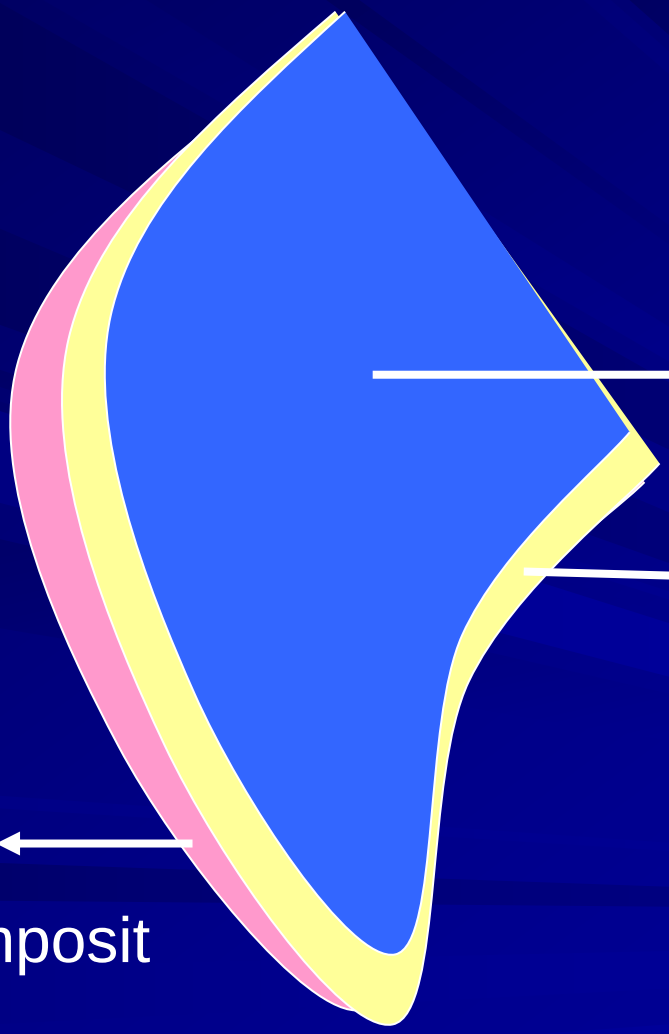
Preparation is shoulderless

Preparation border can be seen



Metall alloy - golden alloy, chromcobalt alloy

Facet crown

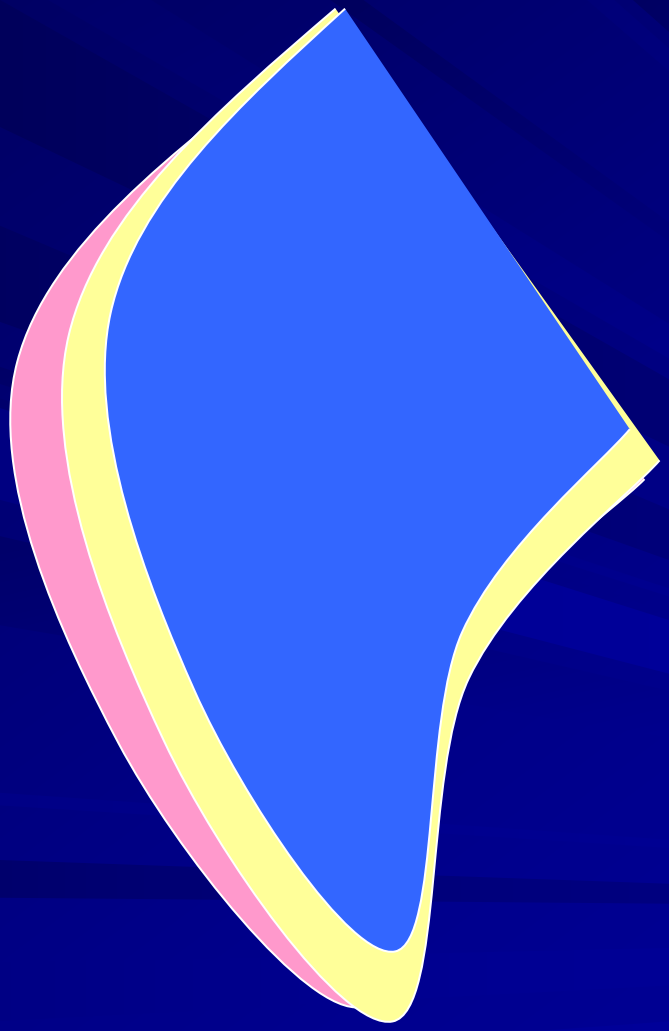


Tooth

Metal allo

Facet made
of resin or composit

Facet crown



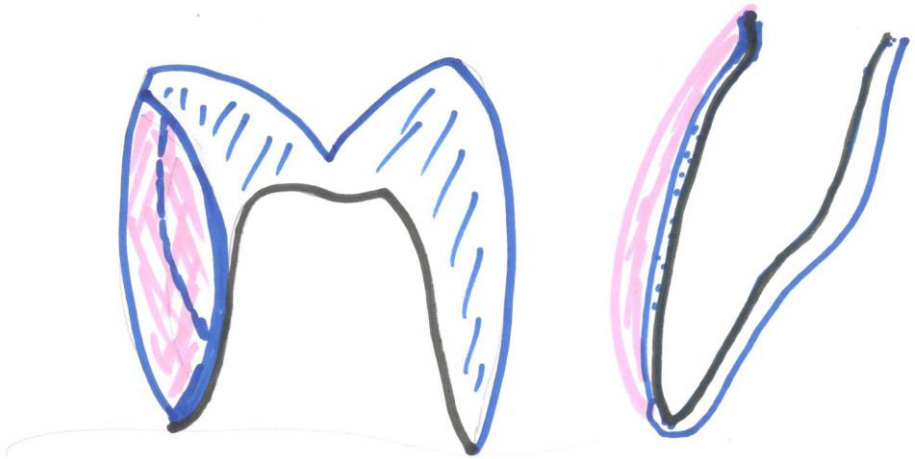
Anterior teeth

Posterior teeth

Facette crown

Metal framework
Made of golden alloy or chromcobalt alloy

Facete made of the resin, composite, (ceramics)



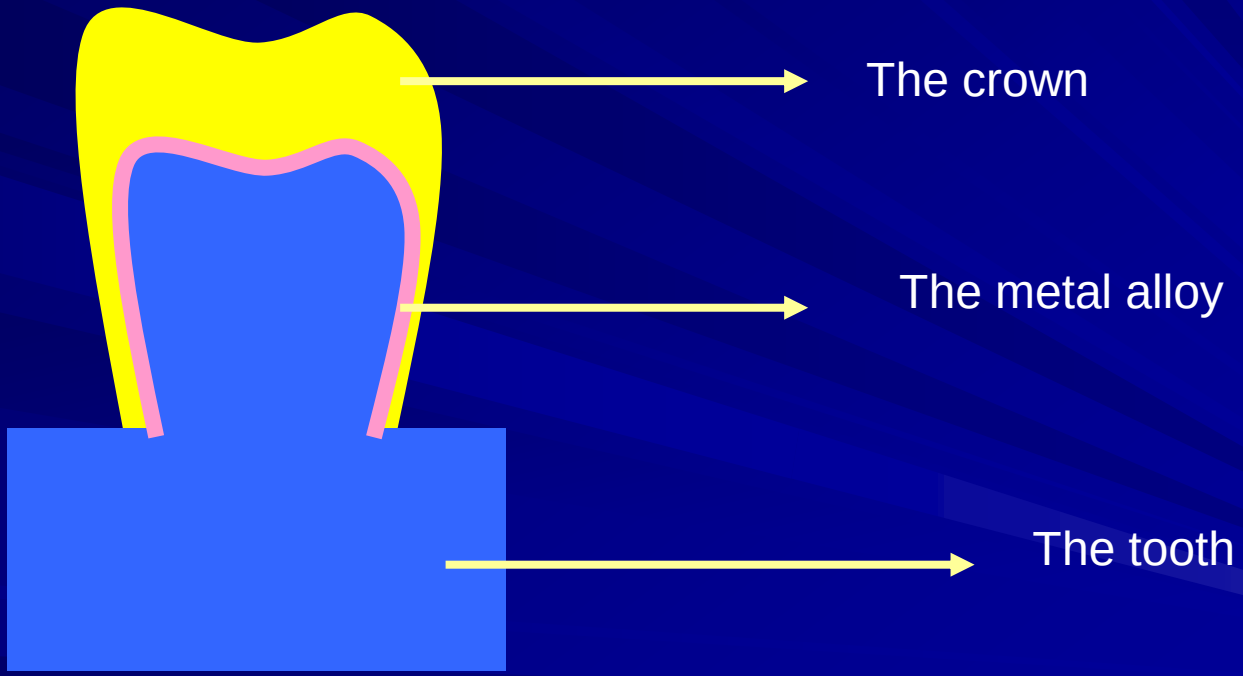
Metal framework
with retention for the resin

Facette of aesthetic
materiál usually resin

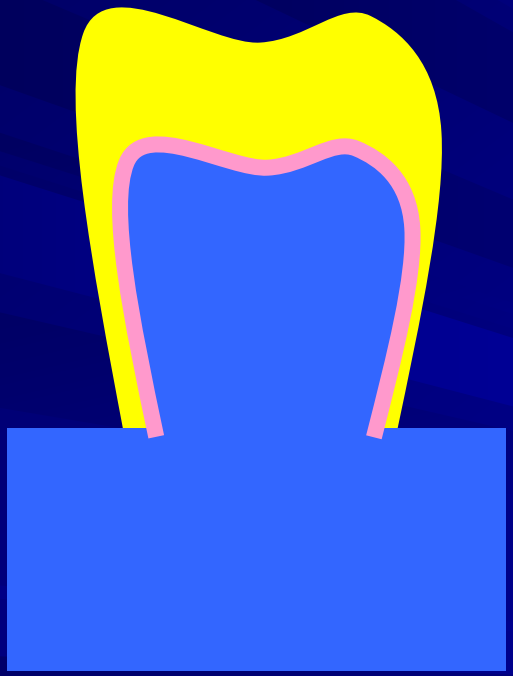
Combined crown – facet crown

- Metal construction + facet (made of acrylic or composit)
- Incisal or occlusal reduction 1,5 mm
- Vestibular reduction 1 - 1,5 mm
- Oral reduction 0,5 mm
- Round shoulder (vestib appr. 1 – 1,5 mm, oral 0,5 – 1 mm)

Metalceramic crown



Metalceramic

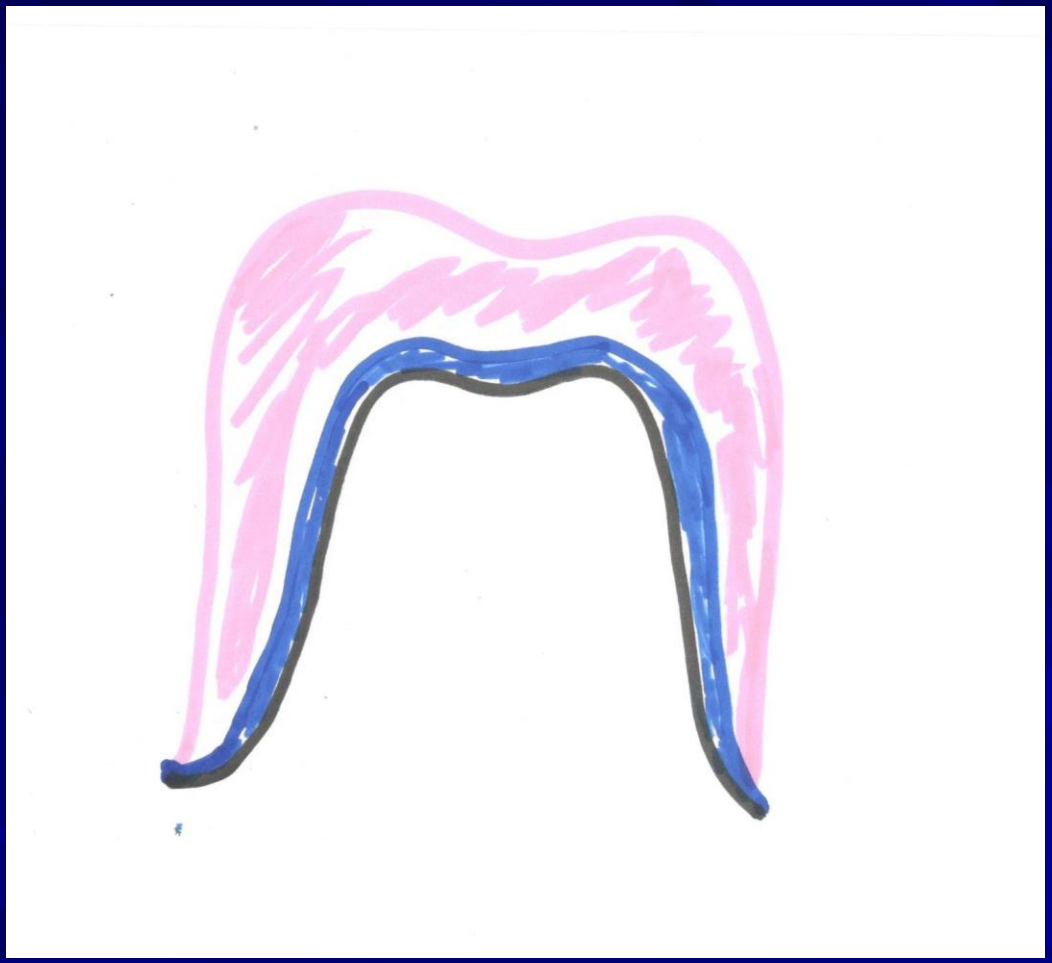


Posterior teeth
Anterior teeth

High aesthetics
Good mechanical properties

Metalceramic

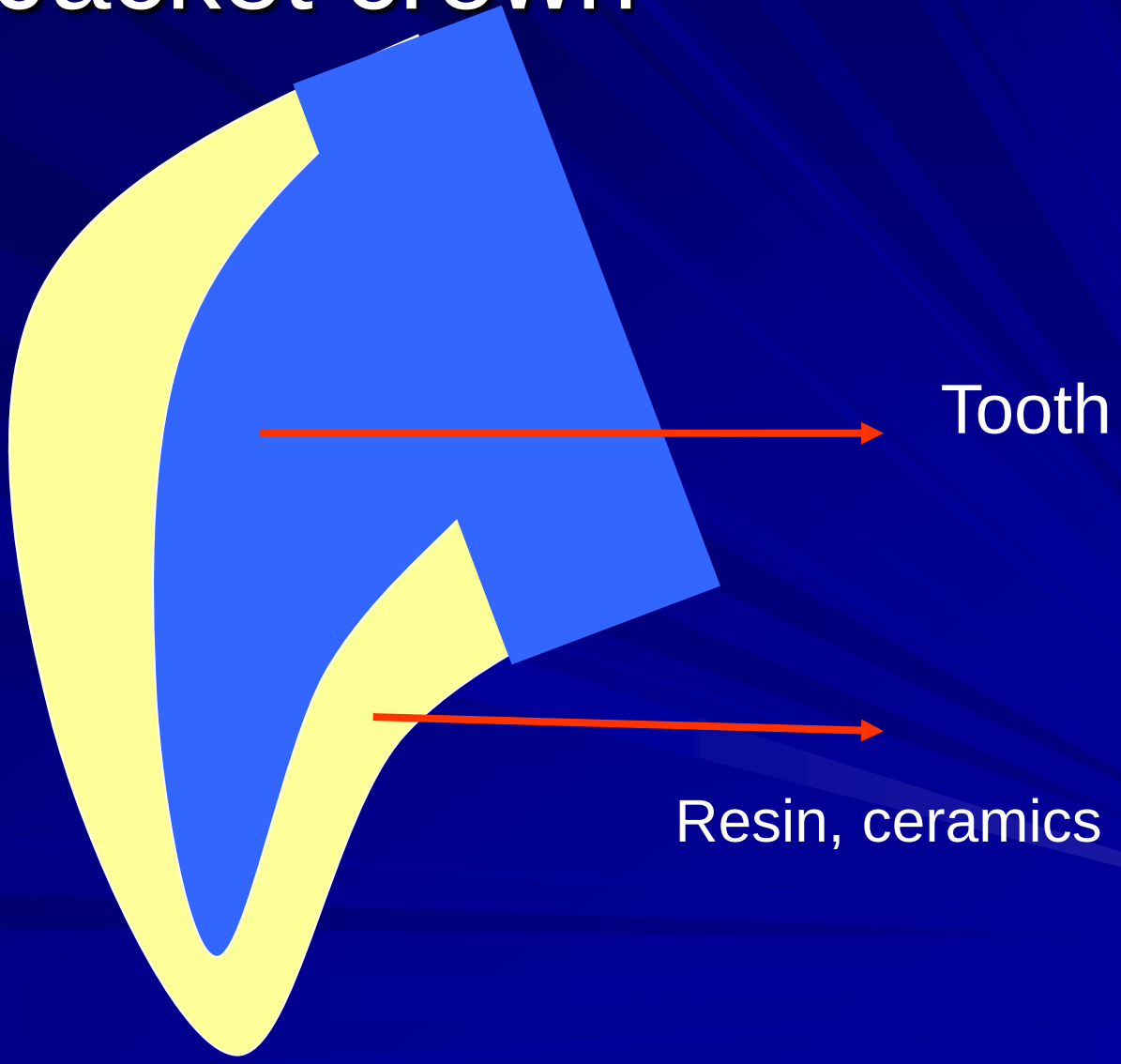
- Occlusal (incisal reduction) – 1,5
- Vestibular and oral reduction and other 1,5 mm
- Round shoulder

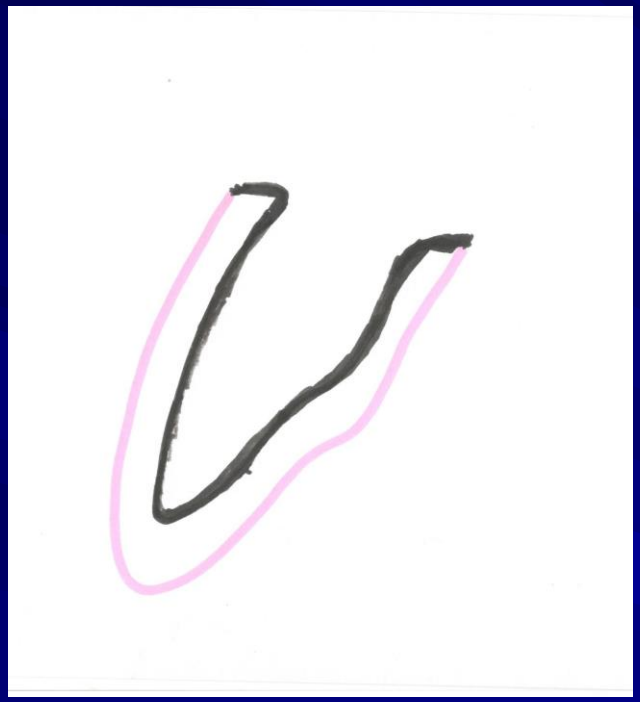


Metal framework
is fully covered
with ceramic material

Metalceramic crown

Jacket crown





Jackette crown

Made completely

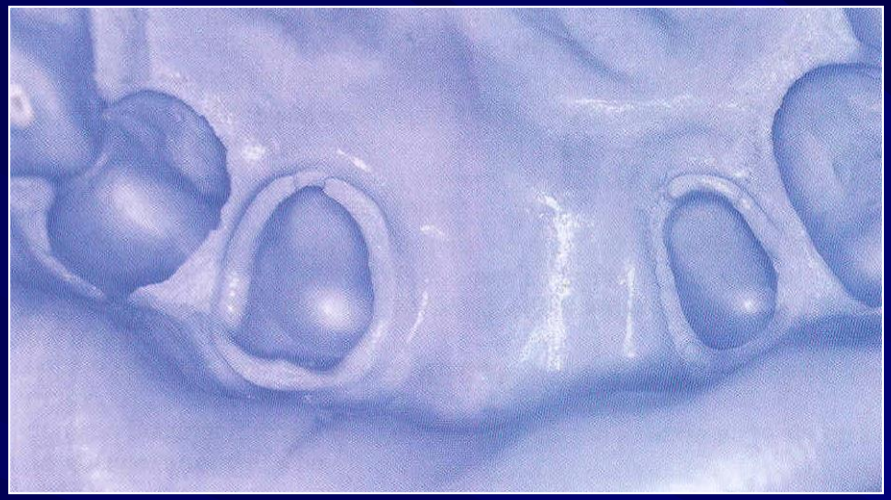
of aesthetic materiál

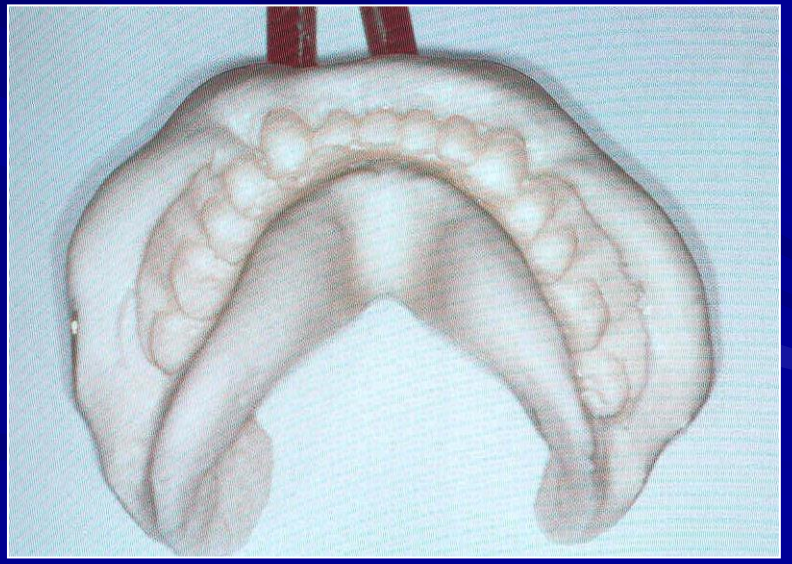
Resin or ceramics

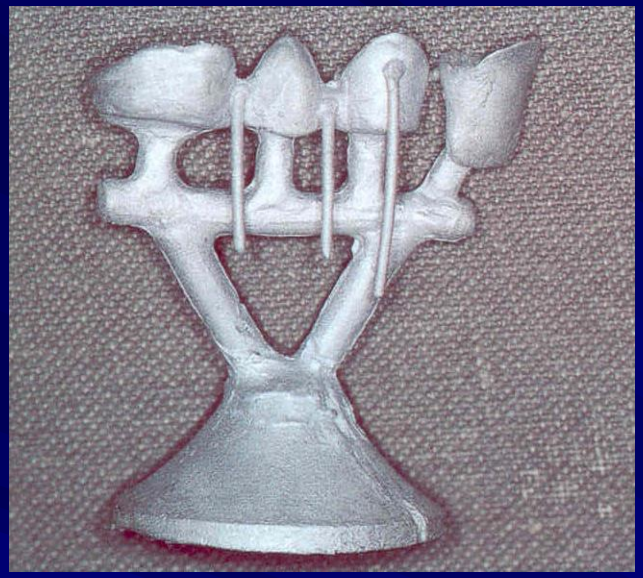
Jacket crown – ceramic, composit, acrylic

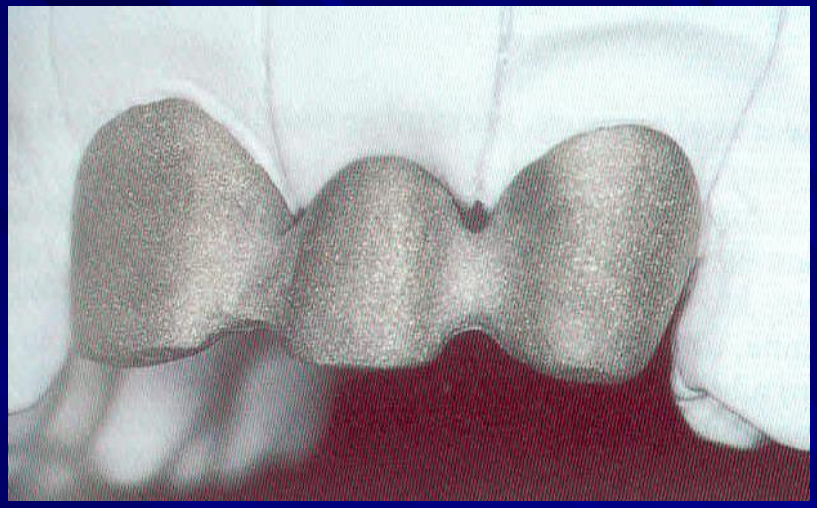
- Occlusal (incisal reduction) – 2 mm
- Vestibular and oral reduction and other 1,5 mm
- Sharp rectangle shoulder

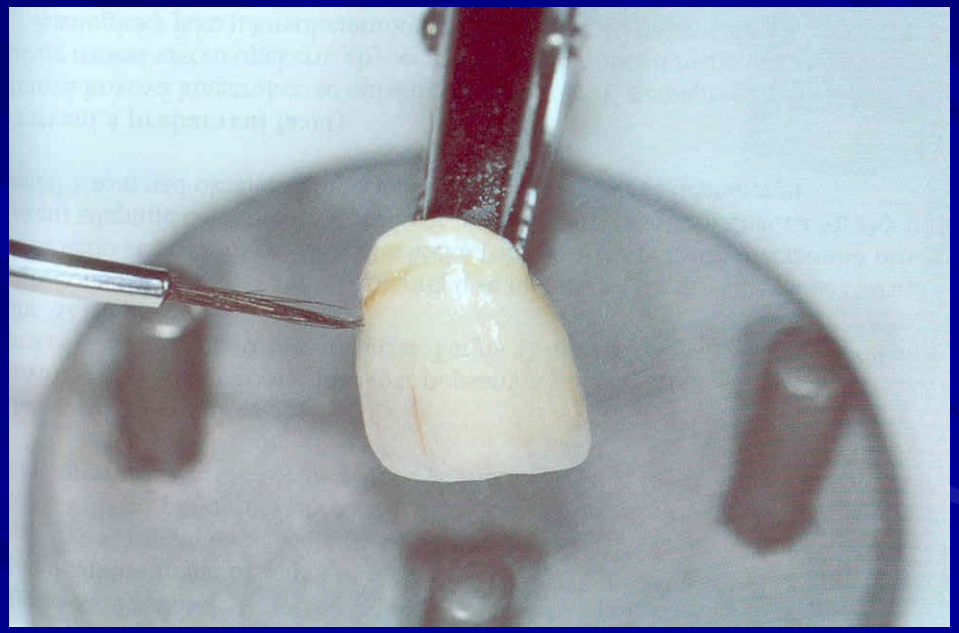
Full ceramic (jackette) crown



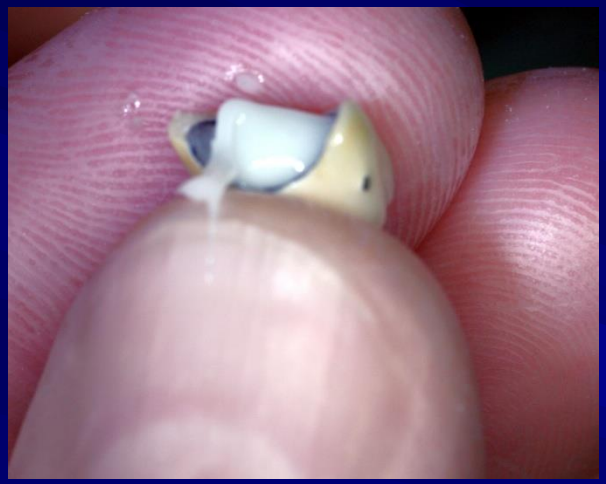






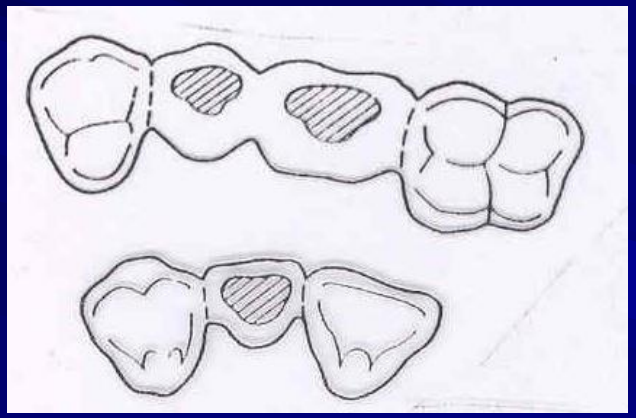


Cementation of the crown



Fixed bridge

- Replacement one or more teeth



Bridges

- Abutments
- Pontic

Various size:

3 members bridges, 4 members bridges, 5 members… tce

The member: abutment or pontic.

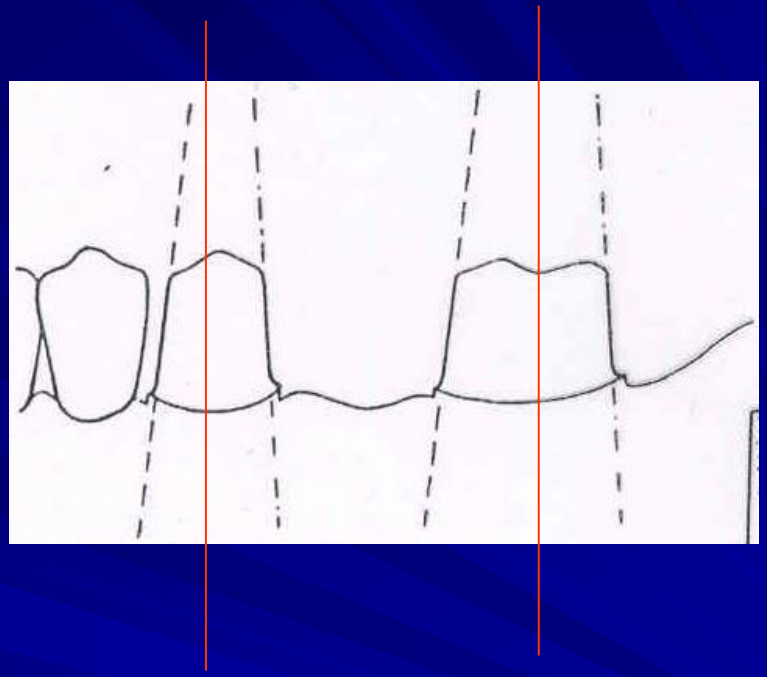
Bridges

- Abutments

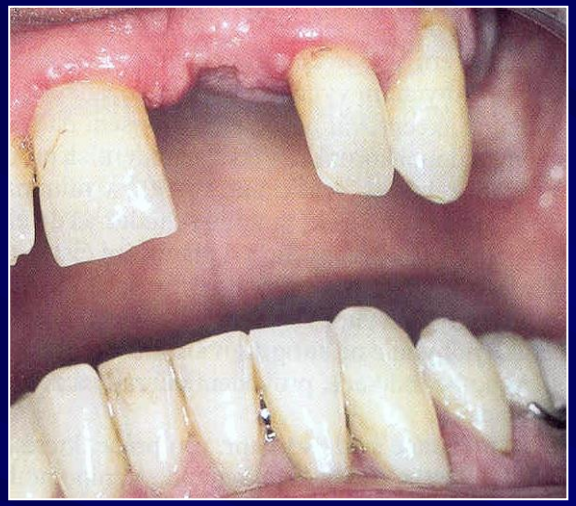
Full metal crown

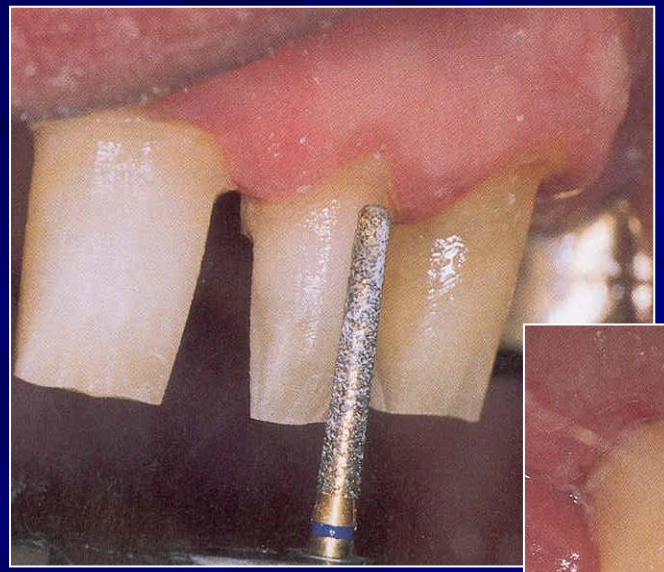
Facet crown

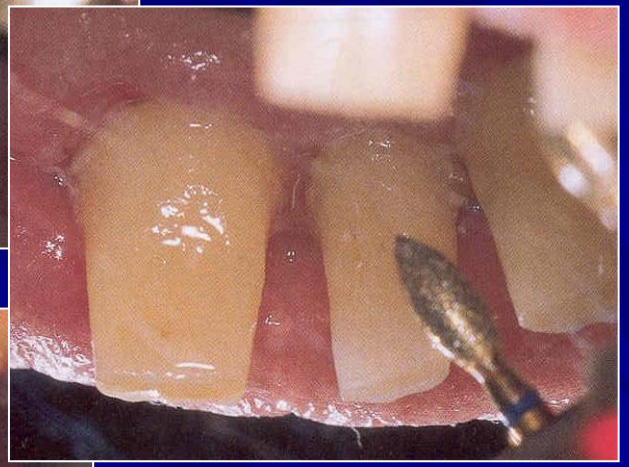
Metalceramic crown



The axis must be parallel







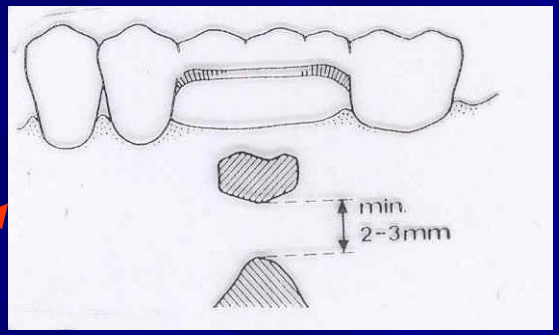
Bridges

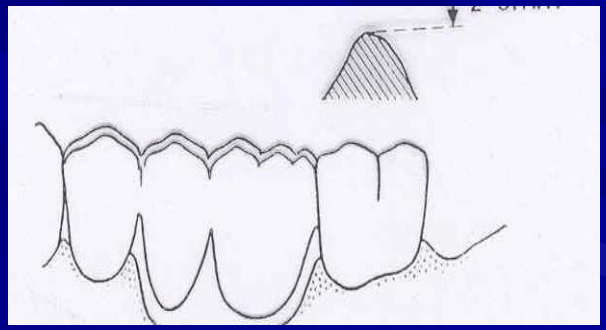
- Pontic

Full metal

Facet

Metalceramic

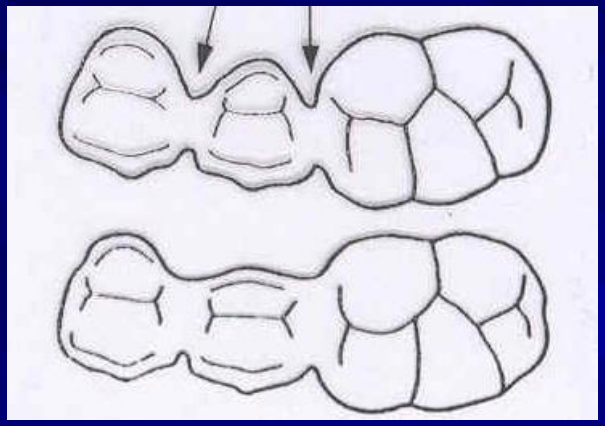


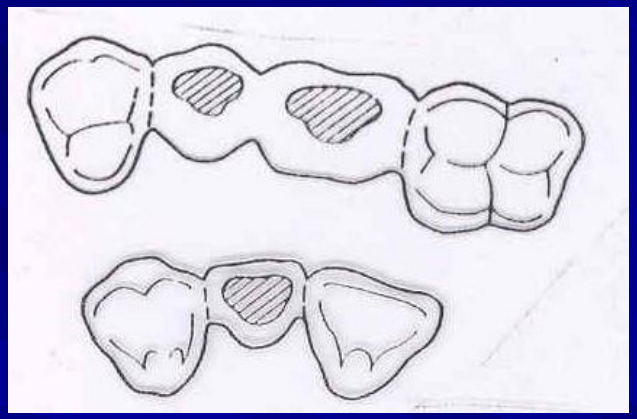


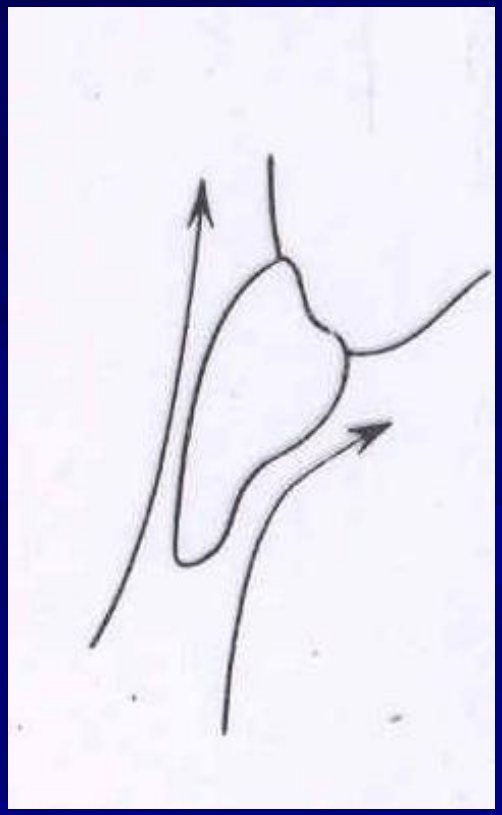
Self cleaning bridge (sanitary bridge)

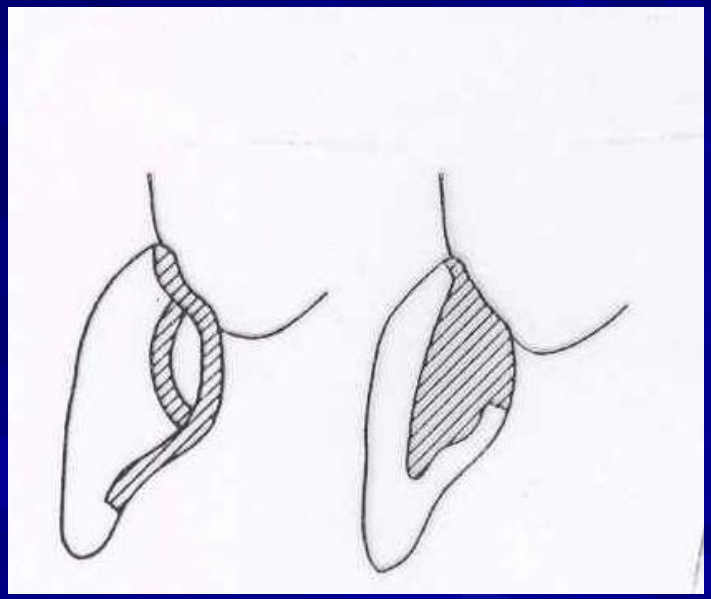
Contact pontic

Reduction - the area that is in contact with gingiva 1/3 of the occlusal size.
Occlusal reduction depends og the magnitude from 10 – 30% reduction.



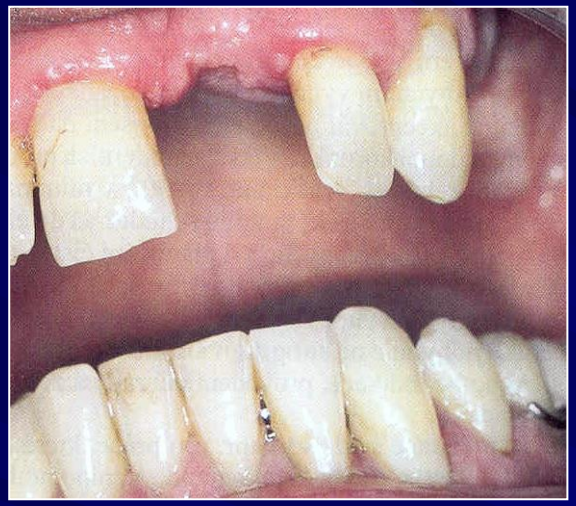


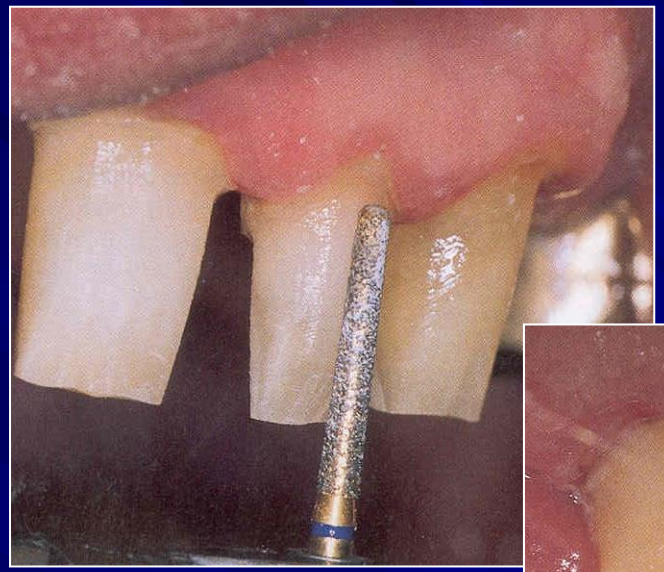


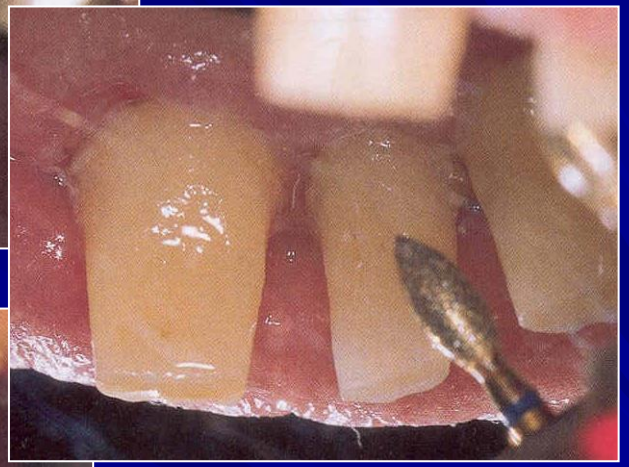


Preparation

- Preparation grooves
- Occlusal reduction
- Vestibular reduction
- Oral reduction
- Proximal reduction
- Finishing and polishing





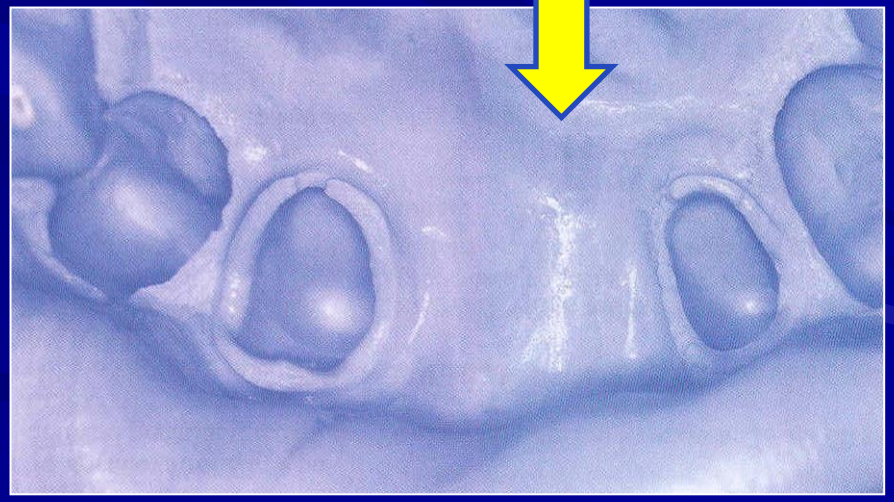


Manufacturing procedure 1.st phase in dental ofice

- Taking impression – elastomers
- Antagonal impression alginate
- Occlusal impresion – bite registration (intermaxillary relationship)
- Provisional treatment

Impression

- Elastomeric materials
- Dual viscosity technique
- in one phase or in two phases



Registration of the intermaxillary relationship

- Wax or

- Special silicone)

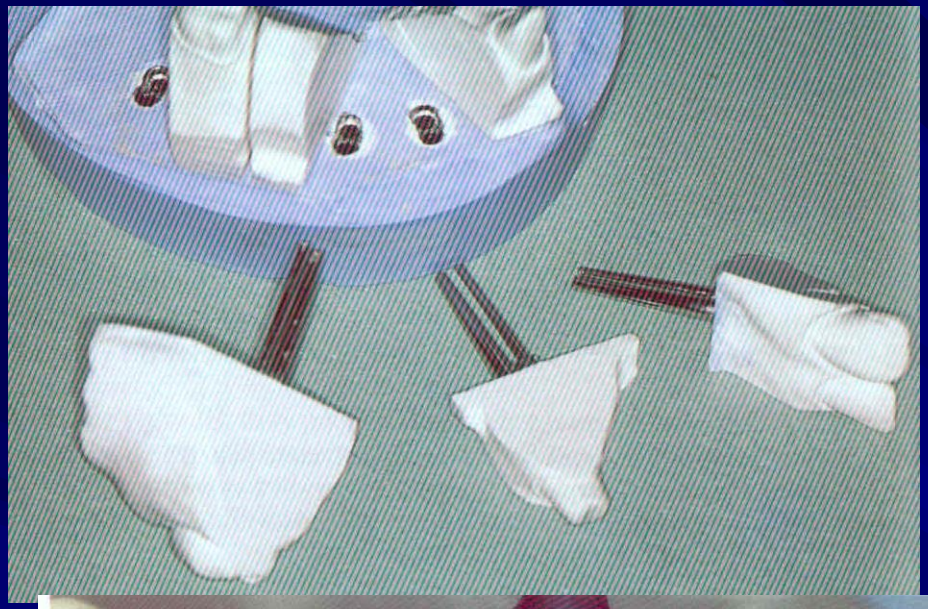
Antagonal impression - alginate

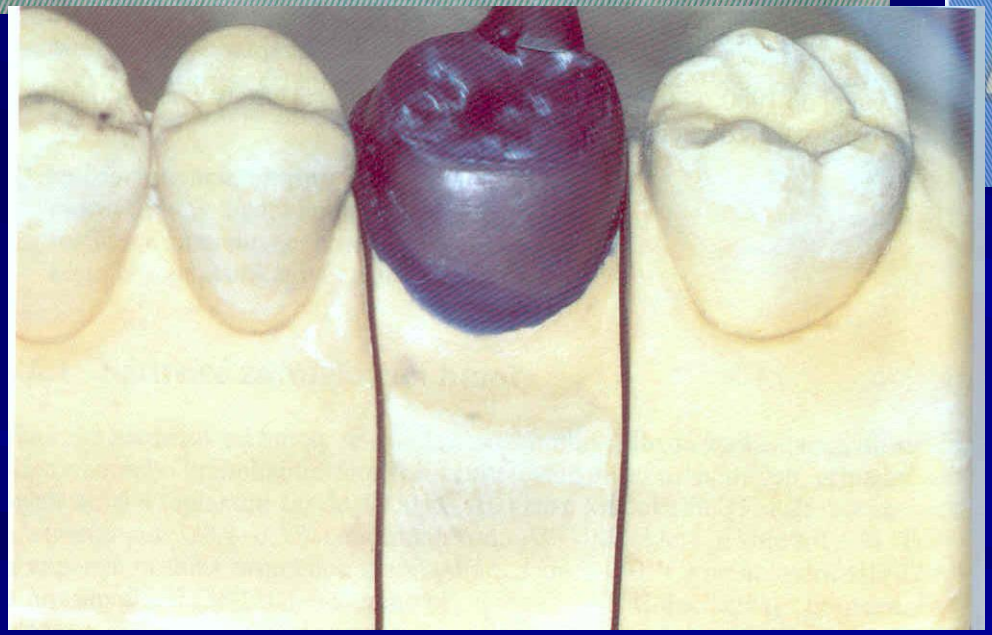
Manufacturing procedure 1.st phase in dental lab

- Plaster model– the dental arch is made of ultrahard gypsum, the base of a stone.
- The model is divided after application of guide pins
- The antagonal model of stone
- Mounting to the articulator (simulator)

Manufacturing procedure 1.st phase in dental lab

- The wax patern of the metal framework is manifactured
- Casted (the method of lost wax)
- Adapted on the model





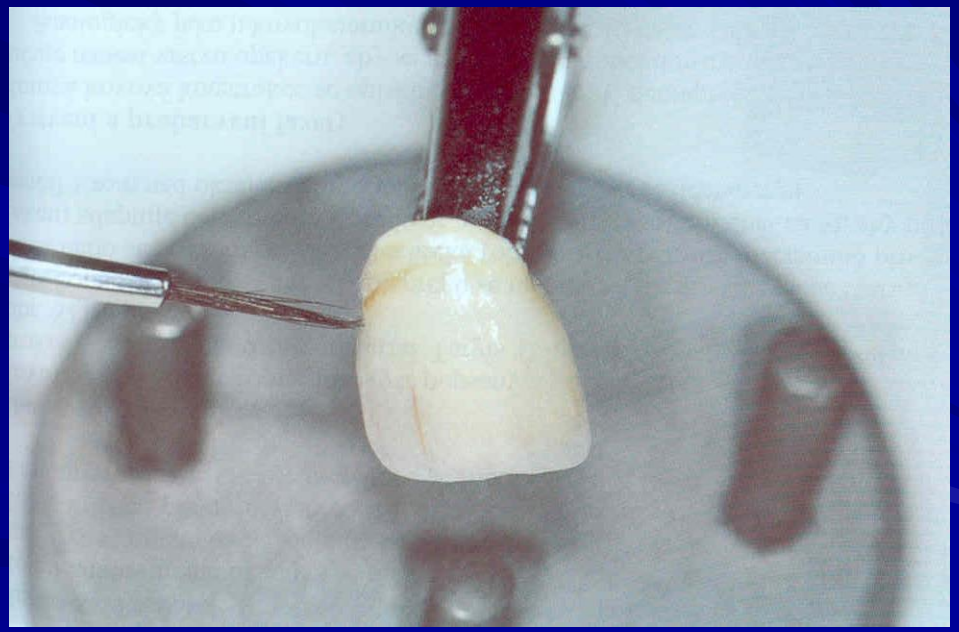
Manufacturing procedure 2.nd phase in dental ofice

- The framework is tried out

- The colour of veneering material is choosen

Manufacturing procedure 2.nd phase in dental lab

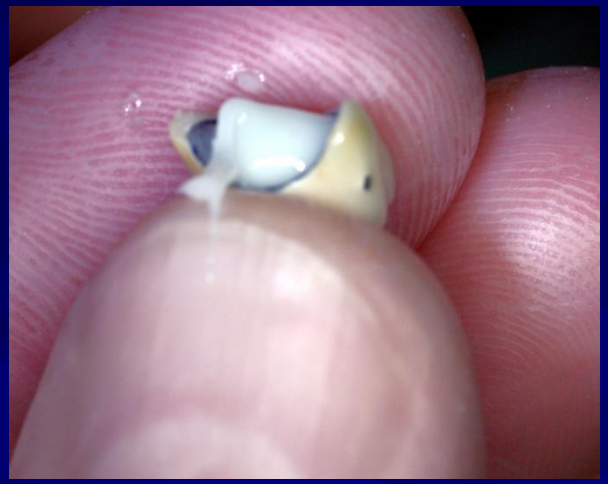
The veneering material is applied on the framework.



Manufacturing procedure 3.rd phase in dental ofice

- The denture is tried out

- Cemented
- (zinkoxidphosphate cement, glasionomer or composite)



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