

Limited partial edentulism. Indications and contra-indications to treatment of partial edentulism with Fixed Partial Dentures. Principles of choosing and inclusion of support teeth in Fixed Partial Dentures. Soldering Bridge Dentures. Support teeth preparation. Getting impressions.

Variety of tooth artificial denture used at treatment of partial edentulism

- partial fixed denture
- partial removable acrylic denture
- partial removable elastic denture
- skeletal removable denture
- prosthetic treatment on implants.

The Fixed Partial Denture

is a prosthetic appliance that is permanently attached to remaining teeth or implants and replaces one or more missing teeth.

A tooth or implant serving as an attachment for a fixed partial denture is called **an abutment**.

Advantages:

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- restoration of integrity of dental arch
- restoration the main function of stomatognathic system (mastication function, phonetic function)
 - distribution the forces of bite properly by replacing missing teeth
 - prevent remaining teeth from drifting out of position
 - help to preserve the natural function and position of the teeth
 - restore and maintain natural bite
 - restoration the esthetic (shape of the face, smile)
- prevention of TMJ, muscles disorders
- prevention of general disorders.

Disadvantages:

- necessity of teeth preparation under support elements and creating parallelism between them
- possibility of damaging soft tissues under the body of the bridge denture
- possibility of appearing of allergic reaction to the used material
- possibility of functional overloading teeth parodontium in the case of wrong choice of construction
- irritating influence of artificial crown on the marginal parodontium
- unsatisfied aesthetic qualities

- difficulties in hygienic nursing of bridge denture because of fixed construction.

Using Bridge Dentures in case of prosthetic treatment of patients with partial edentulism

and choosing denture construction are defined by the following factors:

1. the size and topography of the tooth row defect (terminal or intercalate defect);
2. condition of hard tooth tissues and periodontium of support teeth and their antagonists;
3. profession, age and body condition of the patient;
4. occlusal relationships.

Indications to prosthetic treatment of partial edentulism with BRIDGE DENTURE:

- 1) loosing from 1 till 3 neighboring teeth, in some cases loss of one or four incisors
- 2) loss of canine
- 3) loss of one or more premolars
- 4) loss of two premolars and the first molar
- 5) permissible loss of two premolars on one side of the jaw, the first and the second molars with preserved and well-developed third molar.

Contraindications to BD using:

Local:

Relative:

- young patient (till 18 – 23);
- inflammation process in apical tooth area;
- inflammation or pathological process in mucosa of the oral cavity etc.

Absolute:

- absence of more than 3 neighboring teeth;
- III degree of pathological tooth mobility of support teeth;
- untreated or impossible to treat inflammation process in apical tooth area;

General:

Relative:

- cardiac accident
- infection diseases
- some mental diseases in acute form etc.

Absolute:

- some mental disorders
- allergic reaction to used material etc.

Classification of artificial Bridge Denture according to different signs:

- **material used for their manufacturing** (metal, plastic, ceramic or porcelain and combined (M/A, M/C))
- **the character of fixation** (fixed and removable)
- **method of their manufacturing** (soldering, cast)
- **construction** (integral or solid, compound)
- **relation of the bridge pontic to alveolar process** pointed и hygienic
- **position of the support teeth** (two sided and one sided support – console)
- **construction of the support part of the bridge denture** (different kinds of artificial crowns, semi crowns, lays, substitution teeth and their combinations)
- **the construction of the pontic** (metal, plastic, ceramic and combined)
- **the number of support teeth** (on one support tooth – console bridge denture, on two support teeth, on the tree and more support teeth)
- **correlation of the body of the BD with alveolar process** (saddle, semi-saddle, tangential, with point contact).

Soldering Bridge Dentures consists from stamp artificial crowns and cast pontic soldered together.

Clinical-laboratory stages of soldering bridge denture

CLINICAL – patient’s examination, diagnosis, choosing a method of treatment, making an anaesthesia, support teeth preparation, taking impressions, determining and registering CO, protection of prepared teeth by covering them with protective lacquer or temporal crowns;

LABORATORY – making a patterns (or a gypsum models) and their fixing in an simulator. Modeling swage crowns (on a pattern wax reproduction of future teeth crowns, gypsum die making, mold making, making metal die (two) from low temperature melted metal alloys, choosing prefab unit (cap) and their fitting, primary and final stamping, processing the crowns and their testing on the gypsum mold.

CLINICAL – testing the crowns in the oral cavity, taking impression from the tooth arch with swage crowns put on the support teeth.

LABORATORY – making a model with swage crowns on it, modeling pontic, casting, soldering pontic of future BD to tested swage crowns, testing the BD on the model.

CLINICAL – testing BD in the oral cavity;

LABORATORY – final processing, polishing and finishing soldering BD.

CLINICAL – final testing and fixing of soldering BD in the oral cavity.