

## **Features of Restoration or Modern Methods for Teeth Filling**

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### **Abstract:**

In this article, the opinions of our country's and foreign scientists are mentioned about the features of restoration or modern methods of tooth filling.

**Keywords:** fissure (diastema), caries lesion, darkening of tooth enamel, irregularity of teeth, cardiac pacemaker, restoration of milk teeth.

Today, with the help of advanced technologies offered by dentistry, even the most advanced oral problems can be solved. One of these techniques is dental restoration.

It involves several aesthetic procedures to correct and restore the color and shape of teeth.

When is a restoration procedure indicated?

With the help of restoration, you can remove diastema (gap between teeth), chips, microcracks in the enamel, and slight curvature of teeth. The most popular in this case is direct restoration, which involves the use of composite materials for extensions.

Thanks to the direct method, the doctor will restore the shape of the tooth and eliminate chips and gaps in the visible area of the smile. The second method is indirect, carried out using veneers - special ceramic overlays installed on a tooth that has not been ground down.

Dental restoration is indicated in the following cases:

chipped and uneven teeth;

pigment spots and darkening of tooth enamel;

incorrect position of teeth in a row;

damage to dental units by caries;

gap (diastema) between teeth - spaces between teeth in the smile area.

All of these defects are eliminated by the dentist under local anesthesia and do not cause pain.

Contraindications to the procedure

Of course, like any aesthetic procedure, restoration has contraindications. Among them there are absolute and relative. The absolute ones include:

allergic manifestations to materials the dentist works with;

diseases of the soft tissues of the oral cavity, serious pathologies of the gums;

extensive caries damage;

installed pacemaker;

Restoration of baby teeth is prohibited.

There are much more relative contraindications, and they are temporary:

Destruction of tooth tissue by more than 50%, in which the restoration structure becomes unreliable. In this case, the doctor is obliged to warn the patient about the possible consequences.

If the destroyed tooth tissue extends under the gum space. This also reduces the effectiveness of the restoration. Even modern materials do not provide 100% adhesion and adherence of the composite to the surface of the tooth under the gum. An alternative would be dental crowns.

It is not recommended to carry out restoration when metal or metal-ceramic crowns are already installed on the opposite teeth. They are stronger than composite, so they will contribute to increased wear of the restored teeth.

The absence of chewing teeth is a contraindication for restoration. The chewing load will be completely transferred to them, which will lead to rapid wear of the composite material. Accordingly, before doing restoration, it is necessary to restore the integrity of the dentition.

Malocclusion, in which there is an incorrect chewing load on the teeth. This provokes high wear of the composite material. It is logical that before starting restoration, orthodontic treatment should be carried out and the bite should be corrected.

Involuntary teeth grinding (bruxism) is another contraindication to restoration. In this case, the choice should shift to stronger and more reliable structures, namely zirconium crowns.

Methods of restoration of anterior teeth and stages

As we have already noted, several methods of dental restoration are used in dentistry:

A direct method in which composite material is applied layer by layer and then cured within a few seconds under a UV lamp. Modern materials allow you to choose any shade of material according to the client's request. At the end of the procedure, the doctor grinds the tooth. The average service life of teeth restored using the direct method is up to 7-8 years.

An indirect method, which involves the use of veneers or special ceramic onlays on the front teeth. They are made from a custom impression in the laboratory and then bonded to the surface of the tooth with an adhesive. The service life of such structures is up to 15 years.

The technique is carried out in several stages. First, the dentist prepares the patient's teeth for a specific, pre-selected design. Then, the color of the future restoration is agreed upon, impressions are taken and veneers are made. At the next stage, the finished overlays are tried on and, if everything fits, the microprosthesis is tightly fixed. The indirect method allows you to cope with various aesthetic defects and get a beautiful smile in a short time.

Composite restoration

More and more clinics are opting for direct composite restoration instead of conventional dental filling. This technique is carried out by an experienced doctor using special materials that harden under the influence of UV light.

Artistic restoration

Unlike other techniques, artistic restoration resolves aesthetic issues. With its help you can fix the following problems:

irregular shape of the dental unit;

insufficient length;

disproportionate size;

enamel chips;

consequences of injuries.

All these problems are successfully solved with the help of artistic restoration. Additionally, a special whitening procedure allows you to adjust the shade of the tooth and bring the entire row to an aesthetic appearance.

In some ways, artistic dental restoration is an alternative to indirect restoration using veneers or crowns.

Advantages and disadvantages of restoration

Let's look at the pros and cons of dental restoration using the indirect method as an example.

The advantages include:

- affordable cost compared to other methods;
- no heavy grinding of dental tissues is required;
- high quality aesthetic indicators;
- A fairly simple procedure algorithm.

The disadvantages include:

- making a night guard (mandatory in case of bruxism);
- lower strength compared to zirconium crowns;
- the need for regular grinding;
- darkening is possible, depending on the pigments of the food, the nature of the food and eating habits.

How to prepare for restoration

Proper preparation for the procedure includes the necessary and important steps:

- undergoing diagnostics from a doctor and selecting the necessary restoration method;
- hygienic cleaning of teeth from stone and plaque;
- complete sanitation of the oral cavity to remove the main sources of infection;
- If necessary or desired by the patient, teeth whitening can be performed;
- restoration of chewing teeth and chewing efficiency.

Next, the patient awaits the stages of the restoration procedure itself, which were described above. Many patients are interested in whether it is painful to have dental restoration? Thanks to modern materials and techniques, there is virtually no discomfort during all the doctor's manipulations. For particularly sensitive teeth, additional anesthesia is performed.

If all stages of restoration were completed correctly and the conditions were met, your new smile will delight you for many years.

The difference between filling and tooth restoration

Restoration of the anterior and chewing teeth with filling material allows you to restore the anatomical shape, integrity and functionality of the dental crown. In fact, a filling performs approximately the same functions. But there are still differences between these two recovery methods, and they are significant:

Filling involves, first of all, restoring the functional parameters of dental tissues, and tooth restoration is aimed at restoring not only functionality, but also aesthetics - materials are selected in such a way as to most accurately imitate natural dentin and enamel, their color and degree of transparency.

Installing a filling is a purely therapeutic procedure, while restoration procedures combine both treatment and artistic restoration.

Fillings are installed when no more than a third of the crown of the tooth is destroyed. Restorative measures can be carried out in cases of more significant destruction of the crown, as well as in cases where the dental crown is visually intact, but it is necessary to correct its shape, color, or correct wide interdental spaces.

What does dental restoration mean and how is it done?

Dental restoration with filling material is a complete restoration of the integrity, functionality and aesthetic qualities of the dental crown with precise selection of color and transparency of materials to match the natural dental tissues. It is performed by a dentist using layer-by-layer application of filling materials of various shades in order to recreate the natural color of the enamel as much as possible. In this case, the doctor pays attention not only to the selection of color, but also to the precise restoration of the shape of the crown.

The final stage of restorative procedures will be grinding and polishing with special tools for dental restoration - such procedures give the tooth surface smoothness and a natural "wet shine" characteristic of healthy enamel.

Dental restoration, pros and cons

The main advantages of restoration are high aesthetics, the ability to restore even severely damaged crown parts, while preserving as much healthy natural dental tissue as possible, as well as the ability to avoid extraction and prosthetics.

As for the disadvantages, they can be considered a higher cost than filling, as well as the likelihood that the work will not be performed accurately enough and subsequently inflammation of the adjacent soft tissues will develop. To avoid inaccuracies in restoration and subsequent complications, the patient should carefully choose a dental clinic and doctor, since the success of the procedure largely depends on his experience and the availability of modern equipment.

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