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**TOOTH WHITENING TECHNIQUES**  
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Modern dental industry offers lots of means for effective tooth whitening. Beautiful, white teeth are not only a sign of good health, but also an element of culture, a symbol of wealth and prosperity. Striving to improve the esthetics of patients caused an active development of this promising dentistry trend.

The history of tooth whitening is more than 100 years old. In the medical literature, the earliest record of tooth lightening procedure appeared in the 14th century. The history of science-based tooth whitening originates in the United States in the late 19th century.

Currently, the dental practice uses the following methods to change the color of natural teeth: microabrasion, chemical bleaching, direct composite restoration, indirect restorations, veneers, crowns. Often, for a significant change of tooth color a patient should undergo two or more of the above techniques.

Modern methods of chemical tooth whitening are classified as follows: professional whitening, external (on vital teeth), internal (non-vital teeth), home bleaching, mixed bleaching.

Bleaching agents differ from each other in the consistency and concentration of the agent, exposure time, as well as the use of an additional factor that activates the bleaching component.

The essence of all modern techniques is the following: substances used for the procedure decompose and form free radicals, reactive oxygen molecules and hydrogen peroxide anions. These penetrate the hard tissues of the tooth (dentin and enamel) and oxidize organic substances coloring tooth and denature proteins present in pigments, thus making the tooth structure less transparent and optically lighter.

The choice of material to use depends on a number of factors, including the type of discoloration present and how dark the teeth are initially. However, the most important consideration has to be the patient, his/her lifestyle, the time available for bleaching and whether there are existing problems with tooth sensitivity.

The goal of modern dentistry is maximum preservation of tooth substance with excellent esthetics. Bleaching alone, or in combination with minimally invasive adhesive dentistry, very often fulfills this goal without the need to progress to the much more destructive techniques of veneers, crowns and bridges.