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COMPOSITE RESIN DENTAL MATERIALS
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Oral disease has been a problem for humans since the beginning of time. Skulls of the Cro-Magnon people, who inhabited the earth 25,000 years ago, show evidence of tooth decay. The earliest recorded reference to oral disease is from a Sumerian text (circa 5,000 B.C.) that describes "tooth worms" as a cause of dental decay. No one can deny that dentistry has made tremendous strides over the years.

An awful lot of technological and scientific progress has been made within the field of dentistry over the last decade. The majority seems to have been focused on one area – the humble dental filling because fillings are the most common (and one of the most reviled) forms of dental treatment.

Today, several dental filling materials are available. Teeth can be filled with gold; porcelain; silver amalgam; tooth-colored plastic, and materials called composite resin fillings.

Dental composites typically are composed of three chemical materials: an organic matrix, inorganic fillers, and coupling agents. Requirements of composites: they must be biocompatible and bond well to both enamel and dentin; must resist masticatory forces and demonstrate mechanical properties similar to those of natural teeth.

Nowadays, of all resin-based composites, the most commonly used are light cure composites, which have both advantages and disadvantages. The greatest advantages should be stressed: improved aesthetics, composite fillings chemically bond to tooth structure, alternative to tooth removal, reparability, lack of corrosion, they can be used not only to restore front teeth but also molars.

In conclusion, it should be added that there are light-cured materials synthesized in Belarus. For example, material Migrofil and light-cured unicomponent adhesive system Migrobond.

The investigation of the physical-mechanical properties of the new composite material (strength, water absorption, polymerization depth) showed that these indices don't concede the best foreign analogs.