Case examples: Front tooth repair

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CASE I (Courtesy of Dr. A. Peschke)

Tooth with broken edge- A front tooth with broken edge. The fracture is confined to enamel. The dentist has cut the enamel and created “a scalloped bevel”. The tooth is then treated (etched) with a special acid, before the adhesive and restorative material (composite resin) are placed.
Final restoration made with composite resin.

Tooth Slice
Tooth Slice- The tooth is made out of a very hard and brittle outer shell called ENAMEL. It is mainly inorganic containing 96% hydroxyapatite crystals. The enamel is firmly bonded to the inner part, called DENTIN, which is an organic/inorganic composite (30% collagen, 50% hydroxyapatite, 20% water). Dentin is a vital tissue since it contains string-like processes from the cells lining the dentin in its inner surface (odontoblasts). The center of the tooth (white and black in picture) is filled with living tissue (connective tissue, blood vessels and nerve fibers). Courtesy of Dr. A. Peschke.

CASE II (Courtesy of Dr. A. Peschke)
Patient presents himself with old, discolored large restorations and fractures.

The operative field is insulated from the oral cavity to prevent contamination of the adhesive interfaces. The old restorations are removed and bevels placed.
Hydrophosphoric etching gel (blue) is placed on all surfaces planned for adhesion of the upcoming restorative material.

Finished restorations after layering composite resins and polishing.
CASE III (Courtesy of Dr. R. Spreafico)

Broken tooth by accident.

Tooth is insulated in order to prevent contamination of adhesive surfaces. The Enamel is etched.
The first layer of composite is build up and bonded to the tooth and polymerized.

The midsection layer is placed colored composite added for aesthetic effect.
The Final top layer of composite is placed. The Enamel is etched.

Final restoration after polishing.