When a filling needs to be replaced

dental filling (also called a "dental restoration") is intended to replace tooth structure lost to decay. Dental fillings may last many years; however, eventually all fillings need to be replaced. Constant assault from eating and drinking, or stress from clenching or grinding, eventually may cause a dental filling to fail.

Bacteria cause tooth decay. Fillings that have worn away, chipped, cracked or fallen out may leave gaps between the tooth and the filling that can provide an entry point for bacteria. Bacteria are abundant in the mouth and are commonly found in saliva and in dental plaque (a thin film that forms on teeth and gums). If the seal between the tooth and the filling breaks down, food particles and decay-causing bacteria can work their way between the worn filling and the tooth. These bacteria cannot be removed easily with a toothbrush or other means, and decay may develop along the edge of the filling or underneath it. Decay that is undiagnosed and untreated can progress to infect the dental pulp (which contains the tooth's nerve and blood supply), which often results in the need for root canal (endodontic) treatment or, possibly, loss of the tooth.

Regular dental examinations are important because problems with existing fillings generally can be detected in the early stage. Although you may not be able to tell that your filling is worn. your dentist can identify any weaknesses in it during a regular checkup. During the examination, the dentist determines if the existing fillings are intact or if any have cracked or worn away. He or she uses an instrument called an explorer to gently detect any worn spots around the filling's edge. This instrument will help your dentist determine if the dental filling is sealed to the tooth, or if it is sufficiently worn and needs replacement. Dental radiographs ("X-rays") may be taken to help detect decay under existing dental fillings or between teeth, neither of which can be seen simply by looking at the tooth. If the dentist finds evidence that a filling has failed or detects decay on the radiograph, the dental filling should be replaced promptly. Don't wait until the tooth hurts or a crack appears in the filling of the tooth. Early detection and treatment can minimize the need for extensive and costly procedures.

CHOICES FOR NEW FILLINGS

Advances in dental materials and techniques offer new ways to create more pleasing, naturallooking smiles. Researchers are continuing their often decades-long work in developing materials, such as ceramic and plastic compounds, that mimic the appearance of natural teeth. There are several types of tooth-colored materials that can be used to repair damaged or decayed teeth.

Several factors influence the performance, durability, longevity and expense of dental fillings. These factors include the components in the filling material; where and how the filling is placed; the chewing load that the tooth must bear; and the length and number of visits needed to prepare and adjust the restored tooth.

Amalgam. Amalgam is composed of a mixture of silver, copper, tin and mercury, all of which combine to form a strong and stable filling material. It is durable, easy to use, highly resistant to wear and relatively inexpensive compared with other materials.

Composite. Composite fillings are a mixture of acrylic resin and finely ground glasslike particles that produce a tooth-colored restoration. Composite fillings provide durability and resistance to fracture in small-to-mid–sized restorations that need to withstand moderate chewing pressure.

Glass ionomers. Glass ionomers are toothcolored materials made of a mixture of fine fluoridecontaining glass powder and organic acid that forms a solid restoration able to release fluoride.

TALK TO YOUR DENTIST

The ultimate decision about what to use is best determined by the patient in consultation with the dentist. Before your treatment begins, discuss the options.

Prepared by the ADA Division of Communications, in cooperation with The Journal of the American Dental Association. Unlike other portions of JADA, this page may be clipped and copied as a handout for patients, without first obtaining reprint permission from the ADA Publishing Division. Any other use, copying or distribution, whether in printed or electronic form, is strictly prohibited without prior written consent of the ADA Publishing Division.

"For the Dental Patient" provides general information on dental treatments (and dental careers) to dental patients. It is designed to prompt discussion between dentist and patient about treatment options and does not substitute for the dentist's professional assessment based on the individual patient's needs and desires.