

## Dental restorations: Choose carefully

At a recent dental study club meeting, a young dentist dramatically and persistently proclaimed resin composite dental restorative materials to be adequate for all contemporary dentistry needs. While exuberance about the wonderful new possibilities provided by adhesive dentistry is understandable, caution in selecting restorative materials in particular cases is mandatory. Indications and contraindications exist for every material available to practitioners.

The article by Hicks and Flaitz on page 570 reminds us that materials other than resin composites may be wiser choices in selected restorative dentistry cases, and the seminal articles on minimal intervention by Mount and Ngo (pages 527 and 555) further illustrate the need for disease control through prevention as the first step in treating every patient, followed by case-specific technique and materials selection. In fact, "Minimal intervention: A new concept for operative dentistry" should become one of dental literature's landmark papers because it stimulates the profession to detailed debate and discussion about why, how, when, and with what we manage and treat the cause, course, and lesions of the tooth demineralization process. Readers will recognize continuation of a *Quintessence International* theme established a few years ago: When is caries caries, and what should we do about it? The answer is not simple, and current evidence-based science has altered the answer from what most of us learned during our dental training. Important studies being conducted will further elucidate the issue.

Some fundamentals remain unchallenged. Fluoride notwithstanding, as long as cariogenic bacteria, carbohydrates, and inadequate oral hygiene occur in the same mouth at the same time, some degree of decalcification of mineralized tooth structure will result. It is wrong, therefore, for dentists to place restorations without controlling caries first. As I have told thousands of patients over the years, you don't try to repair damage to the roof while the house is still on fire.

Various epidemiologic studies from the 1950s and 1960s indicated that periodontal disease was the leading cause of tooth loss around the world. That mantra has been repeated countless times in dental literature. However, a study published in 1989 suggests that the past 50

years' concentration on understanding, preventing, managing, and treating periodontal disease has dramatically reduced tooth loss caused by that disease. At least with the sample of US males reported on in that study, the rate of tooth loss due to tooth decay was twice that of periodontal disease (roughly 40% versus 20%). We still have a long way to go in controlling oral disease, and disease patterns continue to vary from country to country. The key, as always, is an informed population with the motivation and capacity to access dental care, achieve and maintain a healthy oral environment, and select appropriate oral repairs that restore function and appearance.

Much about the future of our practices can be learned from the recently released US Surgeon General's Report on Oral Health in America. The executive summary lists 8 major oral health findings, and from those findings one can extrapolate assumptions and strategies that apply in communities around the world. Next month we will list them and comment on how those findings relate to the editorial themes developed over the past 3 years, related to assessing, managing, and treating the oral conditions of patients who come to us for help.

*Bill Wathen, DMD*

William F. Wathen, DMD  
Editor-in-Chief

### Suggested Reading

- US Department of Health and Human Services. Oral Health in America: A Report of the Surgeon General—Executive Summary. Rockville, MD: US Department of Health and Human Services, National Institute of Dental and Craniofacial Research, National Institutes of Health, 2000.
- Chauncery HH, Glass RL, Alman JE. Dental caries: Principal cause of tooth extraction in a sample of US male adults. *Caries Res* 1989;23:200–205.
- Tyas MJ, Mount GJ, Frenken JE, Anusavice KJ. Minimal intervention dentistry—A review. FDI Commission Project 1–97. *Int Dent J* 2000;50:1–12.