

Prevention and Non-Surgical Treatment of Caries



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CE Credits: 1.5 hours

Intended Audience: Dentists, Dental Hygienists, Dental Assistants, Dental Students, Dental Hygiene Students, Dental Assistant Students

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Cost: Free

Method: Self-instructional

AGD Subject Code(s): 10

Online Course: www.dentalcare.com/en-us/professional-education/ce-courses/ce640

Disclaimers:

- P&G is providing these resource materials to dental professionals. We do not own this content nor are we responsible for any material herein.
- Participants must always be aware of the hazards of using limited knowledge in integrating new techniques or procedures into their practice. Only sound evidence-based dentistry should be used in patient therapy.

Conflict of Interest Disclosure Statement

- Dr. Lawson received compensation from the Procter & Gamble Company for creating this course.

Introduction

This course presents a simple approach for treating caries based on the risk factors of our patients. We will discuss treatment of the patient with low salivary flow, poor oral hygiene, frequent consumption of sugar and low exposure to fluoride. The protocols and techniques for treating each type of high caries risk patient will also be discussed. Finally, we will review the mechanism of action and evidence for fluoride.

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Overview

Despite our best efforts to restore natural dentition with adhesive dentistry, all restorations are inferior to natural tooth structure and susceptible to secondary caries. This course presents a simple approach for treating caries based on the risk factors of our patients. The patients will be grouped into those who have inadequate production of saliva, those who have frequent consumption of sugar, those who have poor oral hygiene, and those with inadequate exposure to fluoride. Time-tested approaches will be reviewed, i.e., fluoride-containing products and diet modification recommendations. Additionally, the evidence for fluoride, its mechanism of action, and the possible risks of too much fluoride will be discussed.

Learning Objectives

Upon completion of this course, the dental professional should be able to:

- Review four distinct types of high caries risk patients.
- Present protocols and techniques for treating each type of high caries risk patient.
- Review the evidence for fluoride.

Video



[Click on image to view video online.](#)

Course Test Preview

To receive Continuing Education credit for this course, you must complete the online test. Please go to: www.dentalcare.com/en-us/professional-education/ce-courses/ce640/test

- 1. What is the major buffer inside saliva?**
 - A. Sodium hydroxide
 - B. Bicarbonate
 - C. Sodium fluoride
 - D. Ammonia

- 2. Which is a function of saliva for preventing caries?**
 - A. Lubricating the mouth
 - B. Enzymatic breakdown of carbohydrates
 - C. Reservoir for ions in tooth mineral
 - D. Enhancing taste

- 3. What is the critical pH of enamel?**
 - A. 3.5
 - B. 4.5
 - C. 5.5
 - D. 6.5

- 4. Which of these sugars is a fermentable sugar?**
 - A. Xylitol
 - B. Sucralose
 - C. Erythritol
 - D. Sucrose

- 5. Carbohydrates in foods such as potato chips can be cariogenic.**
 - A. True
 - B. False

- 6. How do diet sodas cause damage to tooth structure?**
 - A. By providing fermentable sugar to oral bacteria
 - B. Through direct erosion due to their low pH
 - C. Both A and B
 - D. Neither A nor B

- 7. According to the Cochrane review, which was shown to be more effective relative to electric toothbrushes when compared to manual brushing?**
 - A. Plaque removal
 - B. Reduction in gingivitis
 - C. Relief of halitosis
 - D. Both A and B
 - E. A, B and C

- 8. How does stannous fluoride help prevent gingivitis?**
 - A. The fluoride strengthens root dentin.
 - B. The fluoride recruits inflammatory cytokines.
 - C. The tin binds to the LPS toxin in gram negative bacteria.
 - D. The tin binds to root dentin and repels bacteria through electric charge.

- 9. How much fluoride is in most non-prescription fluorides?**
- A. 1 part-per-million
 - B. 100 parts-per-million
 - C. 1000 parts-per-million
 - D. 5000 parts-per-million
- 10. Patients should be instructed to rinse their mouths following brushing with fluoridated toothpaste.**
- A. True
 - B. False

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Additional Resources

- No Additional Resources Available.

About the Author

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Nathaniel Lawson, DMD, PhD is the Director of the Division of Biomaterials at the University of Alabama at Birmingham School of Dentistry and the program director of the Biomaterials residency program. He graduated from UAB School of Dentistry in 2011 and obtained his PhD in Biomedical Engineering in 2012. He has served as an investigator on over 50 clinical and laboratory research grants, and published over 150 peer reviewed articles, book chapters, and research abstracts. His research interests are the mechanical, optical, and biologic properties of dental materials and clinical evaluation of new dental materials.

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