

# Caries Process and Prevention Strategies: Risk Assessment



**Course Author(s):** Robert V. Faller

**CE Credits:** 1 hour

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

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**Cost:** Free

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**AGD Subject Code(s):** 11

**Online Course:** [www.dentalcare.com/en-us/professional-education/ce-courses/ce377](http://www.dentalcare.com/en-us/professional-education/ce-courses/ce377)

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- 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**

- Mr. Faller is a retired employee of P&G.

**Introduction**

This is part 10 of a 10-part series entitled *Caries Process and Prevention Strategies*. This course introduces the dental professional to risk terminology, and methods for identifying caries-causing factors and assessing a patient's risk for developing dental caries. It also outlines a risk protocol that can be used with patients.

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## Overview

This course introduces the dental professional to risk terminology, and methods for identifying caries-causing factors and assessing a patient's risk for developing dental caries. It also outlines a risk protocol that can be used with patients.

## Learning Objectives

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

- Define risk, risk factor, and risk assessment.
- Identify biological, environmental, sociocultural, and economic factors that increase caries risk.
- Evaluate clues from a patient's medical and dental history to assess caries risk.
- Implement a risk-assessment protocol.
- Conduct a risk-assessment survey.
- Choose individualized intervention strategies based on a risk-assessment survey.
- Understand the additional specialized needs of certain populations, like the elderly or those with dry mouth.
- Describe the Caries Management by Risk Assessment (CAMBRA) system.

## Glossary

**risk** – The probability that an event will occur. Teeth erupt free of caries, but from eruption onward they are at risk of developing dental caries, depending upon the risk factors; those that induce the disease and those that prevent the disease.

**risk assessment** – This is the qualitative or quantitative estimation of adverse effects that may result from exposure to specific hazards or absence of biological influences. The importance of risk assessment in clinical dental practice is recognized as relevant by dental insurers. For further information see CAMBRA (Caries Management by Risk Assessment).

**risk factor** – Any factor that will increase or decrease the probability of an event occurring. Risk factors for caries are environmental, biological, or social. Environmental factors include the availability of sugars in the diet, fluoride availability in water, or toothpaste. Biological factors include saliva quantity and quality. Social factors include age and socio-economic status.

**risk survey** – This is a tool, usually a specifically designed form, that captures specific information about key factors that may impact the patient's oral health. It is used to aid the dental professional in assessing the individual caries risk potential for a patient.

**Video: Risk Assessment**



*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/ce377/test](http://www.dentalcare.com/en-us/professional-education/ce-courses/ce377/test)

- 1. Which of the following is the definition of risk factor?**
  - A. The probability that an event will occur.
  - B. The qualitative estimation of adverse effects that may result from exposure to specific hazards.
  - C. An environmental, biological, behavioral or social factor that directly increases the probability of a disease occurring if it is present.
  - D. The possibility that an event will occur.
- 2. When taking the patient's medical history, why is it important to look for clues that could lead to dry mouth?**
  - A. Dry mouth is a factor linked to increased risk of caries because there is insufficient saliva present in the oral cavity to remineralize teeth in an acid attack.
  - B. Dry mouth causes oral cancer.
  - C. Dry mouth is always a sign of serious illness.
  - D. Dry mouth is associated with an increased incidence of tartar growth.
- 3. \_\_\_\_\_ is a condition that leads to dry mouth.**
  - A. Caries
  - B. Sjögren's Syndrome
  - C. Dental erosion
  - D. Gingivitis
- 4. \_\_\_\_\_ medications are NOT usually linked to dry mouth.**
  - A. Analgesic
  - B. Antidepressant
  - C. Antihistamine
  - D. Antihypertensive
- 5. Why are patients undergoing radiotherapy at risk for dry mouth?**
  - A. Radiotherapy reduces moisture levels in the body.
  - B. Radiotherapy causes an autoimmune reaction that dries the body's tissues.
  - C. Radiotherapy causes damage to the salivary acinar cells, thereby hindering saliva production.
  - D. Radiotherapy can cause excessive heat that may cause overall mouth dryness.
- 6. How can a dental professional tell if a patient has dry mouth?**
  - A. Ask the patient if he or she is experiencing discomfort because the mouth feels dry.
  - B. Check to see if saliva is dark-colored.
  - C. Look to see if the mouth mirror sticks to mucosal surfaces.
  - D. A and C
- 7. From a patient's dental history, which of the following will indicate high caries risk?**
  - A. A history of multiple restorations.
  - B. History of a trauma that chipped a tooth.
  - C. Teeth with white enamel stains.
  - D. A history of using whitening toothpaste.

- 8. What is information is not needed when collecting a patient's dental history?**
- A. What toothpaste is used.
  - B. How often the teeth are cleaned.
  - C. What their caries-causing dietary habits are.
  - D. What kind of insurance the patient has.
- 9. During the clinical exam, which of the following is a site that is more likely to have caries?**
- A. A front tooth that has a white enamel discoloration.
  - B. Front teeth with a gap in between.
  - C. Restorations with faulty margins.
  - D. A tooth that is smooth.
- 10. Which of the following might help a patient with cleaning carious lesions?**
- A. Suggesting a different angle for brushing the diseased area.
  - B. Showing the patient where the lesion is with a radiograph and/or help of a mirror.
  - C. Saying they should listen to you because you are a professional.
  - D. A and B
- 11. What is the typical amount of fluoride usually formulated into toothpastes sold in the U.S.?**
- A. 500 ppm to 1000 ppm
  - B. 850 ppm to 1150 ppm
  - C. 2000 ppm to 2500 ppm
  - D. 2500 ppm to 3000 ppm
- 12. In a patient with active lesions, how can a dentist determine what dietary factors or habits are caries culprits?**
- A. Ask the patient to recall all they have consumed in a 24-hour period.
  - B. The dentist can tell a lot from just looking at the caries lesions.
  - C. Ask the patient to take a detailed record of all they consume over a 3-day period.
  - D. A and C
- 13. Which of the following is true regarding recalling the patient after a dentist visit?**
- A. Patients without active caries should return to the dentist four times a year.
  - B. Patients at higher risk for caries and who do not have mastery over their plaque control may need to return every 2 to 3 weeks until plaque control has reached an acceptable level.
  - C. Patients without dry mouth should be seen every two years.
  - D. Patients should check with their insurance provider to determine if there is a need for any follow-up treatment.
- 14. Which of the following is NOT a tip that can help patients with dry mouth?**
- A. Sip water frequently.
  - B. Use a saliva substitute.
  - C. Drink caffeinated beverages.
  - D. Chew sugar-free gums.
- 15. \_\_\_\_ percent of elderly occupants in residential homes asked their caregivers to help clean their mouths?**
- A. 50
  - B. 5
  - C. 80
  - D. 100

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## Additional Resources

- No Additional Resources Available.

## About the Author

### Robert V. Faller, BS



Robert Faller has in excess of 40 years in the Oral Care Research field. He retired from P&G after more than 31 years in Oral Care, where he focused on caries and enamel related research as P&G's chief cariologist. He is editor of *Volume 17 - Monographs in Oral Science: Assessment of Oral Health - Diagnostic Techniques and Validation Criteria*. He has written 3 book chapters, published 34 papers in peer-reviewed journals and has over 100 published abstracts on fluoride, caries, dental erosion, and various oral care technologies, along with 5 patents related to Oral Care and 6 Continuing Education courses. He currently resides in the UK and is a consultant to the Oral Care industry.

Email: [rvfaller01@yahoo.com](mailto:rvfaller01@yahoo.com)