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INTRTODUCTION OF CARIOLOGY

CONTENTS

- ▶ The goal of oral health care
- ▶ Why do patients loose teeth?
- ▶ Dental caries- a definition
- ▶ Ecologic Basis of Dental Caries: The Role of the Biofilm

THE GOAL OF ORAL HEALTH CARE

- ▶ A pain-free,
- ▶ Functioning
- ▶ Good-looking dentition



THE GOAL OF ORAL HEALTH CARE

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Hammassirkku is a dental practice located at the centres of the cities of Jyväskylä and Saarijärvi. It offers private and high-quality dental treatment. PlusTerveys dentists are highly committed to customer service of good quality. Our goal is to provide our customers with qualified and ethically sound treatments as well as good doctor-patient-relationships.

A Beautiful Smile

We provide you with dental professionals who always consider what is best for you. Our flexible office hours enable us to carry out our treatment plans according to your schedules. Please, make an appointment, and we will select you a suitable treatment programme out of our various alternatives and fulfill your wish of having a beautiful smile and a healthy mouth.

Opening Hours

Mon to Fri 11am to 6pm



Our Services

- Your recall examination
- Oral hygiene
- Gum disease
- Fillings and tooth decay
- Bruxism and clenchings
- Crowns and bridges
- Root canal treatment
- Implants
- Dentures
- Orthodontics
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CONSULTATIONS**



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- ✓ Full Exams & X-Ray
- ✓ Dental Cleaning
- ✓ Fillings, Root Canals & Extract
- ✓ Full & Partial Dentures
- ✓ Crowns & Bridges
- ✓ Dental Implants

ABOUT US

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WHY DO PATIENTS LOOSE TEETH?



Figure 1 Oral condition
in an elderly Chinese man.

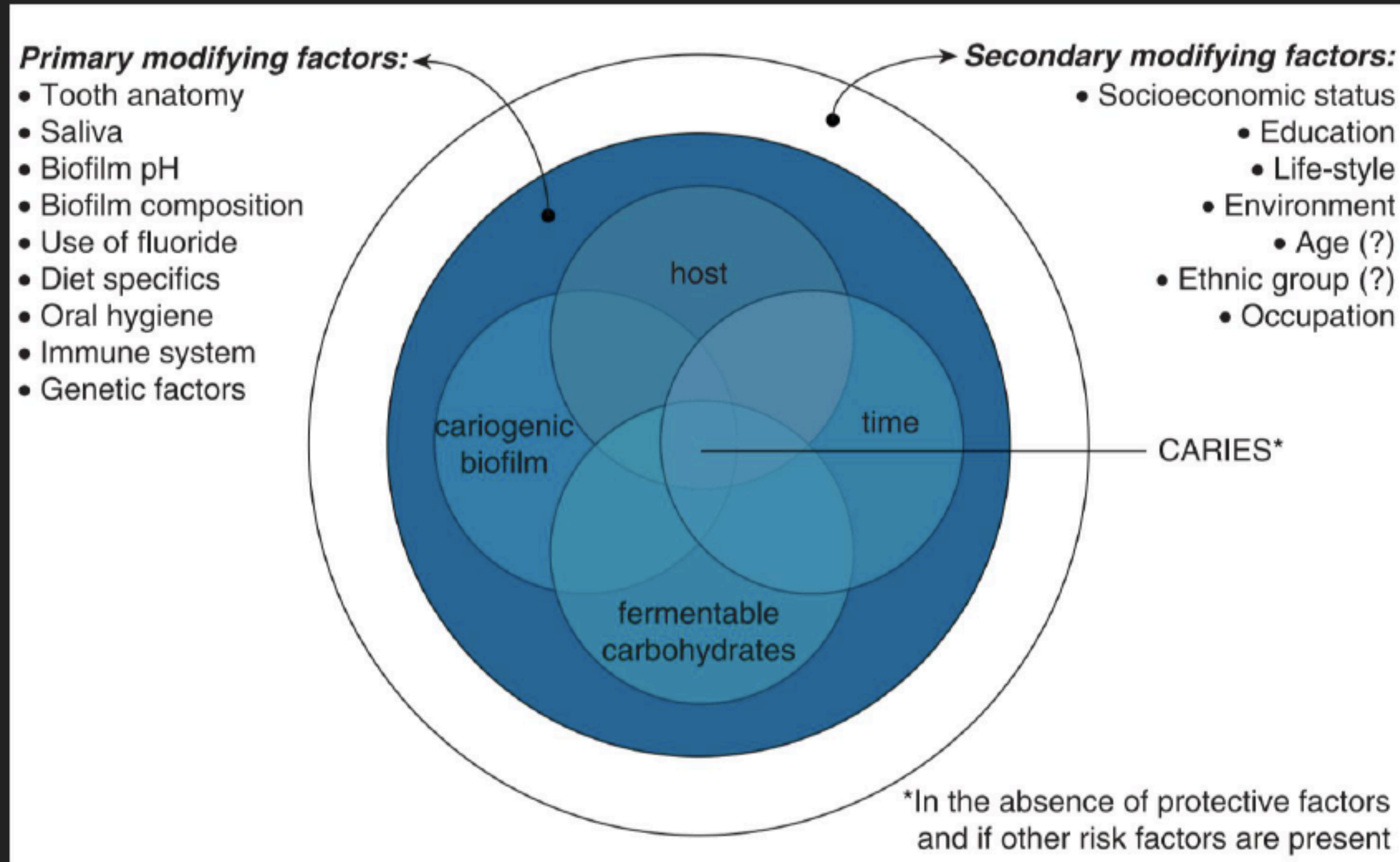


Figure 2 Massive dental plaque in an adult Kenyan man.
The oral hygiene among these populations is very bad with swollen gums, but people rarely lose their teeth because of periodontal loss of attachment. Dental caries is the principal cause of tooth loss.

DENTAL CARIES: A DEFINATION

- ▶ Dental caries is a biofilm-mediated, sugar-driven, multifactorial, dynamic disease resulting in the phasic demineralization and remineralisation of dental hard tissues.

DENTAL CARIES: A DEFINATION



CRITICAL PH

- ▶ Neutral pH  7.00
- ▶ Critical pH  5.5 for enamel
6.2 for dentin

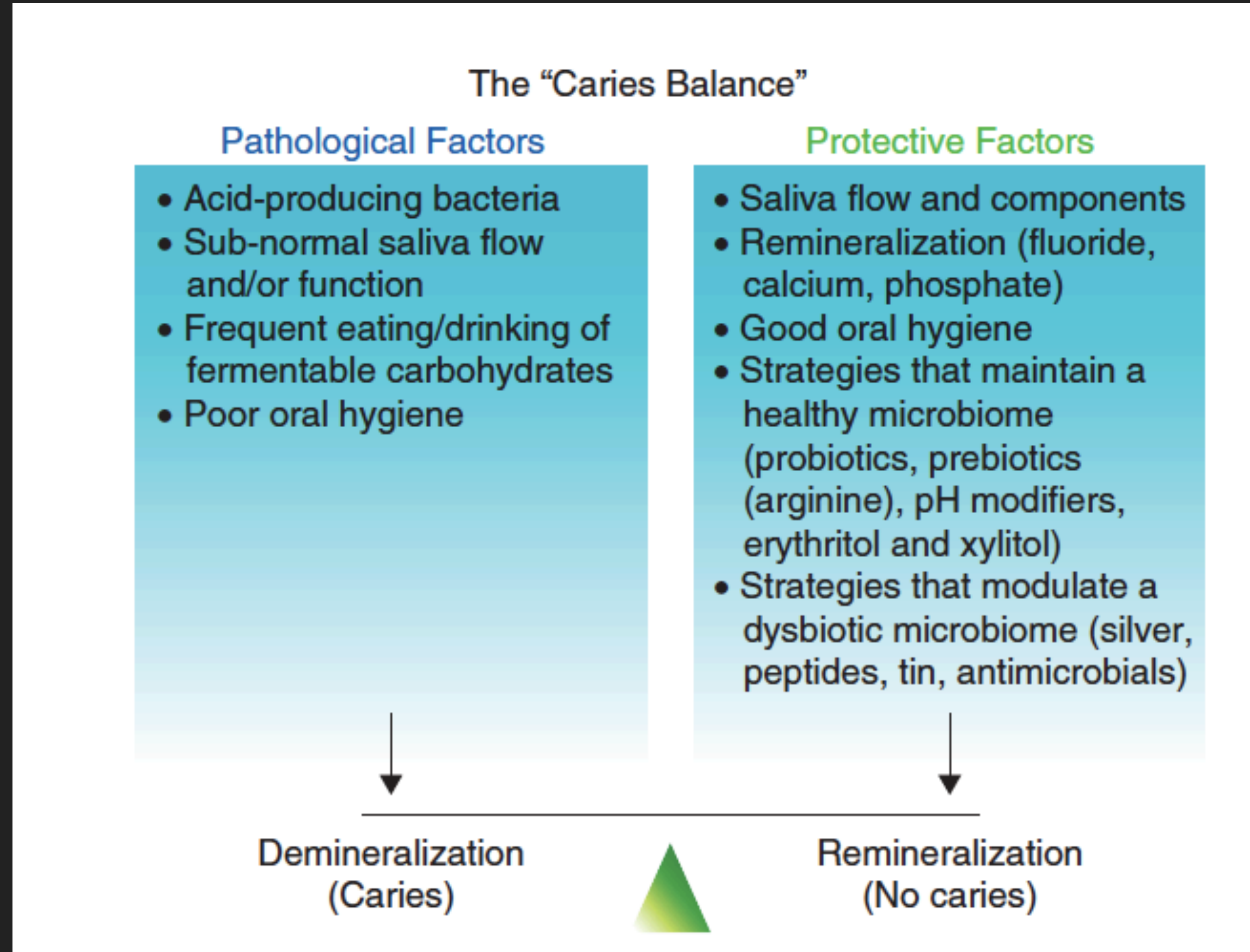
BELOW THE CRITICAL PH

- ▶ The low pH drives calcium and phosphate from the tooth to the biofilm in an attempt to reach equilibrium, hence resulting in a net loss of minerals by the tooth, called **demineralization**.

ABOVE THE CRITICAL PH

- ▶ When the pH in the biofilm returns to neutral and the concentration of soluble calcium and phosphate is supersaturated relative to that in the tooth, mineral can then be added back to partially demineralized enamel in a process called **remineralization**.

DENTAL CARIES



BALANCE BETWEEN DEMINERALIZATION AND REMINERALIZATION IS KEY TO CARIES MANAGEMENT.

Modified from Featherstone JDB: Prevention and reversal of dental caries: role of low level fluoride, Community Dent Oral Epidemiol 27:31-40, 1999.

RESTORATIVE TREATMENT DOES NOT CURE THE CARIES PROCESS.

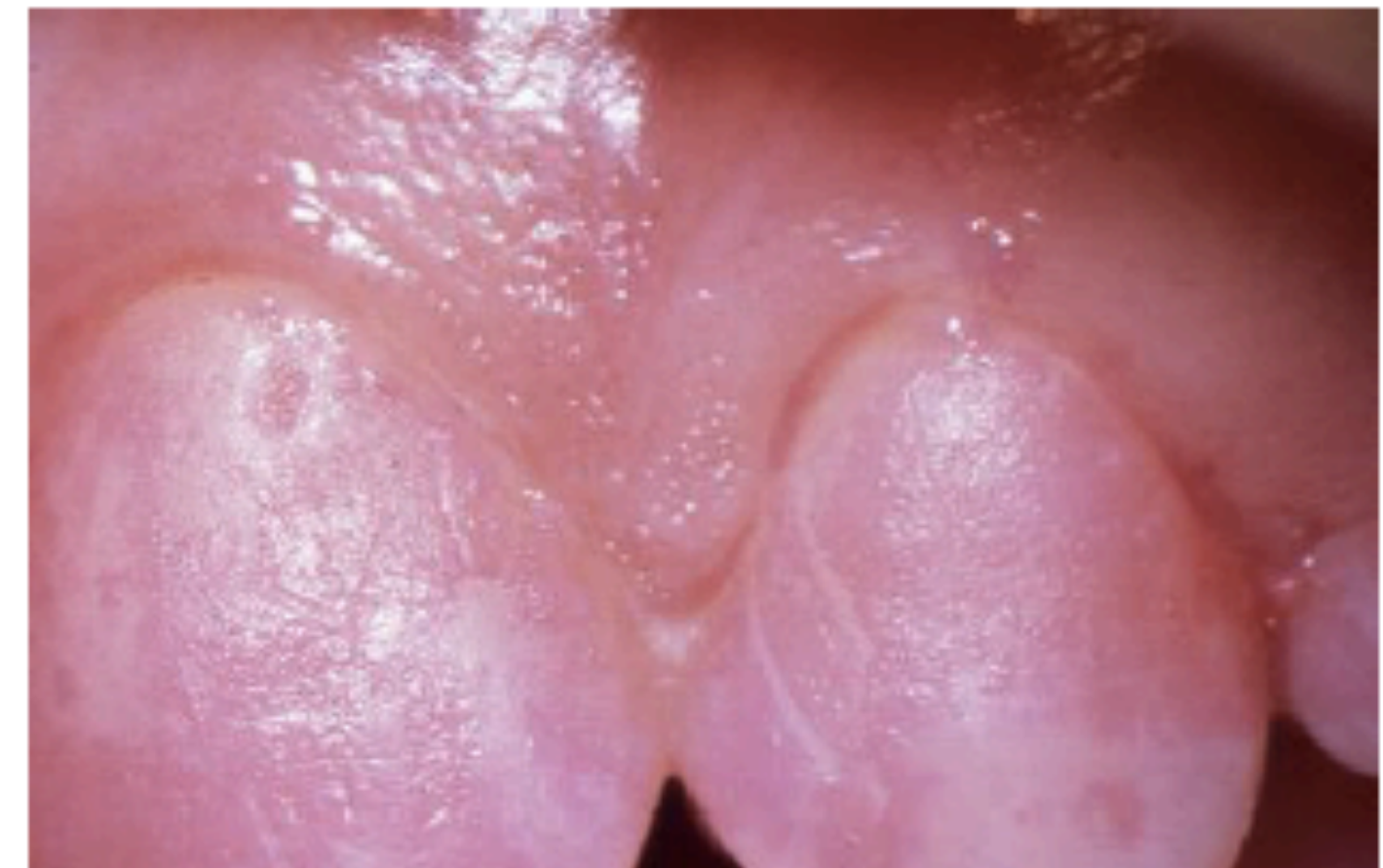
ECOLOGIC BASIS OF DENTAL CARIES: THE ROLE OF THE BIOFILM

A **dental biofilm** is defined as a microbial community growing on a tooth surface.

Figure 2.1 Cervical half of two teeth demonstrating a 24-hour dental biofilm.



Figure 2.2 After application of a disclosing solution, the dental biofilm is more easily discernible.



ECOLOGIC BASIS OF DENTAL CARIES: THE ROLE OF THE BIOFILM

- ▶ On a clean surface, single cells (cocci) attach to the pellicle (the proteinaceous saliva film) within 12 hours and the cells start to multiply and form microcolonies within 24 hours.
- ▶ At this stage, the surface may feel matt or rough when moving the tongue tip over the surface of the teeth. If left undisturbed there is a microbial succession, continued growth and an increased species diversity resulting in a 'mature' or climax type of biofilm within a week. This structure is often referred to as dental plaque.

FURTHER READING

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