



Why Restore Teeth?

213 RDS
Dr. N. Shono

Outline

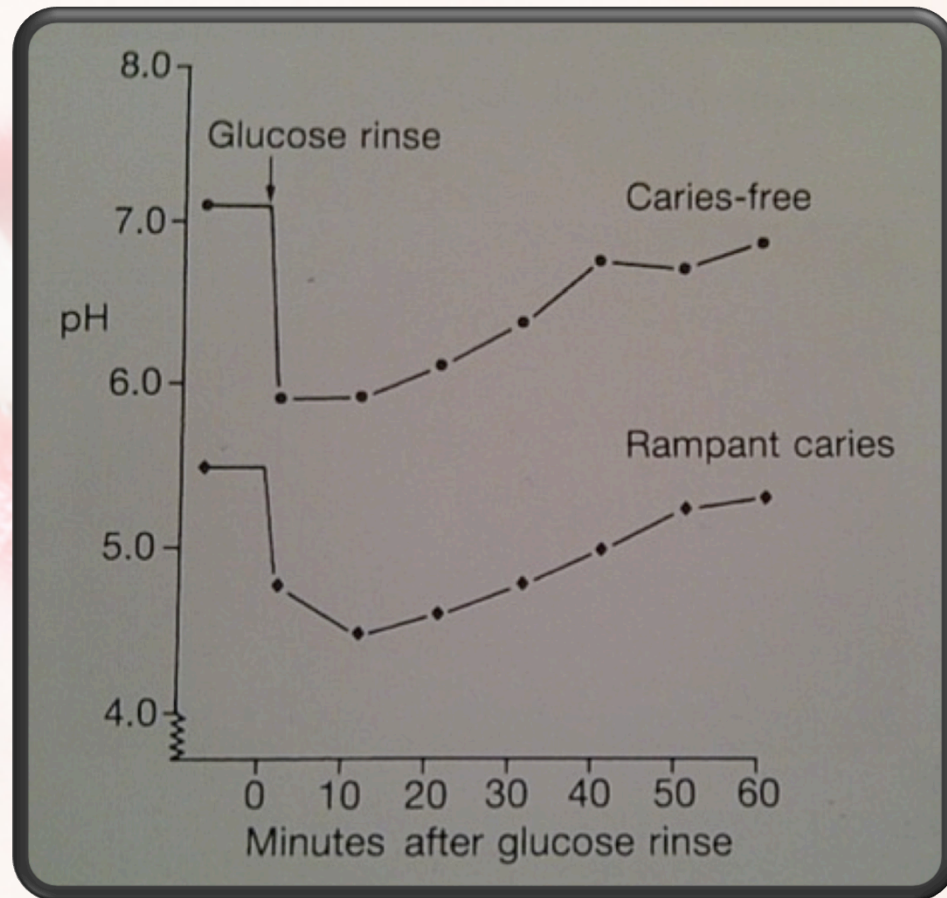
- Dental Caries
- Tooth Wear
- Trauma
- Developmental Defects



Dental Caries

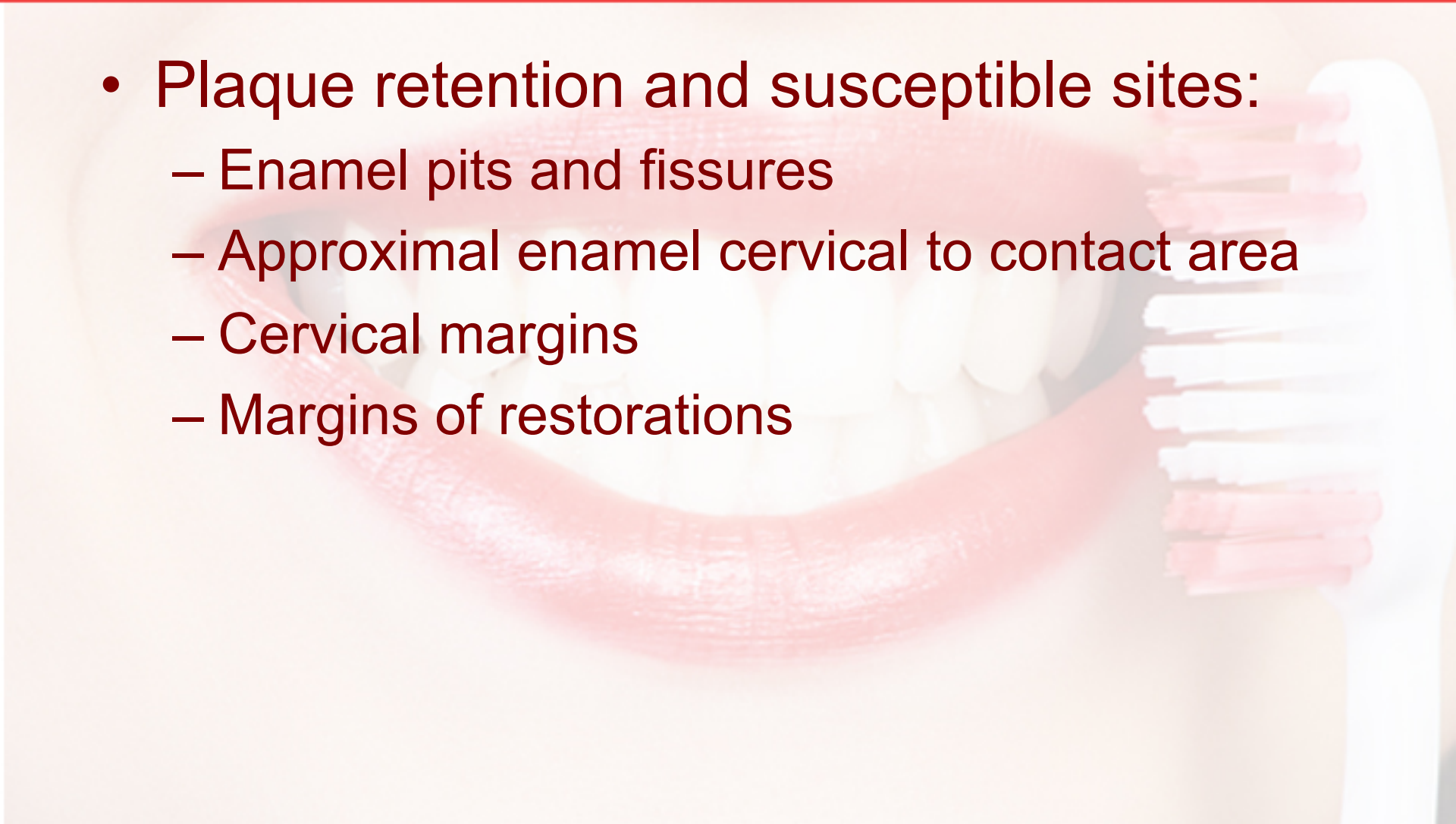
- Is a process that takes place on any tooth surface in the oral cavity
- Microbial film (Dental plaque)
- The carious process is the metabolic activity in the biofilm
- Diet-fermenting carbohydrate substrate (sucrose and glucose)-plaque pH falls (High acidity)

Dental Caries

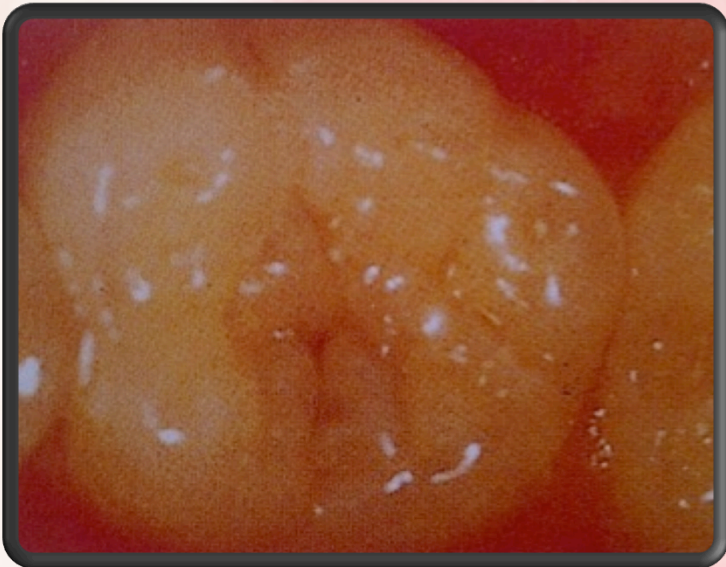


Dental Caries

- Plaque retention and susceptible sites:
 - Enamel pits and fissures
 - Approximal enamel cervical to contact area
 - Cervical margins
 - Margins of restorations



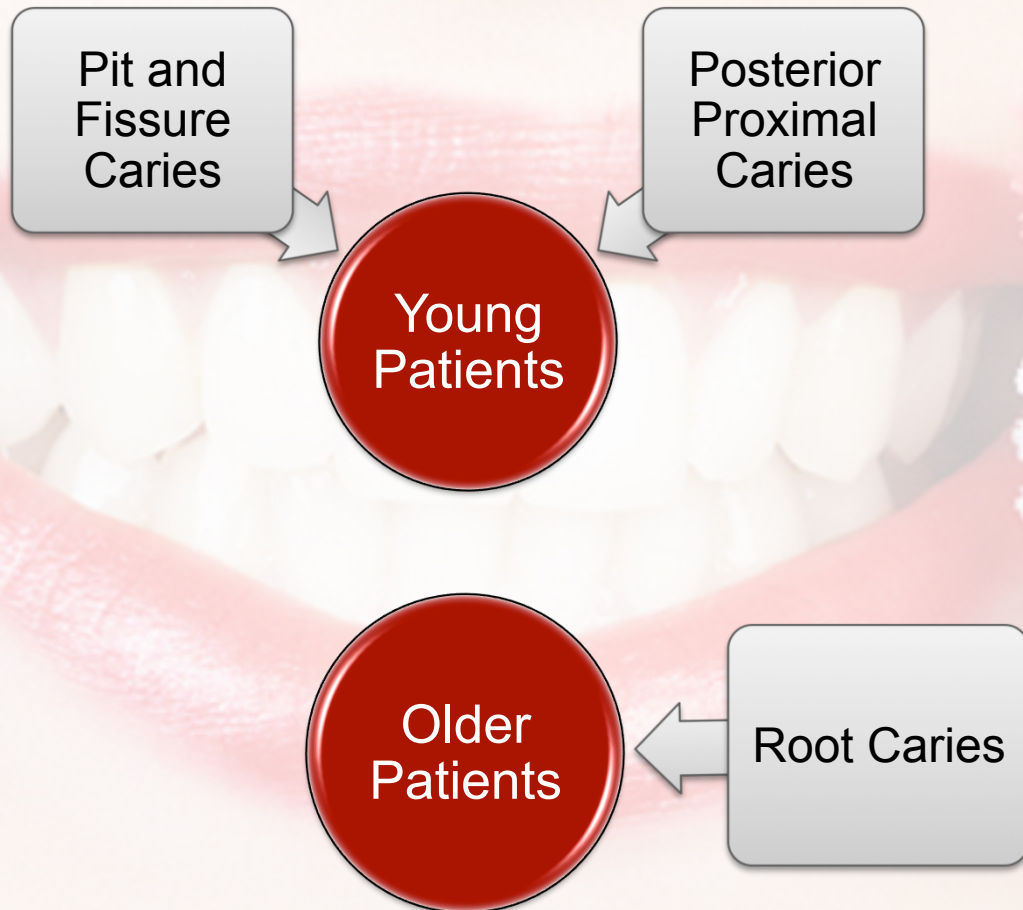
Dental Caries



Dental Caries



Dental Caries



Dental Caries

- Classification of caries according to severity:
 - Rampant Caries
 - Arrested Caries
 - Secondary/Recurrent Caries
 - Residual Caries



Dental Caries

- Rampant Caries:
 - Sudden rapid destruction of many teeth
 - Frequently involving surfaces that are ordinarily relatively caries free



Dental Caries

Rampant Caries



Primary Dentition

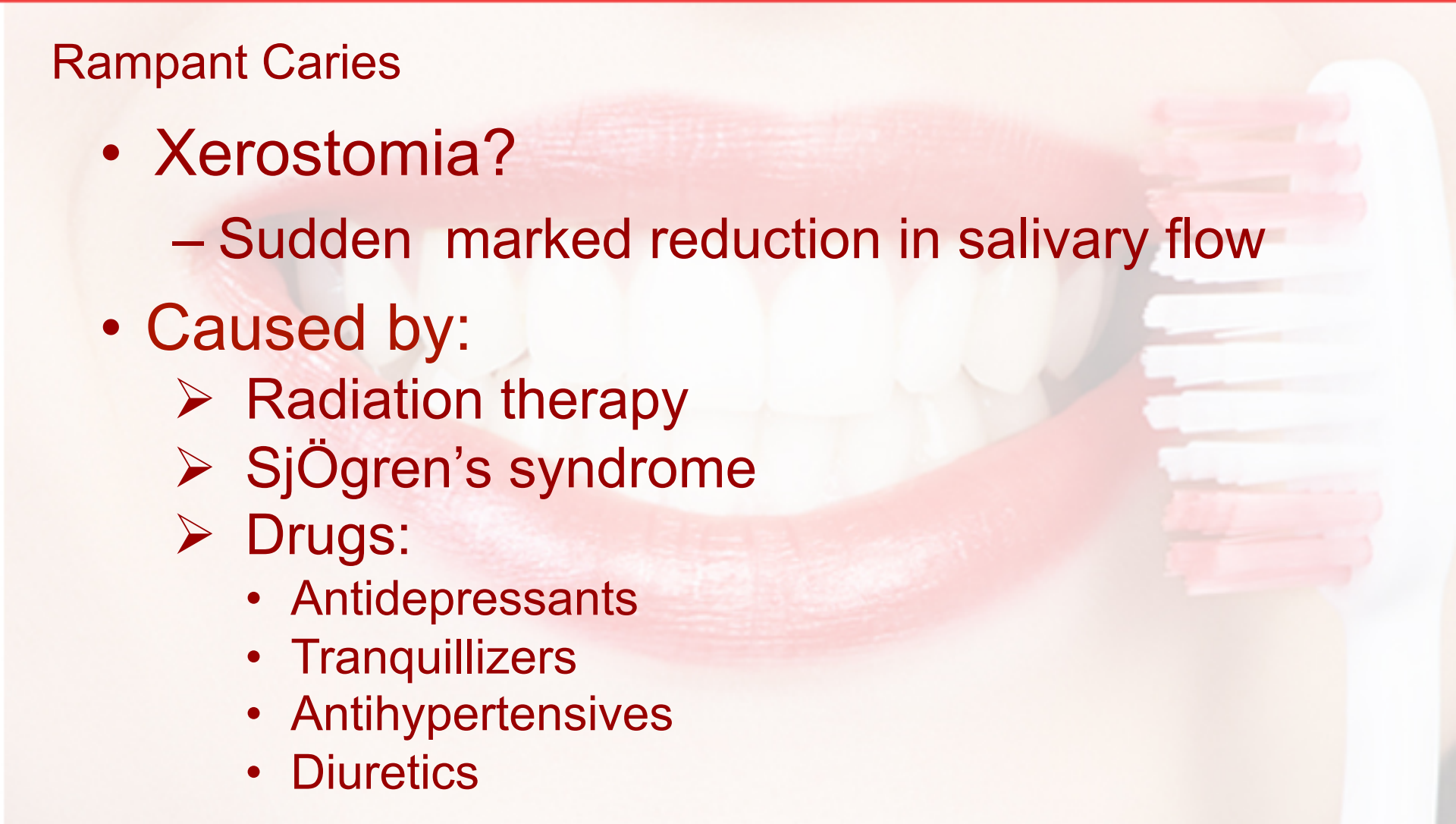


Permanent Dentition

Dental Caries

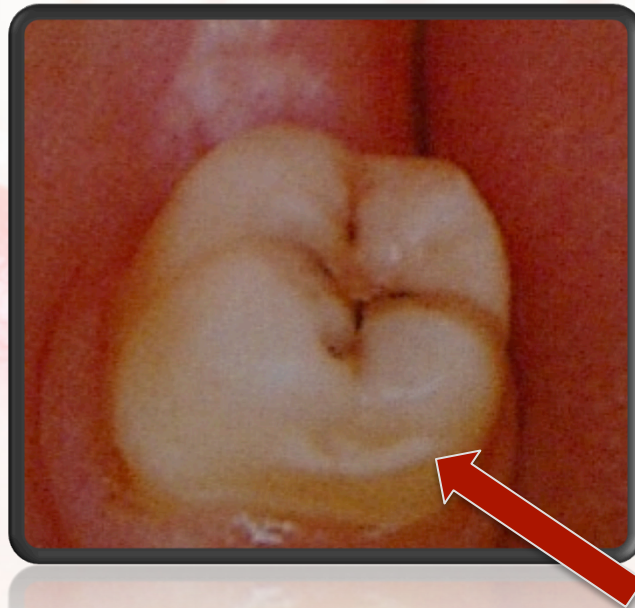
Rampant Caries

- Xerostomia?
 - Sudden marked reduction in salivary flow
- Caused by:
 - Radiation therapy
 - SjÖgren's syndrome
 - Drugs:
 - Antidepressants
 - Tranquillizers
 - Antihypertensives
 - Diuretics



Dental Caries

- Arrested Caries:
 - Carious lesions that do not progress



Dental Caries

- Root Caries:
 - Root surfaces are exposed after gingival recession



Active



Slowly Progressive



Arrested

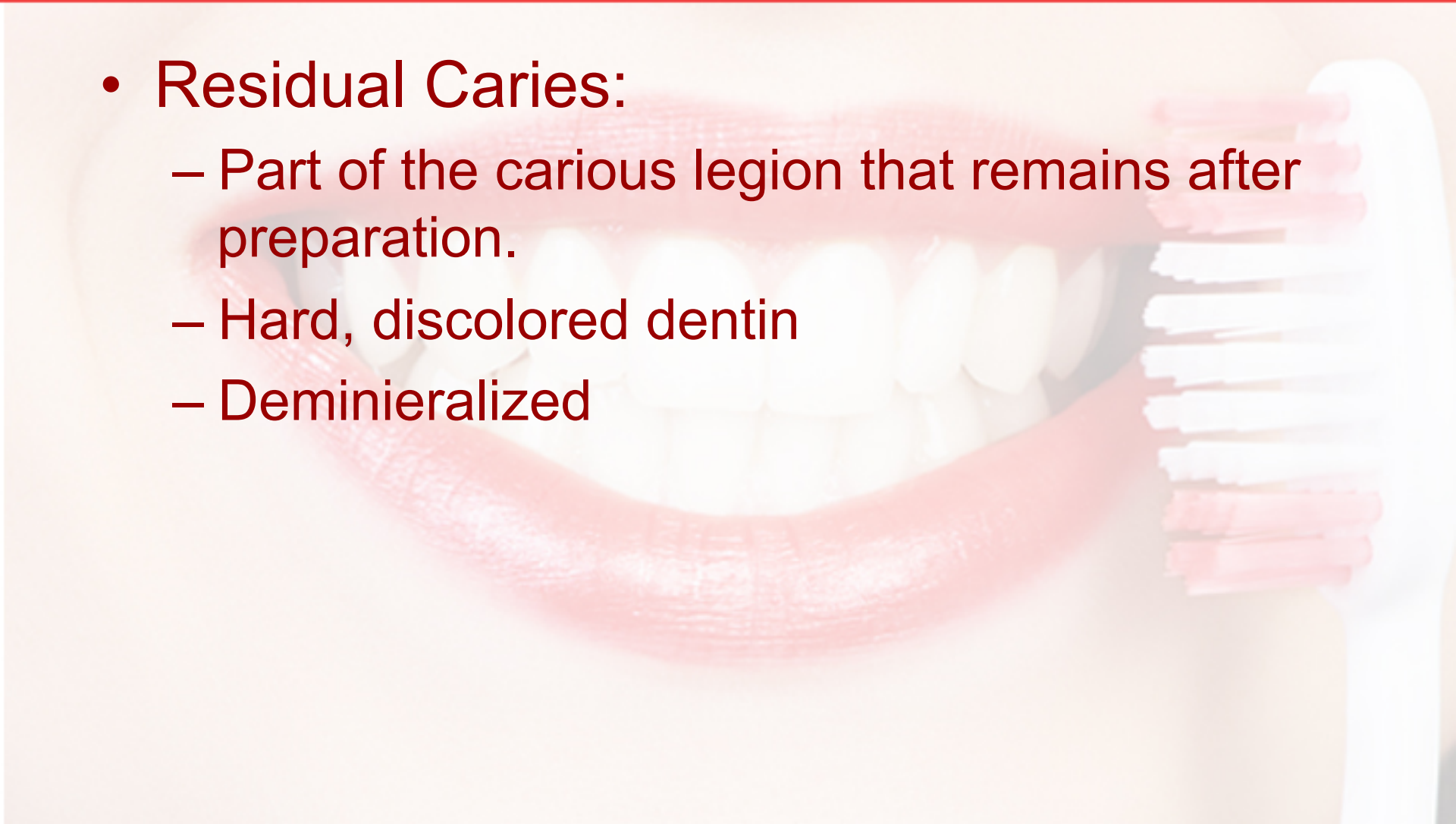
Dental Caries

- Secondary or Recurrent Caries:
 - Caries that occur in the tooth tissue adjacent to the filling material



Dental Caries

- Residual Caries:
 - Part of the carious lesion that remains after preparation.
 - Hard, discolored dentin
 - Demineralized

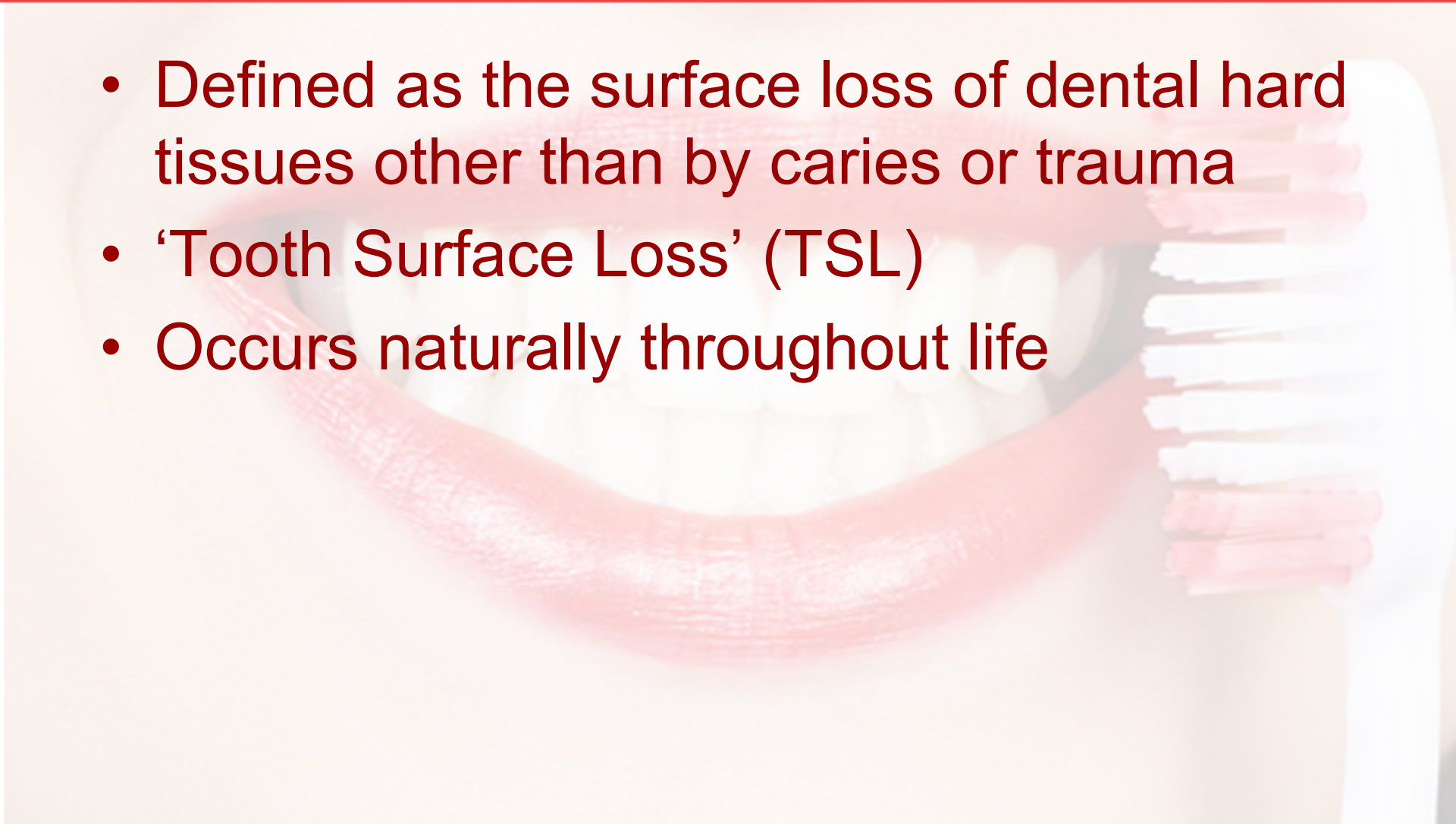




Tooth Wear

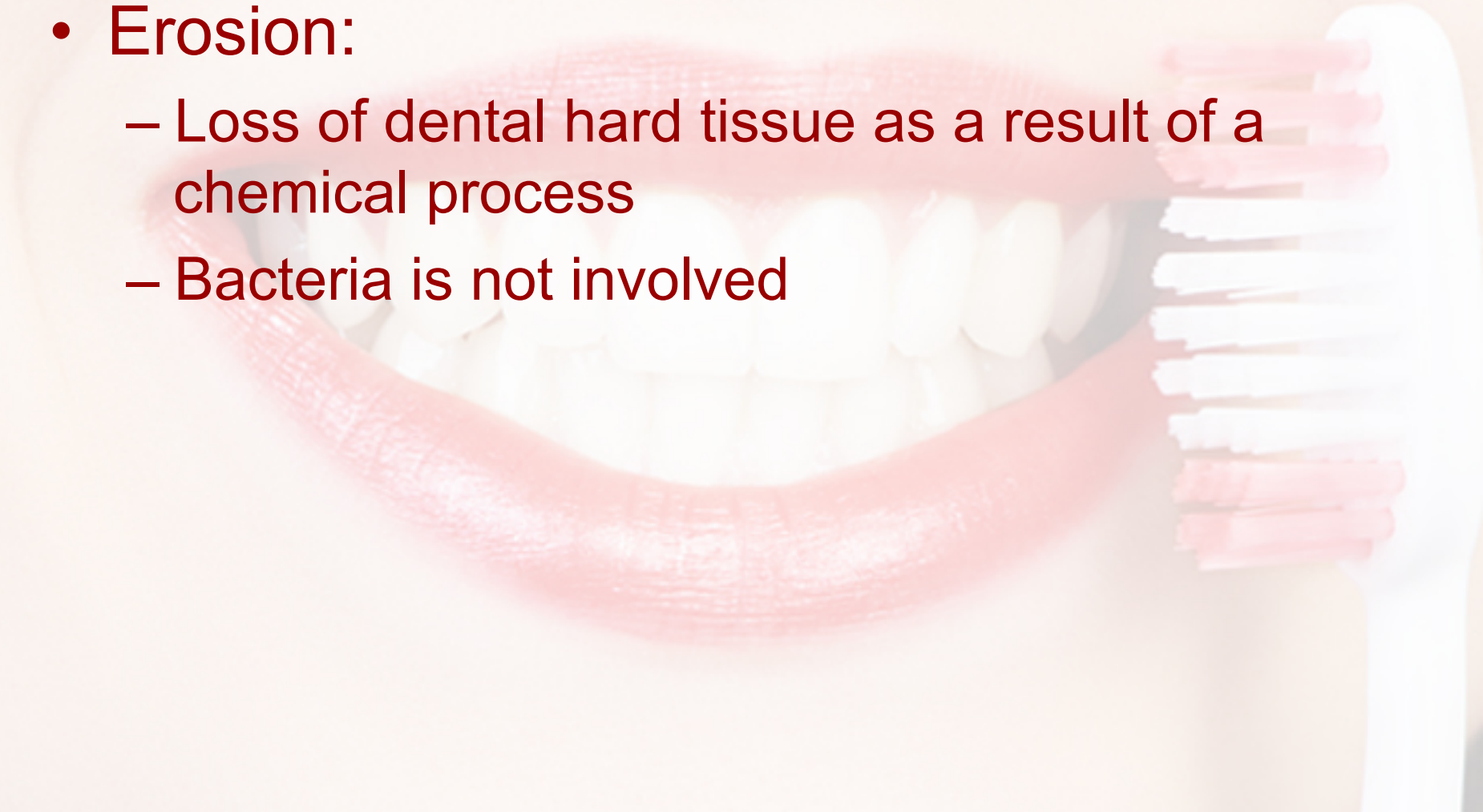
Tooth Wear

- Defined as the surface loss of dental hard tissues other than by caries or trauma
- 'Tooth Surface Loss' (TSL)
- Occurs naturally throughout life

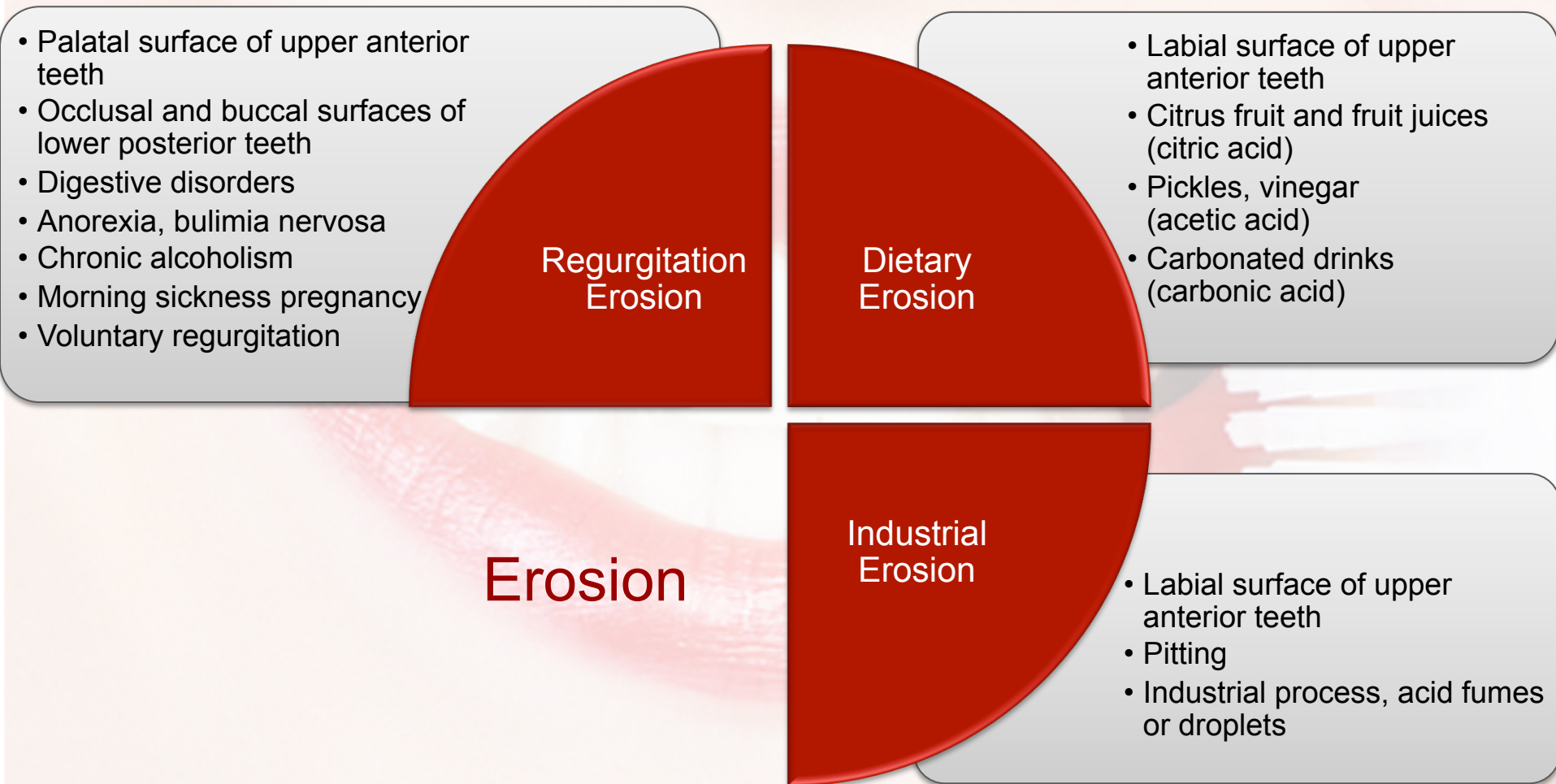


Tooth Wear

- Erosion:
 - Loss of dental hard tissue as a result of a chemical process
 - Bacteria is not involved

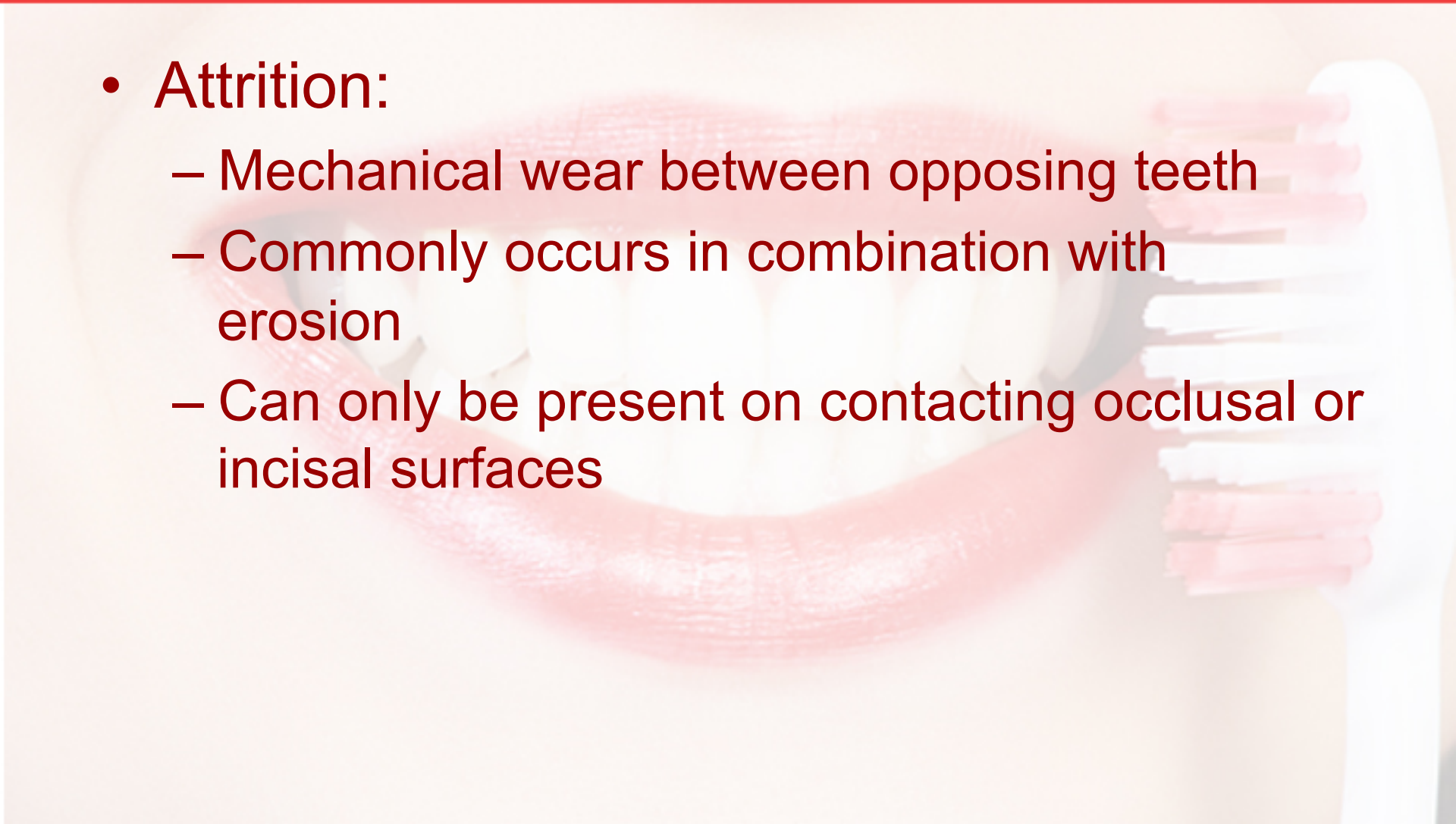


Tooth Wear

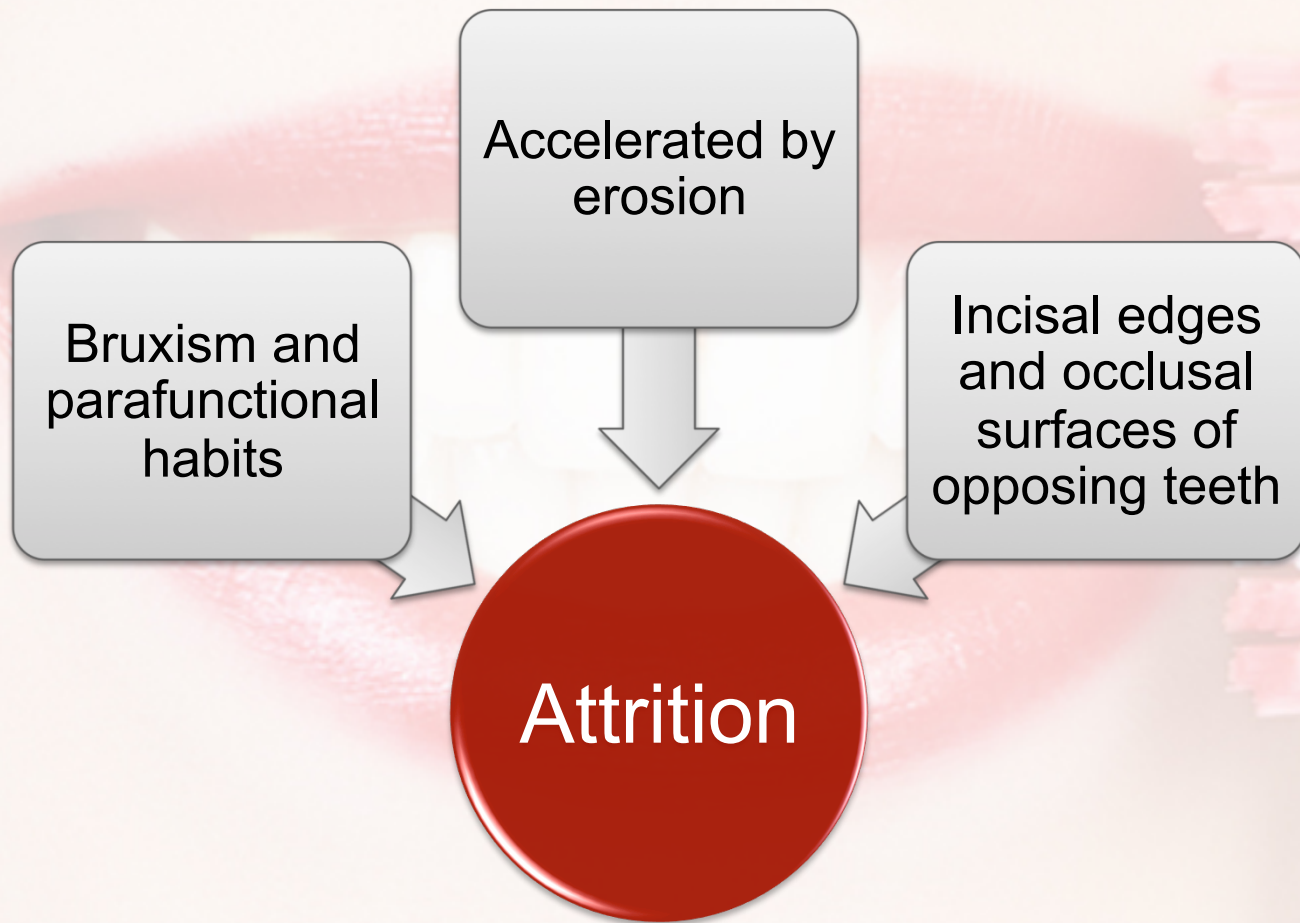


Tooth Wear

- Attrition:
 - Mechanical wear between opposing teeth
 - Commonly occurs in combination with erosion
 - Can only be present on contacting occlusal or incisal surfaces

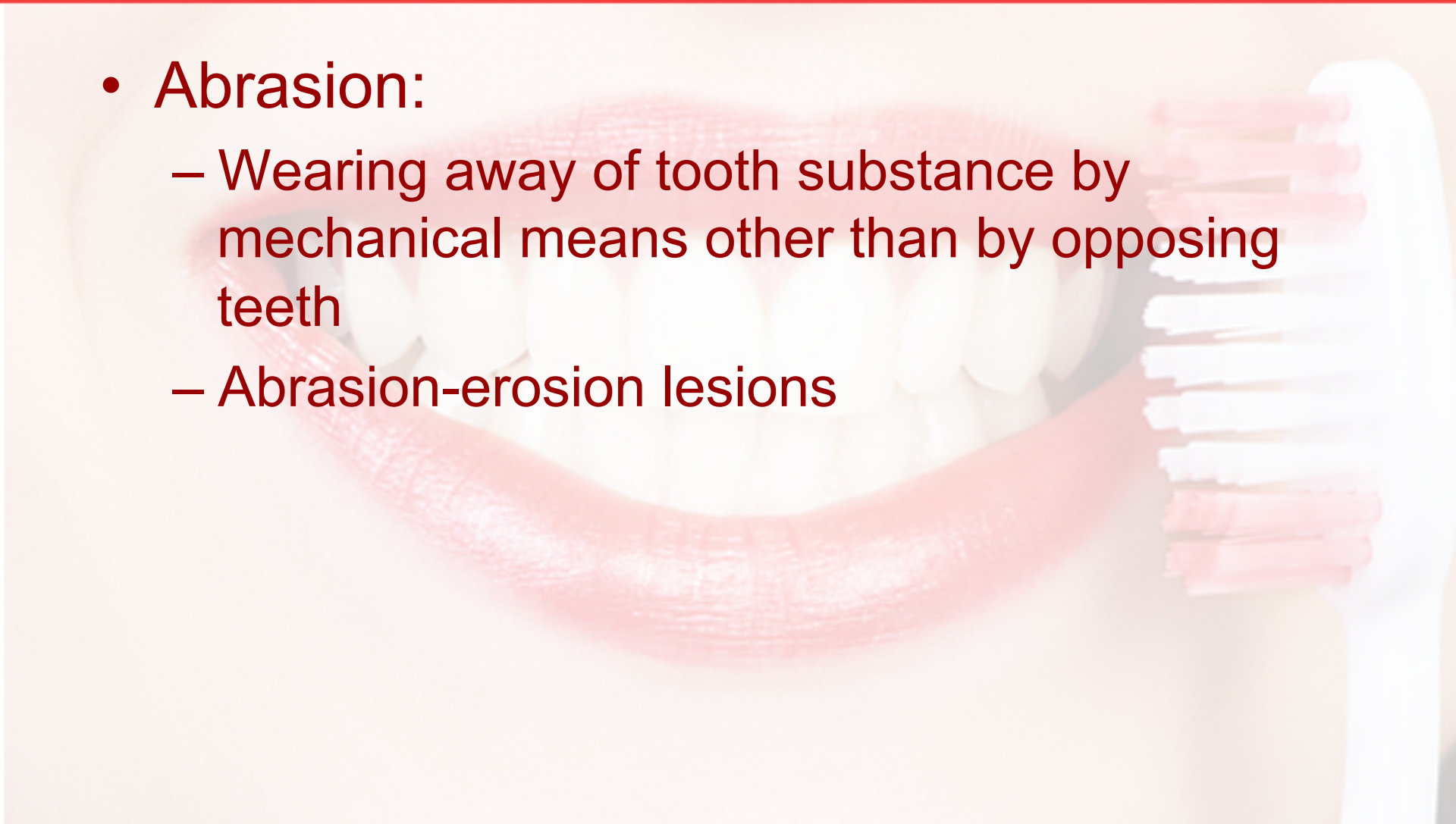


Tooth Wear

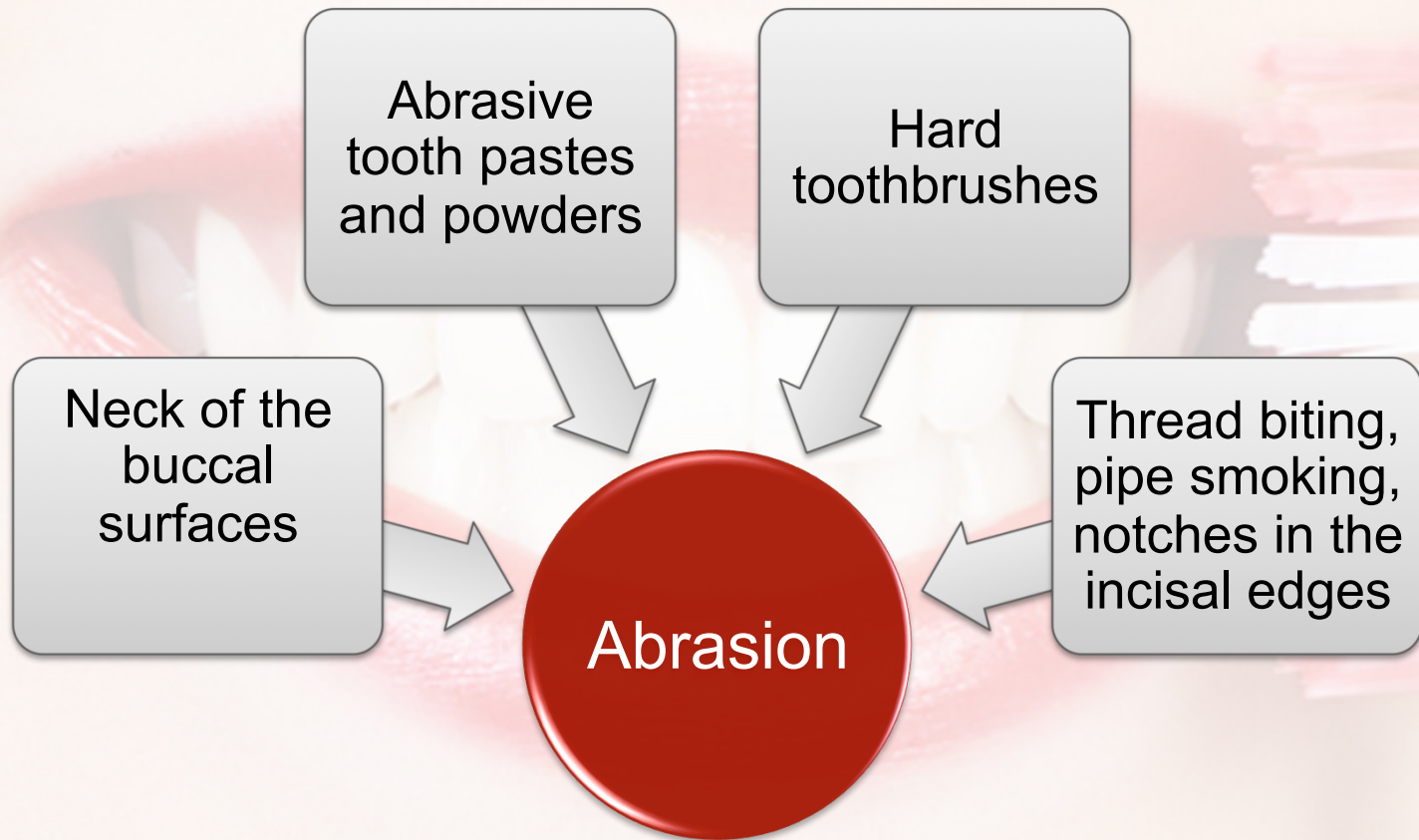


Tooth Wear

- Abrasion:
 - Wearing away of tooth substance by mechanical means other than by opposing teeth
 - Abrasion-erosion lesions

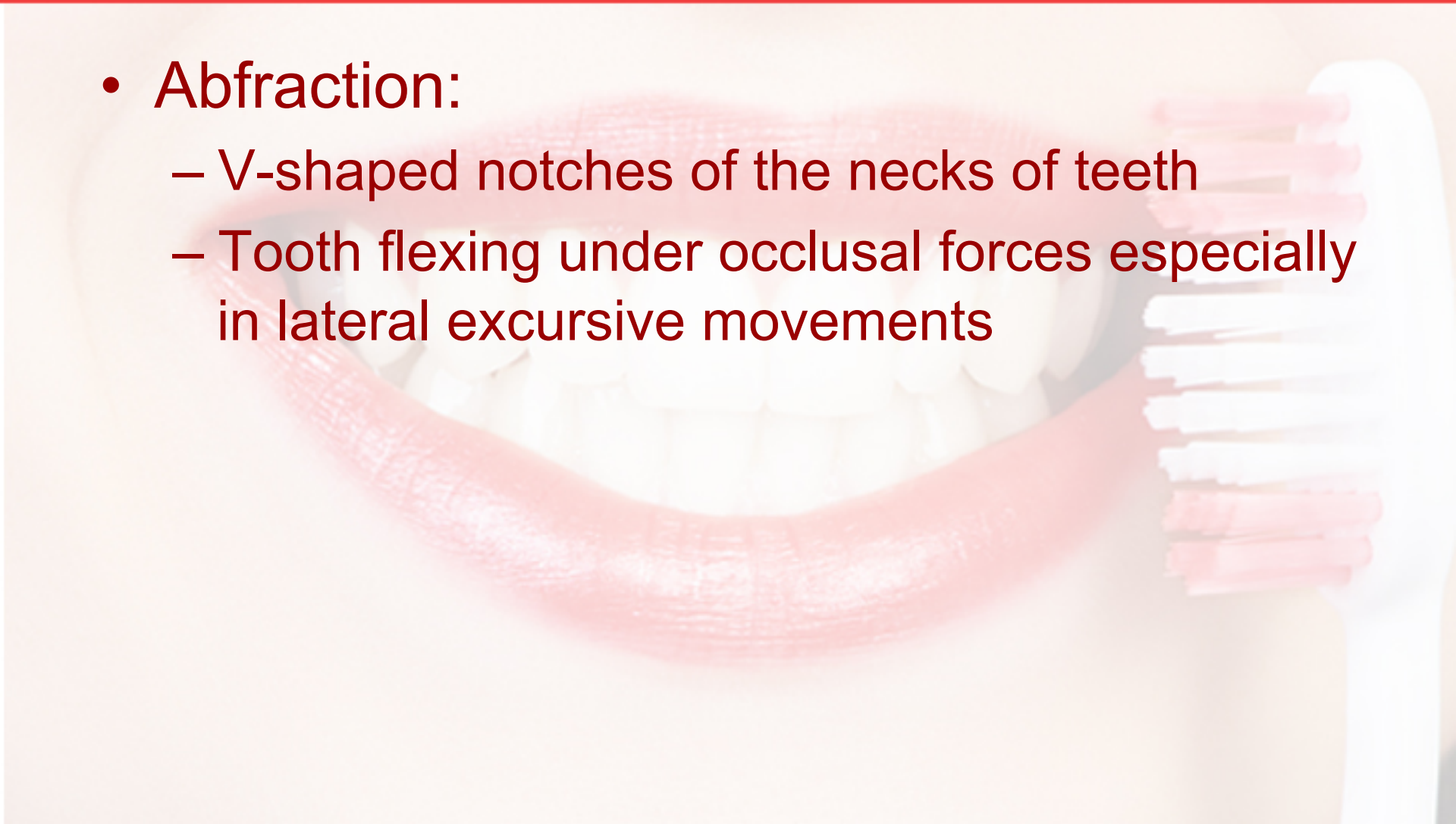


Tooth Wear



Tooth Wear

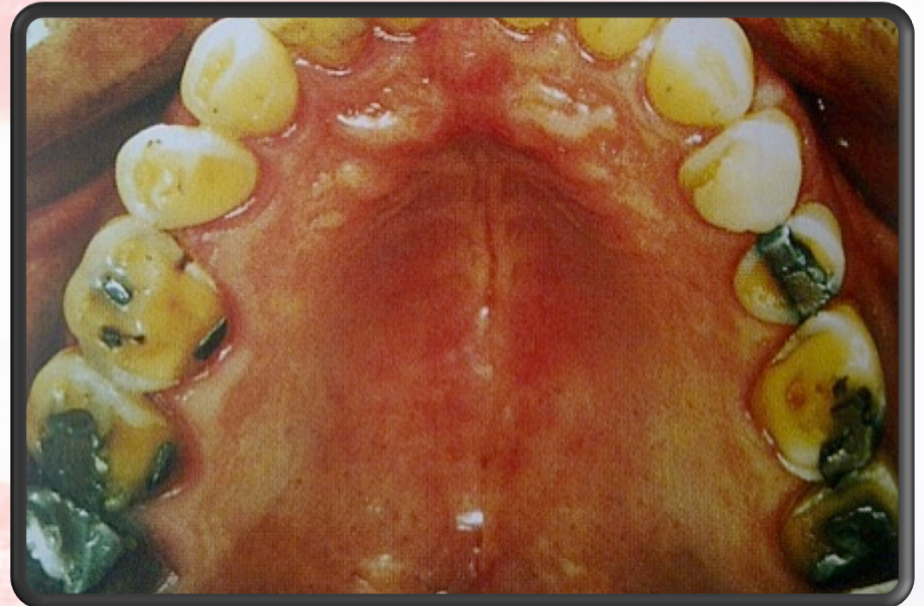
- Abfraction:
 - V-shaped notches of the necks of teeth
 - Tooth flexing under occlusal forces especially in lateral excursive movements



Tooth Wear



Regurgitation erosion
bulimia nervosa

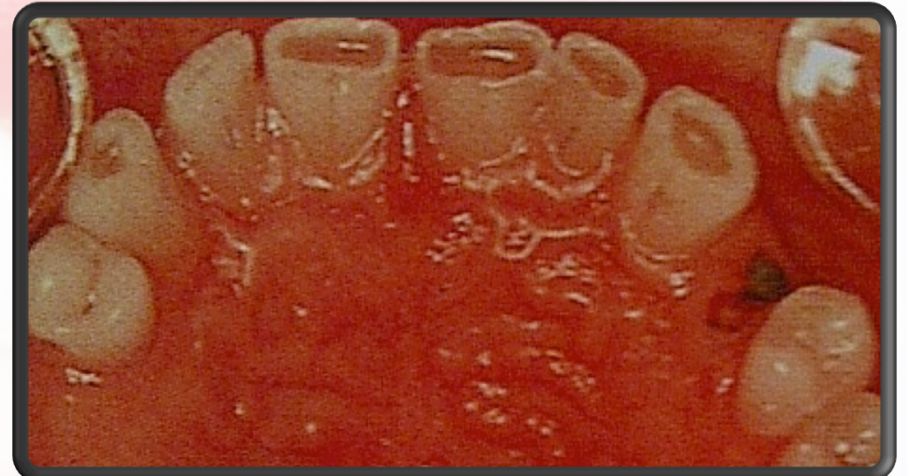


Regurgitation erosion
chronic alcoholism

Tooth Wear



Attrition bruxism



Attrition and erosion

Tooth Wear



Dish-shaped abrasion-erosion lesions



V-shaped notch lesions

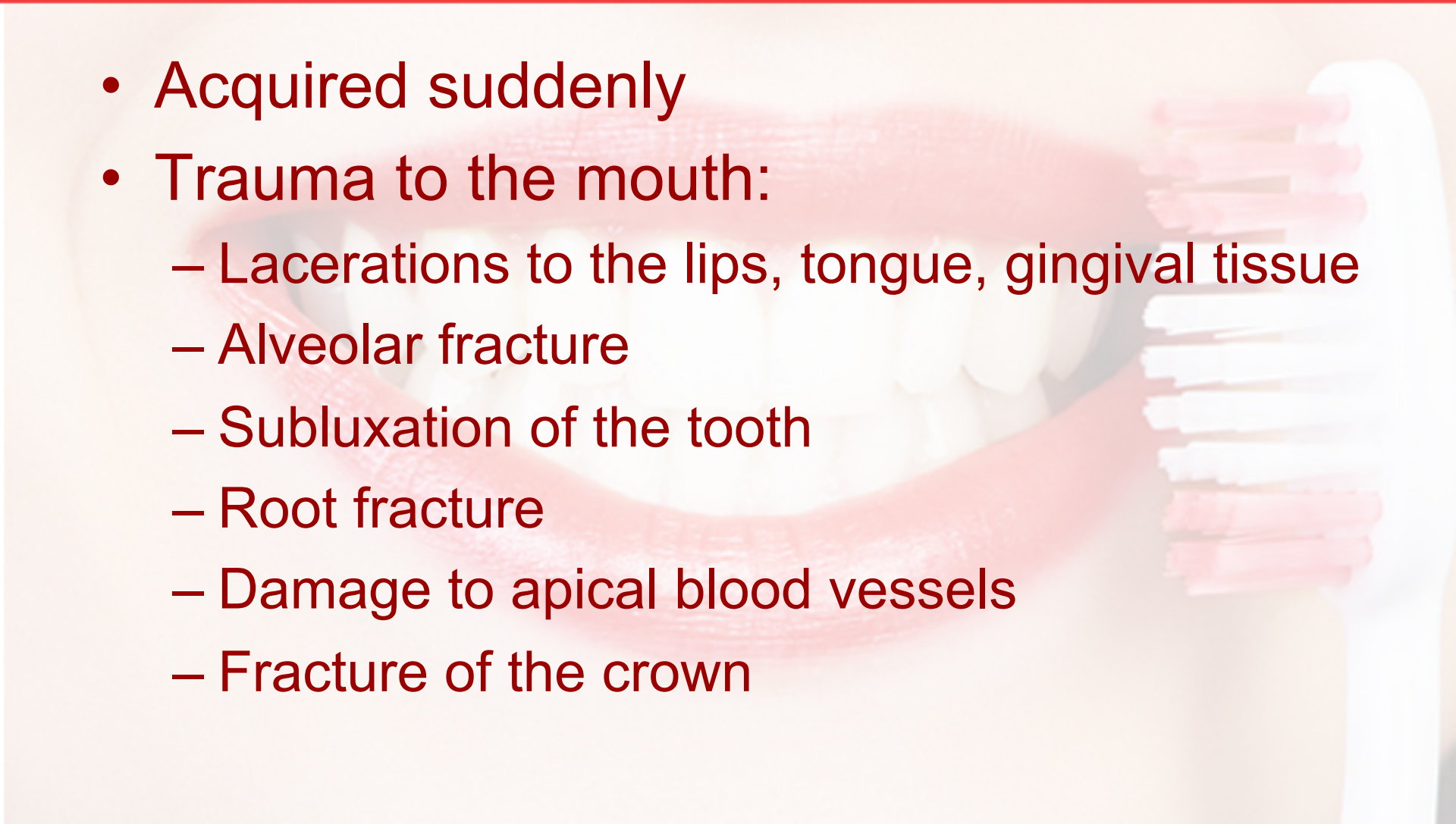




Trauma

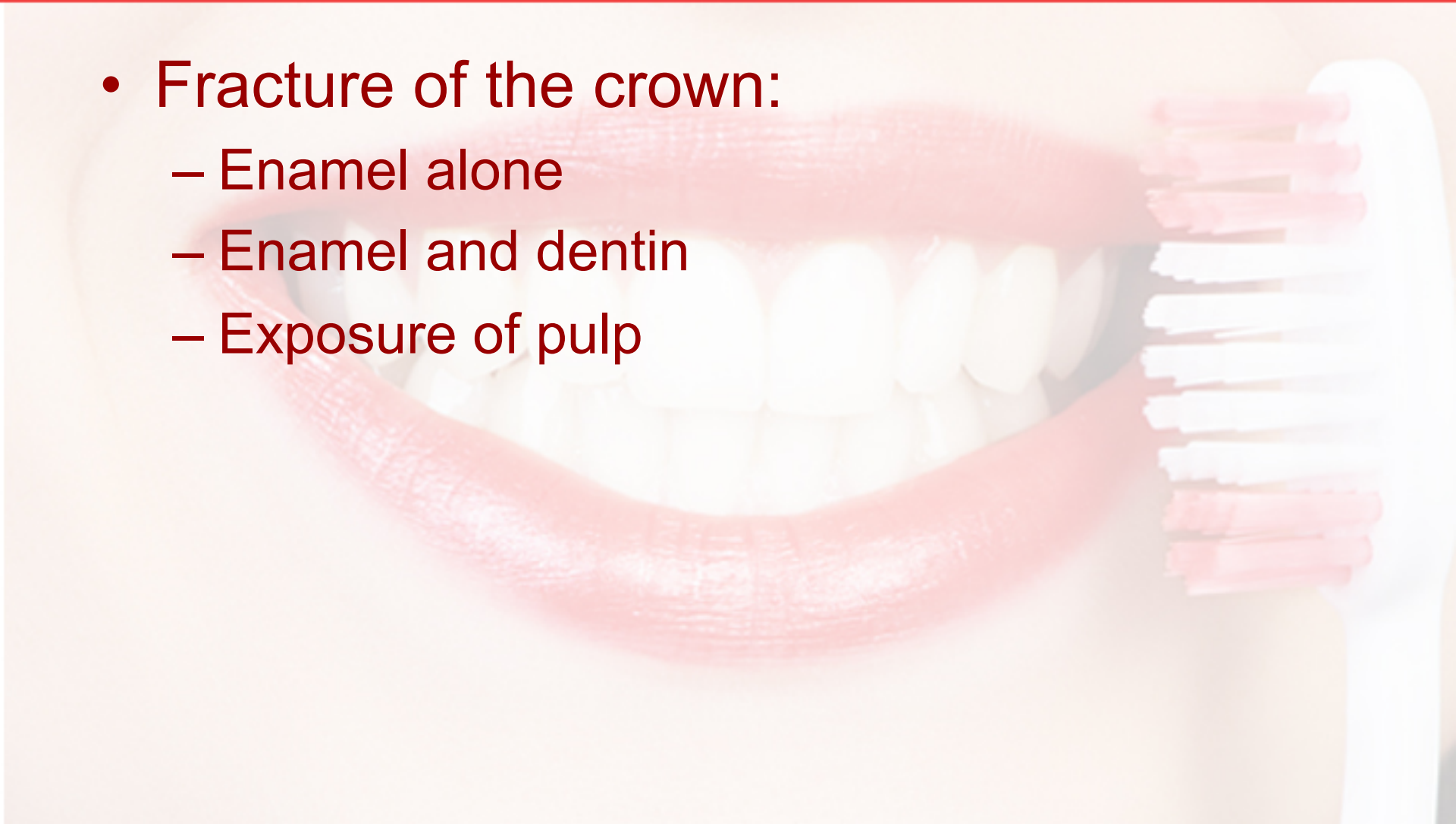
Trauma

- Acquired suddenly
- Trauma to the mouth:
 - Lacerations to the lips, tongue, gingival tissue
 - Alveolar fracture
 - Subluxation of the tooth
 - Root fracture
 - Damage to apical blood vessels
 - Fracture of the crown



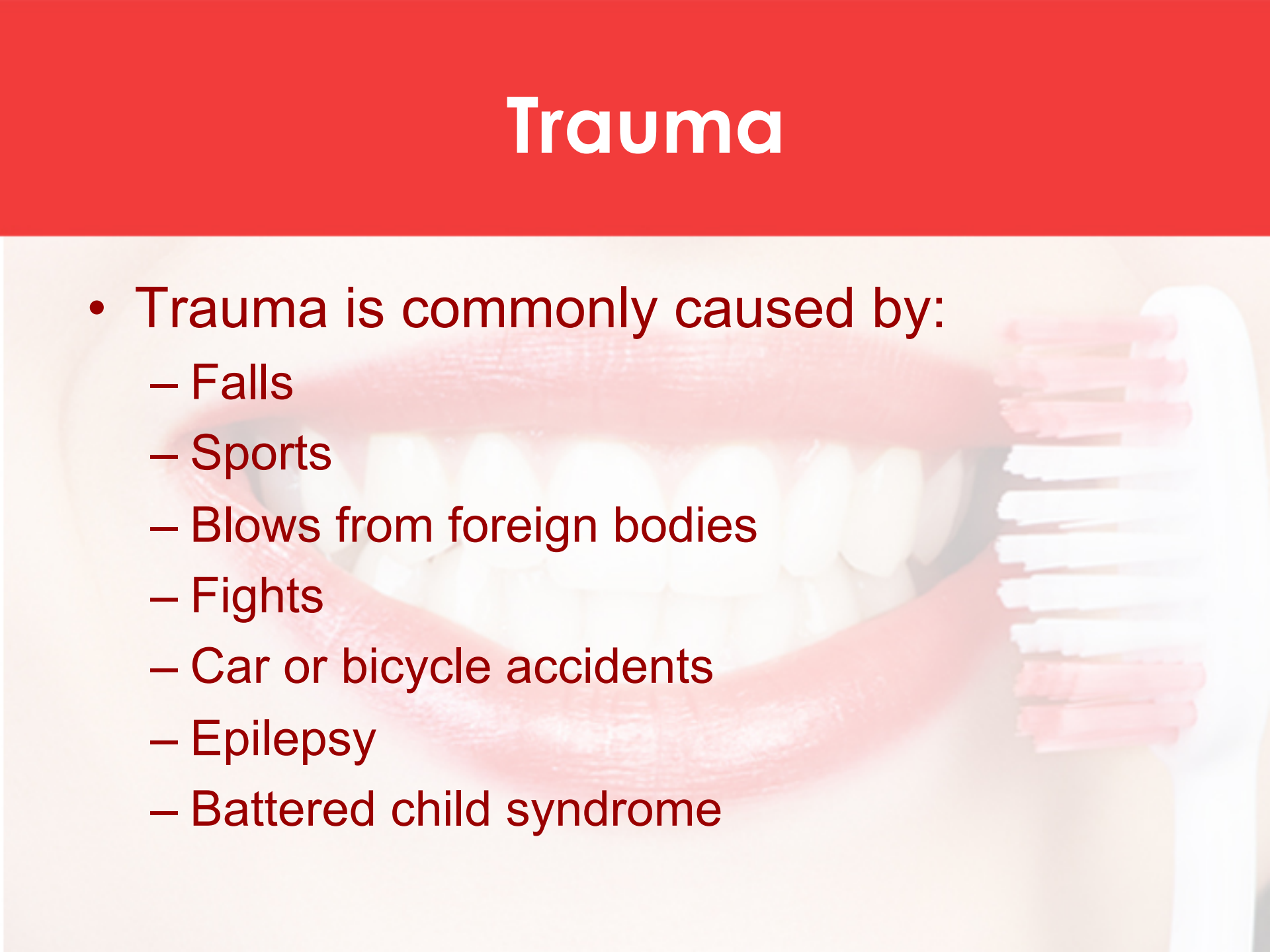
Trauma

- Fracture of the crown:
 - Enamel alone
 - Enamel and dentin
 - Exposure of pulp

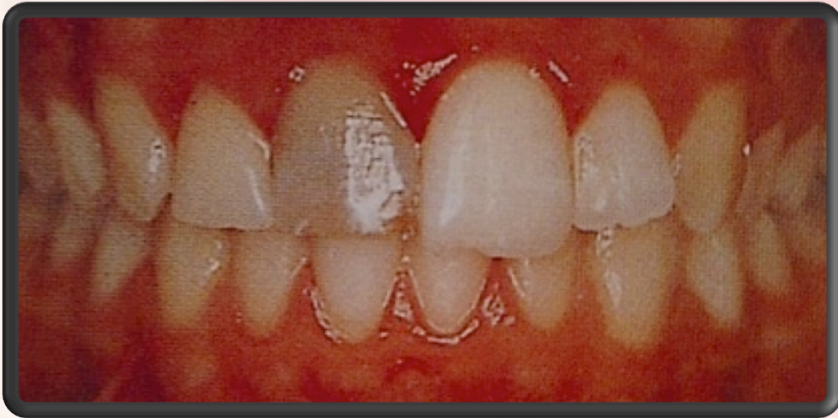


Trauma

- Trauma is commonly caused by:
 - Falls
 - Sports
 - Blows from foreign bodies
 - Fights
 - Car or bicycle accidents
 - Epilepsy
 - Battered child syndrome



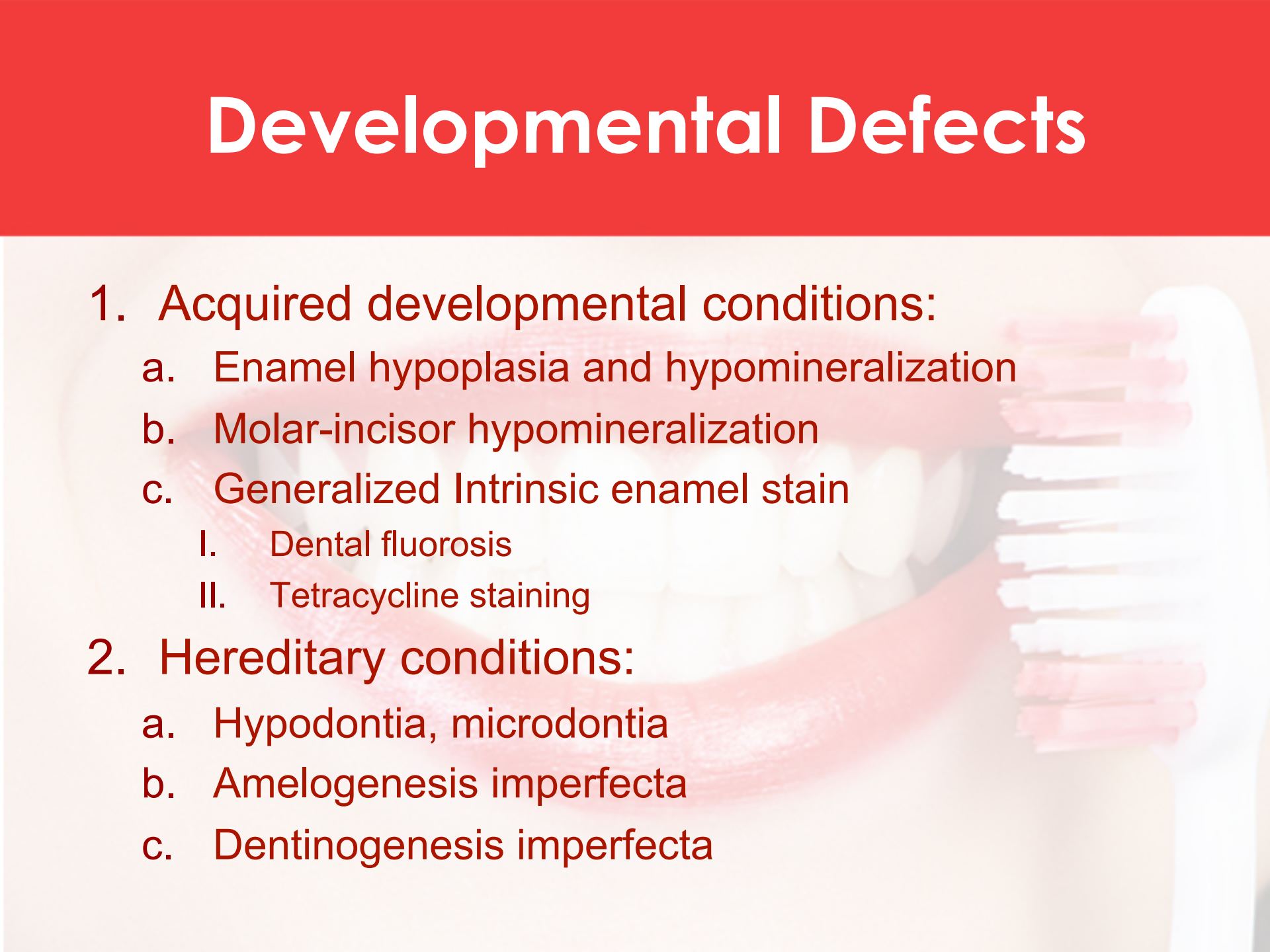
Trauma





Developmental Defects

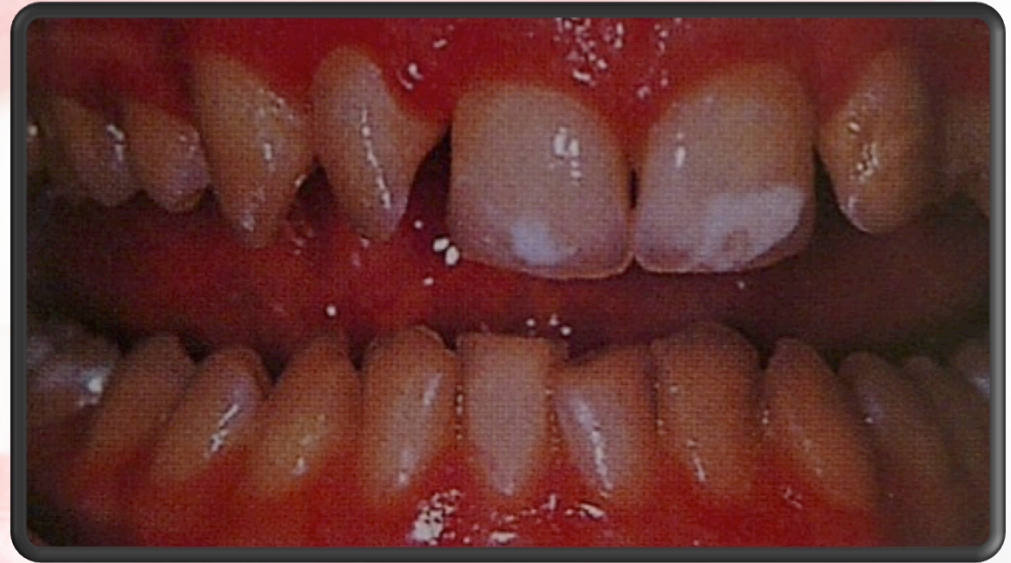
Developmental Defects

- 
1. Acquired developmental conditions:
 - a. Enamel hypoplasia and hypomineralization
 - b. Molar-incisor hypomineralization
 - c. Generalized Intrinsic enamel stain
 - I. Dental fluorosis
 - II. Tetracycline staining
 2. Hereditary conditions:
 - a. Hypodontia, microdontia
 - b. Amelogenesis imperfecta
 - c. Dentinogenesis imperfecta

Developmental Defects



Enamel Hypoplasia



Enamel
Hypomineralization

Developmental Defects



Molar Hypomineralization

Developmental Defects



Dental fluorosis



Tetracycline Staining

Developmental Defects



Hypodontia, Microdontia

Developmental Defects



Amelogenesis imperfecta



Dentinogenesis imperfecta



Thank You!

Any Questions?