

# Environmental alteration of teeth



Lecturer Ghaydaa H.AL- Qudsi  
Department of Oral Diagnosis  
College of Dentistry

University of Basrah  
Basrah  
Iraq

e. mail: [Ghaydaaalqudsi@gmail.com](mailto:Ghaydaaalqudsi@gmail.com)

## **In previous lecture**

- **Developmental defects of :**
  - **Lip & palate**
  - **Oral mucosa**
  - **Tongue**
  - **Jaw bones**

## **In this lecture**

- **Environmental discoloration of teeth**
- **Environmental effects on tooth structure**
- **Post development loss of tooth structure**

# ● Enviromental discoloration of teeth

**A-Extrinsic staining:-** Arise from surface accumulation of exogenous pigments, such as:

**1- Chromogenic bacteria :** Produce green or black- brown to orange stain, in the gingival third of the labial surface of maxillary anterior teeth, in children.



**2-Tobacco-tea-coffee:** Produce brown discoloration on the lingual surface of mandibular incisors.



**B- Intrinsic staining :-** Secondary to endogenous factors that discolor underlying dentin, such as

**Tetracyclin medication:**

(systemic administration) during tooth development will be deposited in tooth and bone , seen as a bright yellow to dark brown stain



# ● Environmental effects on teeth structure

## Dental fluorosis:

- Critical period is age 2-3 y, if the fluoride levels greater than 1 part per million are ingested
- The affected teeth are caries –resistant
- It presents as areas of lusterless, white-opaque enamel, which may have zones of yellow to dark-brown discoloration



# ● Post development loss of tooth structure

**1-Attrition :-** loss of tooth surface by tooth to tooth contact during occlusion & mastication, producing large flat wear facets



**2-Abrasion :-** Pathological loss of tooth surface (tooth structure) secondary to action of external agent, such as **Faulty tooth brushing** lead to horizontal cervical



### 3- Erosion:-

- Loss of tooth structure by chemical reaction, such as **dietary source** (e.g., vinegar, lemons), **internal source** (gastric secretions), or **external source** (e.g., acids industrial atmosphere).
- Commonly affects facial surface of maxillary anteriors and appears as shallow spoon-shaped depressions in cervical portion of the crown



### 4- External resorption:-

Caused by either:

a-Inflammation

b-pressur/mechanical resorption.

c-Tumor or cyst involving tooth root



# Summary

Many environmental factors producing its effects on teeth, either by:-

- Changing the color of teeth
- Changing the structure of teeth during their development
- Causing loss of teeth structure after their development



# Formative Assessment