

# FLUOROSIS

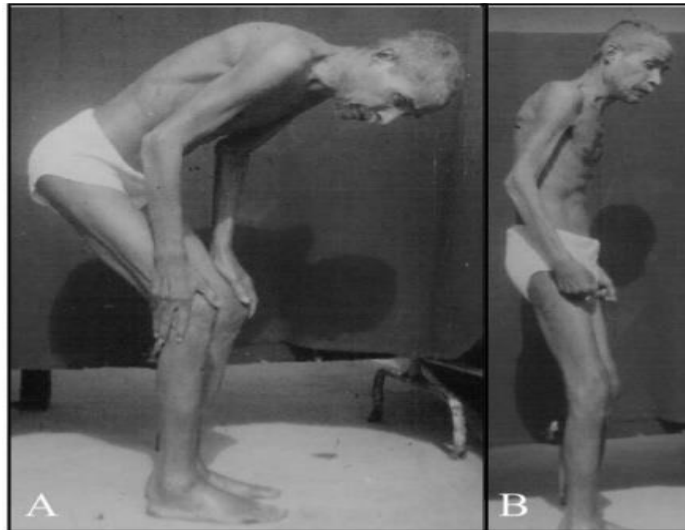
GISELLE SALCEDO  
DEN 1114 2016 WINTER SESSION  
PRO. BILELLO



# FLUOROSIS- IS A CONDITION DUE TO INGESTION OF EXCESSIVE AMOUNTS OF FLUORINE COMPOUNDS

## Types

- Skeletal Fluorosis - exposure over a prolonged period of time by excessive chronic accumulation of fluoride
  - It causes pain and damage to bones and joints
  - Crippling skeletal fluorosis is the most severe form resulting in the calcification of ligaments, immobility, muscle wasting, and neurological problems
    - This is caused by the intake of 10 to 20 mg a day for over 10 to 20 years
  - India has the highest cases with 60 million at risk and 6 million disabled
    - Due to groundwater having 2 mg per liter of fluoride.



**Clinical Reversibility of ESF in a patient aged 65 years 24 months after exposure to fluoride is ceased.**



## ○ Dental Fluorosis ( Mottled Enamel )



- Is hypo-mineralization of tooth enamel during enamel formation due to excessive fluoride intake
  - Causes degrees of intrinsic discoloration
    - Most cases appear as pearly white lines or specks on teeth surface
    - Severe cases have yellow or brown stains with pits
    - Is a cosmetic condition that does not pose a threat to health
  - Only children are at risk as they are developing both primary and permanent teeth
  - The teeth of adolescents, and adults cannot develop dental fluorosis
  - Resistant to dental caries

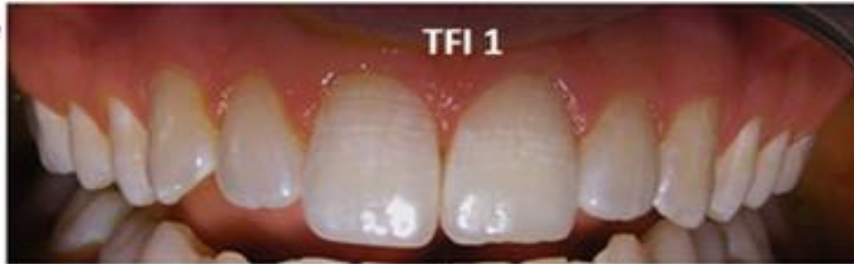
**Henry Trendley Dean known as the “ Father of Fluoridation” came up with a index to classify fluorosis**

Dean's Index	
Classification	Criteria – description of enamel
Normal	Smooth, glossy, pale creamy-white translucent surface
Questionable	A few white flecks or white spots
Very Mild	Small opaque, paper white areas covering less than 25% of the tooth surface
Mild	Opaque white areas covering less than 50% of the tooth surface
Moderate	All tooth surfaces affected; marked wear on biting surfaces; brown stain may be present
Severe	All tooth surfaces affected; discrete or confluent pitting; brown stain present



## Rating Dental Fluorosis Severity using the Dean's Index (DI) and the Thylstrup-Fejerskov Index (TFI)

Questionable  
to Very Mild  
(DI = 0.5 to 1)



Very Mild  
to Mild  
(DI = 1 to 2)



Moderate  
(DI = 3)



Severe  
(DI = 4)



# WHAT CAUSES DENTAL FLUOROSIS

- Fluoridated drinking water
- Fluoride toothpaste
- Fluoride tablets and drops
- Dental mouth rinses, gels, and foams
- Beverages and food processed with fluoridated
- Black Tea and fluoridated salt

\*NYC has 1 mg per liter of fluoride



# DENTAL ROLE

## Prevention for kids

- Talk to parents regarding fluoride products
  - Breast Feed infants
    - If on formula, use fluoride-free water, low concentrations or ready to feed formula
  - If fluoride is included in drinking water, avoid fluoride products
    - Do not use fluoride toothpaste or mouthwash unless advised to do so by your dentist
    - Use only a small smear to pea-size amount of toothpaste
    - Keep children from swallowing fluoride products
- Fluorosis is a cosmetic condition and can be so mild no treatment is needed
- For moderate to severe cases, treatment is masking of the stains
  - Tooth whitening
  - Micro-abrasion
  - Veneers
  - Crowns

