



# Dental Erosion: Evidence-Based Preventive Management

Asra S. Hussain, DDS & Mohammed F. Allahyani, DDS

Author's Affiliations: Asra Sabir, MS Clinical Research Student NYU, & Mohammed F. Allahyan, Pediatric Dental Resident, Prince Mansour Military Hospital, KSA



## INTRODUCTION

Dental erosion is defined as pathological wear of hard tissues of teeth with increased consumption of acidic and carbonated drinks. Susceptibility to erosion in primary dentition is higher as compared to permanent dentition due to the softer and disordered crystal structure of enamel.

The intrinsic and extrinsic etiological factors are responsible for the development of dental erosion. Intrinsic factors that cause dental erosion include gastric acids while the extrinsic sources consist of diet and consumption of acidic foods and drinks. Erosion and caries are 'modern-day' diseases and reflect an imbalance within the oral biofilm resulting in the demineralization of teeth.

## OBJECTIVES

The objectives of this review were to discuss the clinical management of preventing dental erosion based on the available evidence in the literature.

### METHODS OF DATA COLLECTION

Pub Med, OVID Medline, Cochrane & Google Scholar database were used as a main search engine for data collection.

The key words /mesh terms used for search were dental erosion, enamel erosion, tooth wear, acids, NCCLs

## OVERVIEW

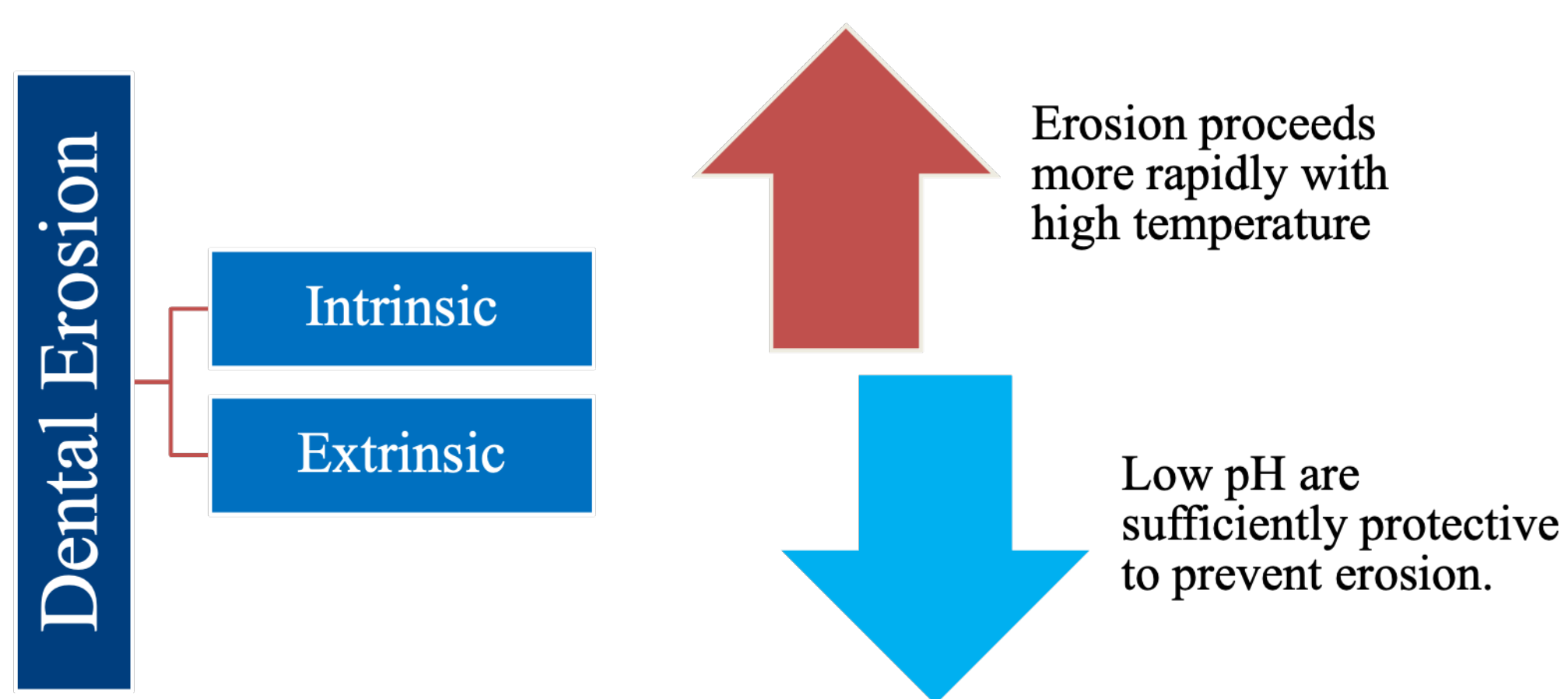
### Erosive Potential of Acidic Drinks

- Throughout the years studies have been conducted to determine the erosive potential of various acidic and carbonated drinks.
- A study by Philip ST et al discussed that frozen fruit juices had the more buffering capacity and erosive potential than the unfrozen ones.
- The capability of a soft drink or a juice to erode dental enamel depends not only on the pH of the drink but also on its buffering effect.

### Erosive Potential of Carbonated Drinks

- Likewise, continuous consumption of soft drinks is the significant cause of potential oral health problems.

## Factors considering the Erosive Potential



## OVERVIEW

- The inherent acids and sugars have both acidogenic and cariogenic potential results in dental caries and potential enamel erosion.
- Prolonged exposure to soft drinks could lead to significant enamel loss.

### Erosive Potential of Sports Drinks

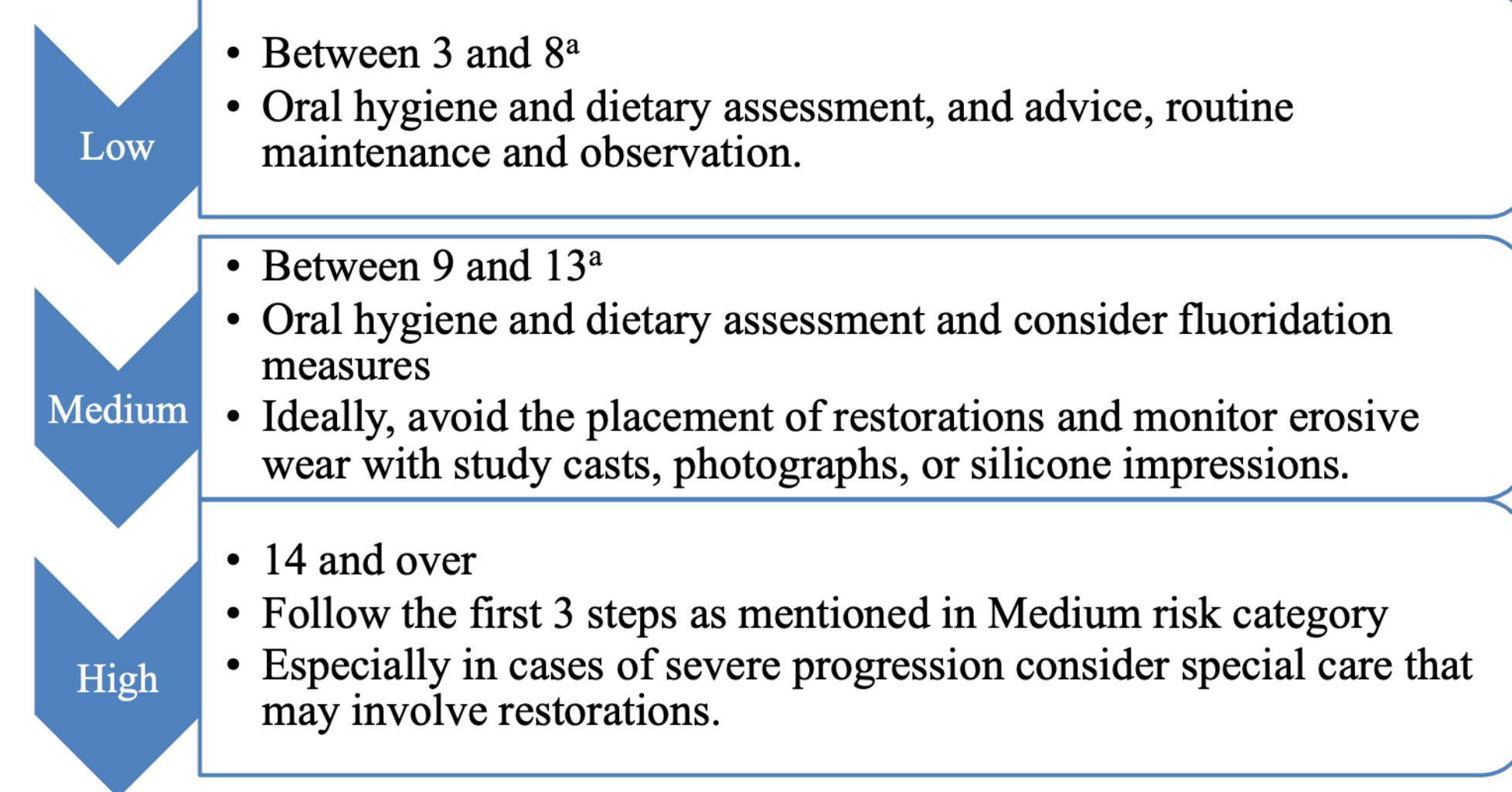
- Sports drink contain high sugar content and are acidic. It causes harmful effects in the form of dental caries and erosion.
- Therefore, it's the foremost duty of a dental practitioner to educate their patients about the possible harmful effects caused by these drinks.

## Table 1 Criteria for grading erosive wear

Score	Description
0	No erosive tooth wear
1	Initial loss of surface texture
2*	Distinct defect, hard tissue loss
3*	Hard tissue loss $\geq 50\%$ of the surface area

\*in scores 2 and 3 dentine often is involved \*in scores 2 and 3 dentine often is involved

## Basic Erosive Wear Examination (BEWE)



## BEWE scores

Highest score	Highest score	Highest score	
1. Sextant (17–14)	2. Sextant (13–23)	3. Sextant (24–27)	
Highest score	Highest score	Highest score	Score sum
4. Sextant (37–34)	5. Sextant (33–43)	6. Sextant (44–47)	

The Basic Erosive Wear Examination (BEWE) has been designed to provide a diagnostic tool for general practitioners to evaluate patients with dental erosion at the earliest stages.

## CLINICAL SIGNIFICANCE

- ✓ Clinical management requires comprehensive diagnosis and risk assessment to understand the underlying etiology factors in causing dental erosion so that optimal preventative measures can be implemented.
- ✓ Overall, the prevention of enamel mineral loss from erosion should form the basis of lifelong dental management.
- ✓ Evidence-based oral hygiene and dietary advice is somewhat effective preventive therapy to formulate a healthy lifestyle, whilst retaining hard tooth tissues.

## REFERENCES

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