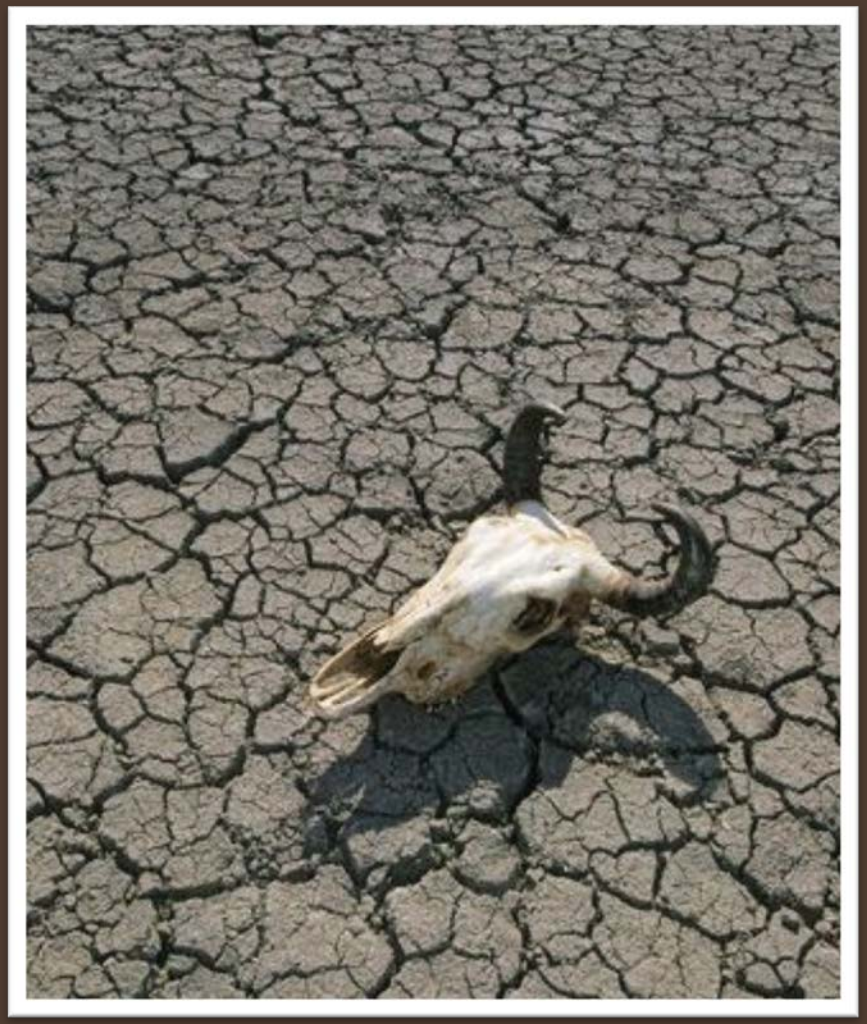
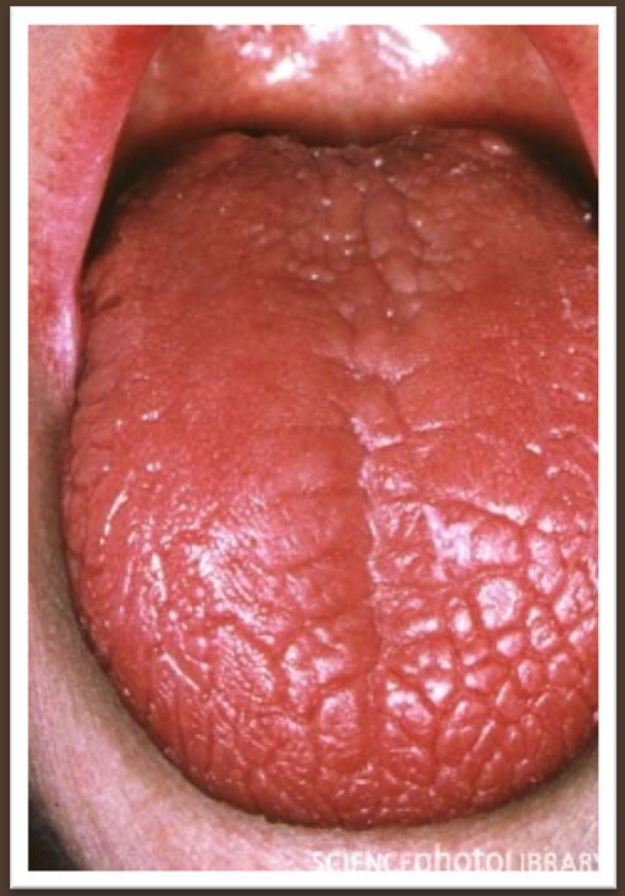


XEROSTOMIA

Sandra Wilkie RDH, BS
Idaho State University
MSDH Program

Dry Mouth



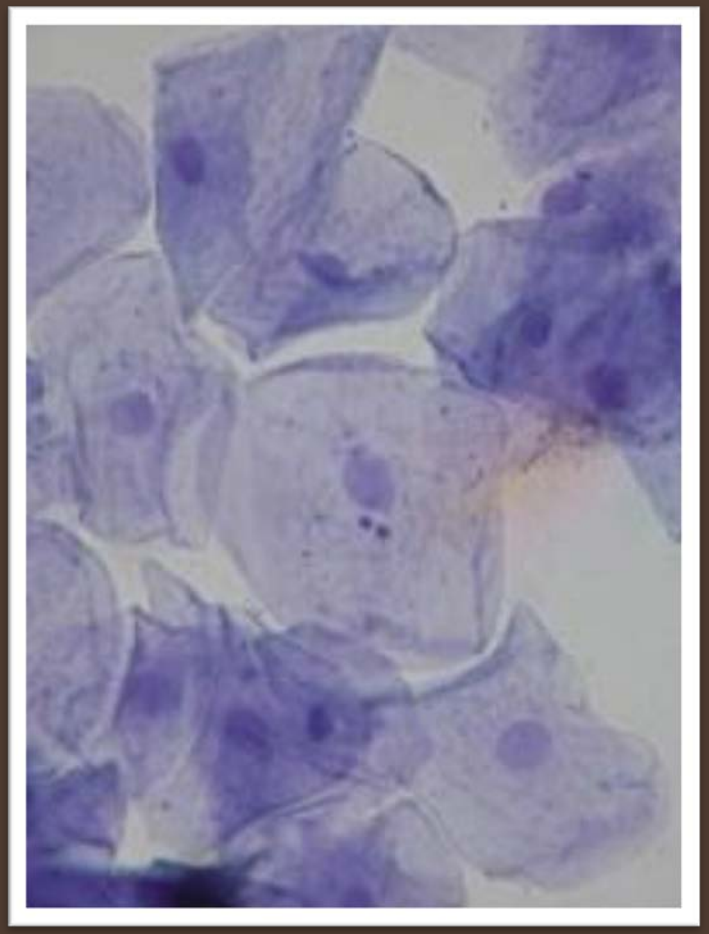
XEROSTOMIA

"A common, yet underdiagnosed condition characterized by an absence or diminished quantity of saliva"

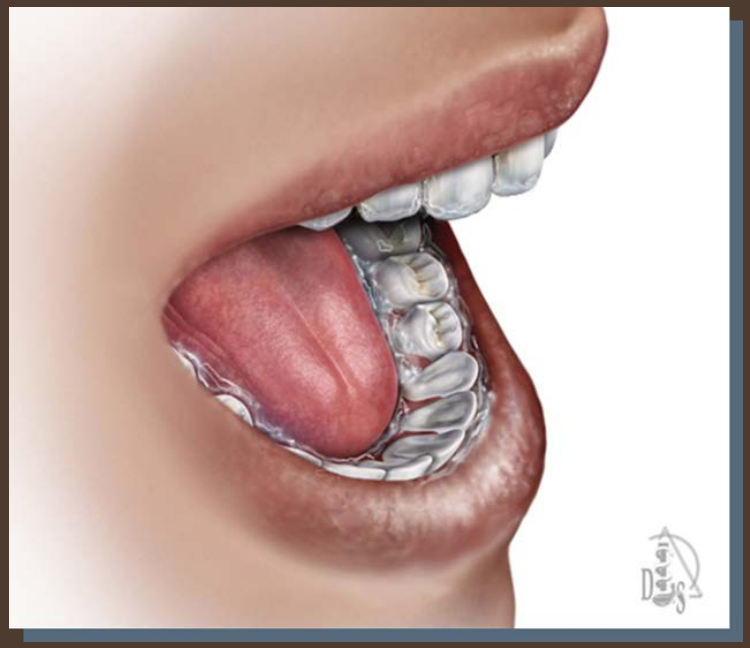
(Wilkins, E.M. 2005)

Composition of Saliva

- 98.5% water
- 0.5% solutes
  - Cellular components
  - Enzymes
  - Electrolytes



Roles of Saliva



- Enables cheeks, tongue and lips to slide easily over the teeth facilitating speech, smiling, chewing and swallowing
- Enzymes protect oral mucosa and teeth against harmful substances
- Irrigates the mouth of food debris and oral microbes

Roles of Saliva

- Mineralizes dentition
- Facilitates digestion
- Dilutes sugars
- Enhances taste
- Maintains proper PH balance
- Prevents infections
- Controls, pain and bleeding
- Promotes healing

Production of Saliva

- Major Salivary Glands (Intermittent Secretions)
  - Parotid
  - Sublingual
  - Submandibular
- Minor Salivary Glands (Continuous Secretions)
  - Lips
  - Cheeks
  - Palate
  - Floor of the mouth

GlaxoSmithKline

Salivary Flow

- The average person produces approximately 0.5 L – 1.5 L per day (approximately 3 pints)
- Salivary flow:
  - Peaks in the afternoon
  - Decreases at night when the major salivary glands are less active

Risk Factors for Xerostomia

Frequently a consequence of:

- Stress
- Radiation therapy of the head and neck
- Glandular fibrosis or destruction
- Mouth breathing
- C Pap use
- Circadian rhythms
- Gender

Risk Factors for Xerostomia

A side effect of certain diseases and infections:

- Sjögren's syndrome
- Sarcoidosis
- HIV/AIDS
- Alzheimer's disease
- Diabetes
- Anemia
- Cystic fibrosis
- Crohn's disease
- Systemic Lupus Erythematosis
- Rheumatoid arthritis
- Hypertension
- Parkinson's disease
- Stroke
- Mumps
- Scleroderma
- Hepatitis

Risk Factors for Xerostomia

A side effect of recreational drug use:

- Methamphetamines
- Cocaine
- Ecstasy

Risk Factors for Xerostomia

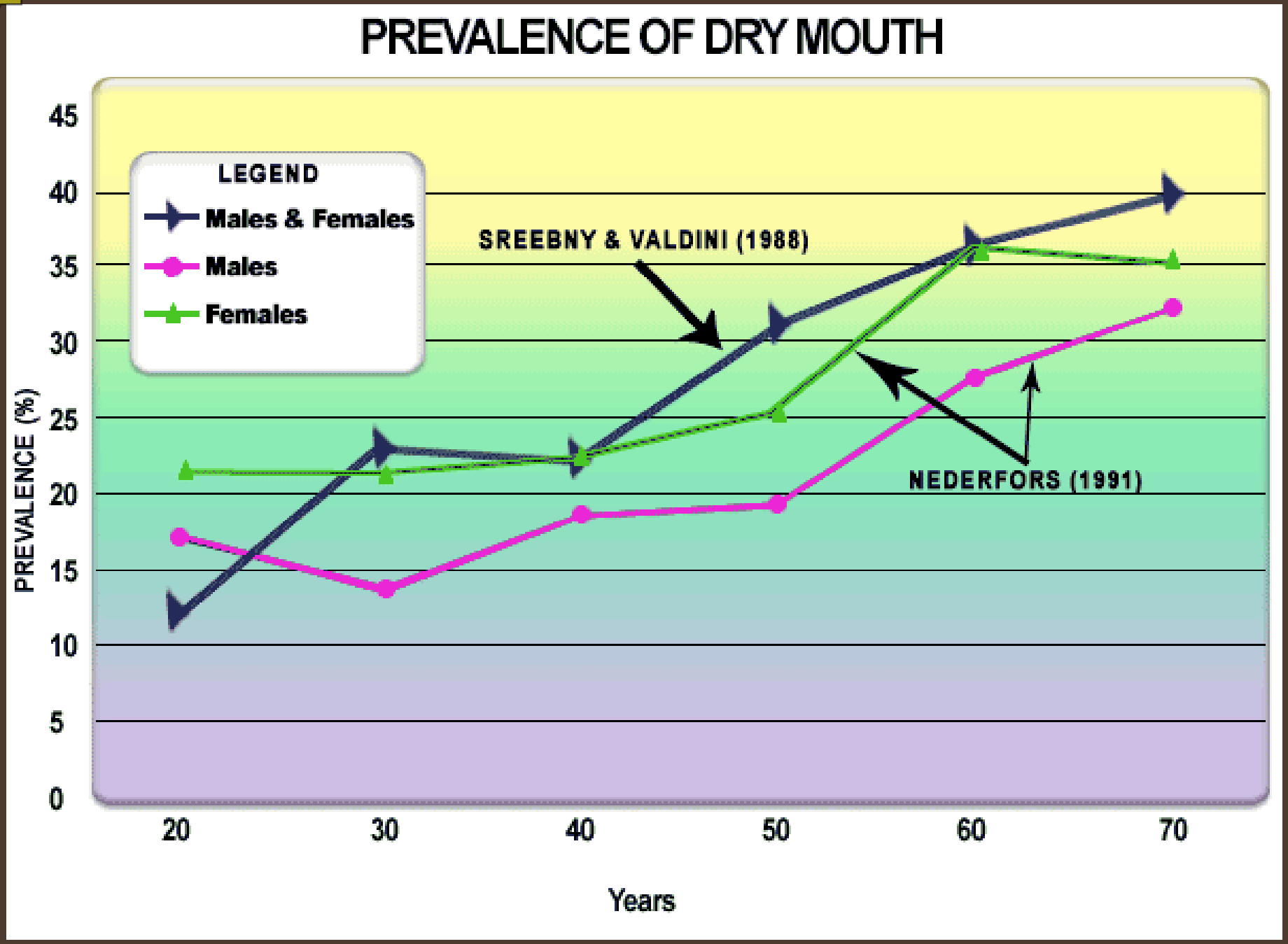
A side effect of over 500 medications:

- Antidepressants
- Antihypertensives
- Narcotics
- Anticholinergics
- Antipsychotics
- Anti-Parkinson
- Antiasthmatics
- Anorexiants
- Anticonvulsants
- Antacids

- Hormone replacements
- Diuretics
- Sedatives
- Inhalants
- Decongestants
- Glaucoma eye drops
- Antihistamines
- Pseudoephedrine

Prevalence of Xerostomia

- Xerostomia is one of the fastest-growing oral health problems in North America
- Xerostomia is becoming increasingly common in many developed countries where adults are living longer and the use of multiple medications is typical
- Xerostomia affects ~ 25% of the population and is becoming 32 million Americans today take three or more medications daily
- **Medications are the cause of more than 90% of xerostomia cases**


PREVALENCE OF DRY MOUTH
LEGEND
Males & Females
Males
Females
SREEBNY & VALDINI (1988)
NEDERFORS (1991)
PREVALENCE (%)
45
40
35
30
25
20
15
10
5
0
20
30
40
50
60
70
Years

Xerostomia and Age

Although the amount of salivary tissue decreases with aging, when healthy, older, non-medicated, individuals are compared to younger persons there is no decline in salivary function.

Symptoms of Xerostomia

- Soreness or burning mouth, lips or tongue
- Sleep interruptions due to thirst or oral discomfort
- Difficulty chewing, speaking, swallowing and wearing dentures
- Difficulty clearing oral debris
- Complaint of dryness
- Altered taste
- Altered sense of smell
- Aversion to eating dry foods

Signs Of Xerostomia

- Dry, sticky oral tissues
- Ropey, thick or frothy saliva
- Ulceration of oral mucosa
- Cracking/fissuring of the corners of the mouth or tongue
- Stale breath or halitosis
- Recurrent candida infections
- Increased dental decay
- Increased tartar deposits
- Red gums that bleed easily

Health Impacts of Xerostomia

- Decreased ability to eat because of mouth pain
- Increased amount of time to recover from other health related illnesses due to secondary oral infections
- Increased the potential for oral diseases and infection

Xerostomia

The oral environment is more acidic.

Oral bacteria thrive as there is less saliva to buffer their affects.

Oral Impacts

Oral Impacts

Oral Impacts

Medication Use

There is a positive correlation between increased prescription drug use and age.

More than 80% of adults in the United States routinely take at least one medication daily and 35% take at least five.

Medication Use

The current trend regarding medication use is expected to continue since the population, age 65 and older, is growing more rapidly than any other age group. The elderly population is projected to nearly double over the next 25 years.

Medication Induced Xerostomia

Many who use prescription and over the counter medications which contribute to decreased salivary flow are unaware of the possible health consequences of using these substances.

Oral Disease

Medication induced xerostomia will continue to be a significant risk factor for dental caries and periodontal disease.

Xerostomia Management Strategies

- Discuss the possibility of adjusting dosages or changing medications with the pharmacist and physician
- Use systemic agents to increase salivary output
  - Pilocarpine HCl, Cevimeline HCl
- Try salivary substitutes or artificial saliva preparations
  - Moi-Stir, Mouthkote, Optimoist, Saliva Substitute, Salivart, Salix, Xero-Lube

Xerostomia Management Strategies

- Stay well hydrated
- Suck ice chips
- Sip liquids while eating
- Take small bites
- Chew slowly
- Choose foods that are:
  - Soft
  - Moist
  - Easy to chew
  - Thinned or softened with liquids
  - Lukewarm
  - Not crunchy or sharp

Xerostomia Management Strategies

- Breathe through nose as much as possible
- Rinse with club soda or a solution of baking soda
- Use sucrose free candies, gum or lozenges
- Use moisturizers on the lips
- Sleep with a room vaporizer

Xerostomia Management Strategies

Avoid the use of :

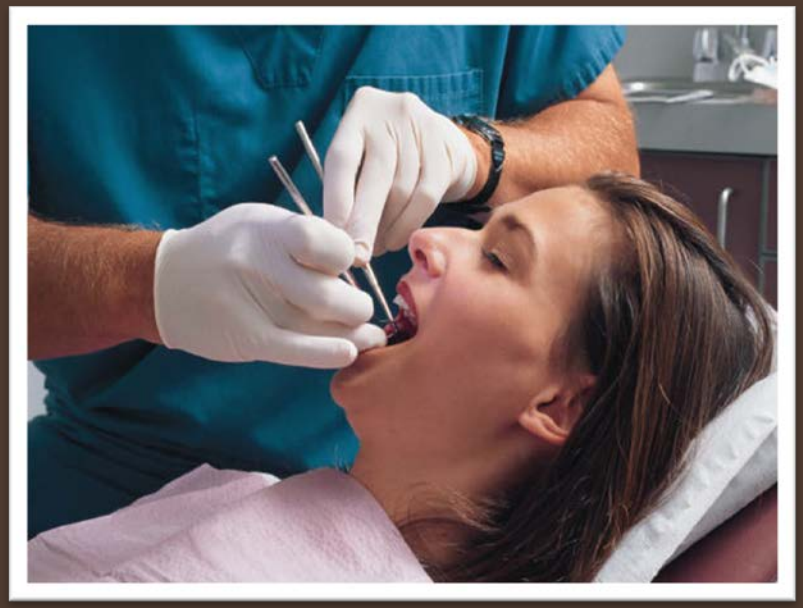
- Sugary, acidic, spicy, salty: foods and beverages
- Caffeine
- Tobacco
- Mouthwash with alcohol
- Alcoholic beverages
- Toothpastes with sodium lauryl sulfate
- Lemon glycerin swabs
- Petroleum based products for lip care

Managing Oral Complications

- Rinse the oral cavity immediately after meals
- Brush teeth and gums using a soft bristled toothbrush
- Floss gently, yet thoroughly between the teeth
- Use a 0.05 % fluorinated toothpaste
- Use products sweetened with xylitol 3-5 times/day
- Use professionally recommended dry mouth products

Managing Oral Complications

- Have complete dental examinations at least every 6 months
- Use various antifungal products when prescribed by a dentist or physician
- Use a prescription strength fluoride dentifrice nightly
- Have professional topical fluoride treatments



Products for Optimal Oral Health

Professional Topical Fluoride Varnish Applications

Products for Optimal Oral Health

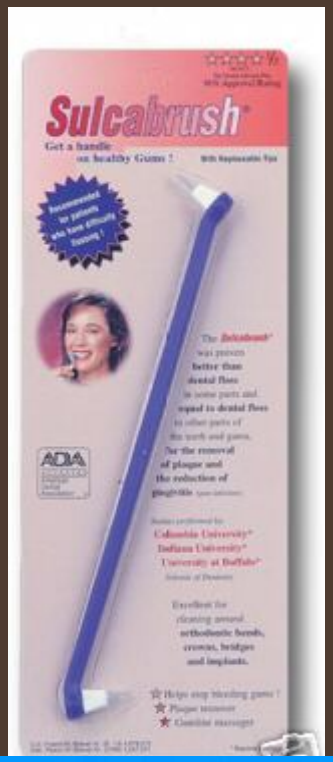
Fluoride Toothpastes and Rinses

Over the counter products

Prescription strength products

Products for Optimal Oral Health

Plaque Removal Aids



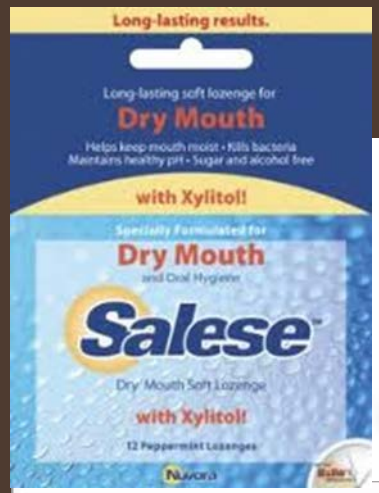
Products for Optimal Oral Health

Moisturizing Toothpastes, Mouth Rinses and Sprays

Mountainside Medical

Products for Optimal Oral Health

Xylitol Gum, Mints and Lozenges



Xylitol in time-release adhering discs

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