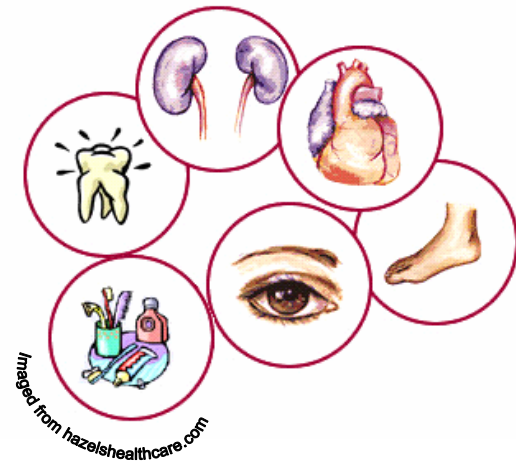




DIABETES and ORAL HEALTH



Inter Tribal Council of Arizona, Inc.
Dental Clinical and Prevention Support Center
2214 North Central Avenue, Suite 100
Phoenix, Arizona 85004
602-258-4822
602-258-4825 fax
www.itcaonline.com

Developed by:
The Inter Tribal Council of Arizona, Inc.
Dental Clinical and Prevention Support Center



Dental health education is an important part of overall diabetes education since dental disease can affect a diabetic's ability to control their blood sugar.

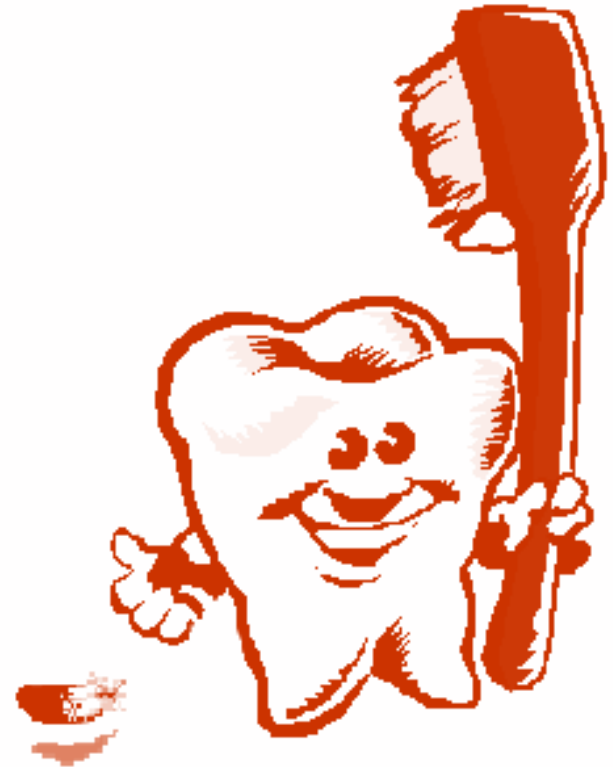
Gum disease is a major problem in Indian Country.

1999 I.H.S. survey: 2,021 adults, 35-44 years old:

96% = gingivitis (inflamed gums)

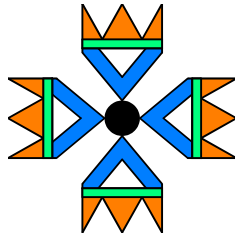
36% = early gum disease (some bone loss)

23% = advanced gum disease (severe bone loss)



Questions or comments?

If your program or group would like to arrange future presentations or if your program would like additional products, visual aids, booklets/pamphlets, etc for educational purposes, please contact I.T.C.A. Dental Support Center



Dr. Alyssa York
alyssa.york@itcaonline.com
602-258-4822

Diabetes

People with diabetes are more likely to have gum disease. Diabetics often have more difficulty controlling their blood sugar levels because of gum infections.

Diabetics often have gum disease and do not know it!

Recent research suggests a link between gum disease and other health concerns such as:

- ◆ Heart disease
- ◆ Stroke
- ◆ Bacterial pneumonia
- ◆ Pre-term, low birth weight baby

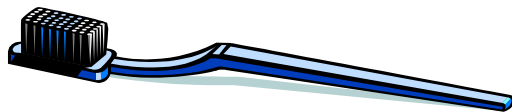
The Major Health Risks of Gum Disease

Heart Disease and Stroke

People with gum disease are 2-3 times more likely to suffer from coronary artery disease as those without gum disease. Bacteria from the mouth enter the blood stream and cause inflammation which can result in blood clots and plaque formation inside blood vessels.

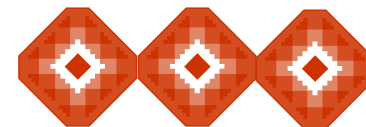
Respiratory Diseases

The bacteria that cause gum disease can be aspirated into the lungs and cause infections such as bacterial pneumonia.



At each client visit the diabetes educator should:

- ◆ Motivate and encourage your client to become an active member of their health care team.
- ◆ Encourage clients to eat healthy, get moving, don't smoke, watch your middle, be screened, and don't ignore family history.
- ◆ Prevention of dental health problems in children begins with parent/care givers' behavior. Educate & demonstrate.
- ◆ Invite a dentist or a dental hygienist to your meetings or to be on your diabetes committee.
- ◆ Being a good example will model the benefits of prevention.



At each client visit the diabetes educator should:

- ◆ Show client the inflammation, bleeding, and stain on teeth and gums.
- ◆ Explain bacterial plaque and how it causes gum disease.
- ◆ Demonstrate proper tooth brushing and flossing.
- ◆ Introduce other dental care aids/products if necessary such as Biotene mouth wash rinse or floss aids.
- ◆ Reinforce daily home care habits to enhance appearance and to maintain health.
- ◆ Provide information to help guide the client's decision to be active in promoting better home care for overall health.

Preterm, Low Birth Weight Babies

Teeth and gums are affected during pregnancy



- ◆ Pregnant women who have periodontal disease may be seven times more likely to have a baby that is born too early and too small.
- ◆ All infections are cause for concern among pregnant women because they pose a risk to the health of the baby.
- ◆ Pregnant women can have regular scheduled dental exams and should have their teeth cleaned in the second trimester.

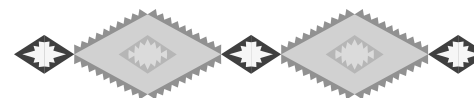
Are you at risk?

- ▶ Native American
- ▶ over 30 years old
- ▶ family history
- ▶ overweight
- ▶ inactive
- ▶ have high blood pressure
- ▶ had gestational diabetes
- ▶ had a baby that weighed more than 9 pounds.



Nutritional education

- ◆ Frequent ingestion of carbohydrates promotes tooth decay.
- ◆ Large intake of carbohydrates can lead to obesity.
- ◆ Limit sugary snacks and soda pop.
- ◆ What we eat can affect the overall health of the body and specifically the teeth and gums.
- ◆ **Remember: You are what you buy!**

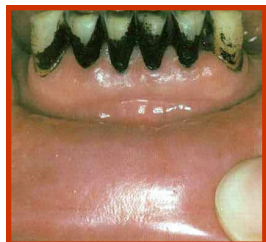


Need for specialized dental care

- ◆ Diabetics should have dental exams & cleanings every 3-4 months.
- ◆ Pregnant women should have their teeth cleaned during the second trimester.

Identifying changes in the mouth

- ◆ Clients should know what their oral health look like.
- ◆ Clients should monitor any changes in color, shape, size, tenderness, and bleeding in the mouth.
- ◆ Critical for smokers or spit tobacco users.
- ◆ Diabetics who smoke (use tobacco) and consume alcohol = 20 times more likely to get severe gum disease.
- ◆ Dental exams should include a thorough **oral cancer screening**.



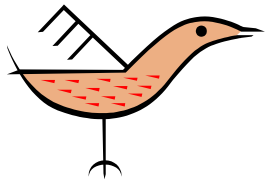
Most common dental problems associated with diabetes are:

- ◆ Tooth decay
- ◆ Periodontal (gum) disease
- ◆ Salivary gland dysfunction: dry mouth
- ◆ Fungal infections
- ◆ Delayed healing
- ◆ Taste impairment



How does gum disease complicate the management of diabetes?

- ♦ Diabetics often have poor resistance to infection.
- ♦ High blood sugar levels cause blood to thicken, which slows the flow of nutrients to the tissues and makes it difficult to remove harmful wastes. This **weakens the resistance** of the gums and bone **to infection**.
- ♦ **Diabetics** who need teeth removed **take longer to heal** after surgery due to lack of adequate blood circulation at the surgery site.



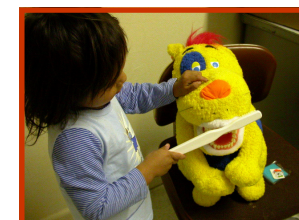
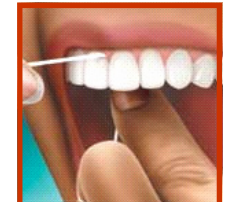
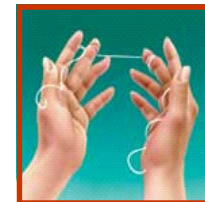
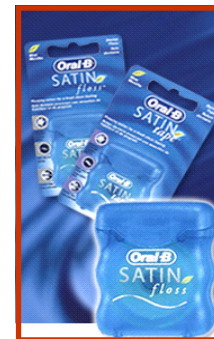
Soft Toothbrush



Replace every 3 months



Floss daily



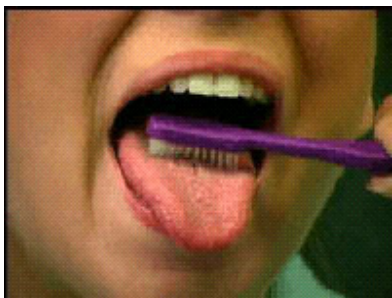
Brush and Floss Daily



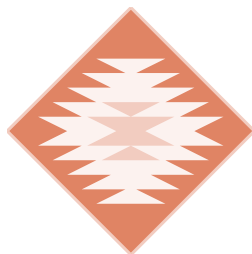
Brushing removes plaque from the tooth surfaces.

Flossing removes plaque from between the tooth surfaces.

Brush with a soft-bristled brush along the gum line.



Brush your tongue to reduce bad breath and fungal growth.

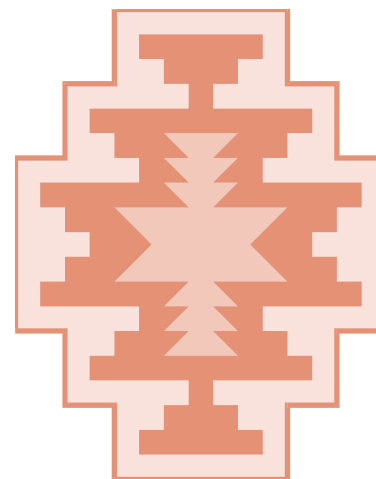


Control your blood sugar!

Infections in the mouth can affect your ability to control your blood sugar.

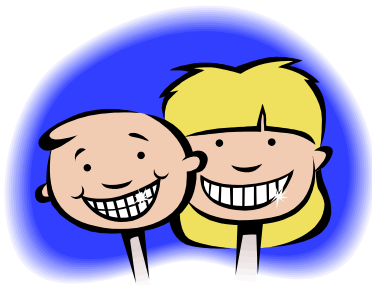
People with poor blood sugar control have:

- ♦ More gum disease
- ♦ A more severe form of gum disease
- ♦ Lose more teeth much earlier than people with good blood sugar control



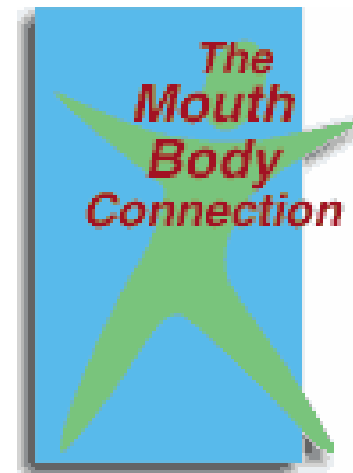
Bacteria thrive on sugar!

- ♦ When your blood sugar is high or uncontrolled, the amount of sugar in your saliva (spit) increases, and the bacteria in your mouth that cause gum disease multiply.
- ♦ The bacteria enter the blood stream and the resulting inflammation causes the patient to be chronically insulin resistant.



Two out of three adults do not know or practice proper brushing techniques.

Proper brushing prevents not only cavities and gum disease, but systemic disease as well.



Diabetics have a harder time controlling their blood sugar because of gum infection.

Xylitol Sugar

Prevent
Cavities

40% less calories
than other sugars

As sweet as
regular sugar

Safe for diabetics

- ❖ Oral examination by the **physician** should be a part of regular diabetes checkups.
- ❖ Newly diagnosed diabetics should be referred to a **dentist** for a thorough dental & periodontal exam.

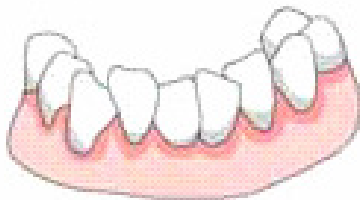
If periodontal disease is
treated in diabetics,
their blood sugar
control can improve.

What is gum disease?

- ◆ A chronic **bacterial infection** of the gum and bone that holds your teeth in your jaw.

What causes gum disease?

- ◆ Bacterial plaque
- ◆ Plaque hardens into tartar.
- ◆ Major cause of tooth loss.



Xylitol

- ◆ It is a natural sugar derived from fruits, berries, vegetables and birch wood.



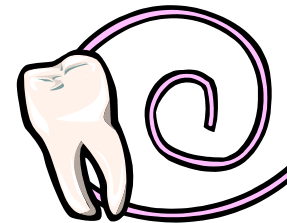
Dry Mouth Solutions

- ◆ Sip water throughout the day
- ◆ Saliva substitutes
- ◆ Humidifier or nasal spray
- ◆ Avoid caffeine, alcohol, tobacco
- ◆ Biotene mouth rinse
- ◆ Xylitol chewing gum or mints



Warning Signs and Symptoms

- ◆ gums that are swollen, tender and red
- ◆ gums that have pulled away from teeth
- ◆ infection including pus around the teeth and gums
- ◆ teeth that are loose or separating
- ◆ Bite changes - in the way your teeth fit together
- ◆ any changes in the fit of your partial denture
- ◆ bad breath and/or taste
- ◆ gums that bleed when you brush or floss your teeth



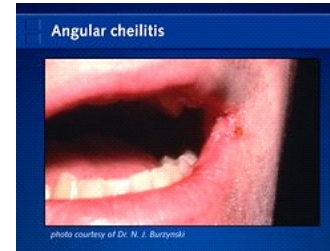
Periodontal abscess may signal the presence of diabetes or a change in diabetic control.

◆ **Diabetes Control** ~ Poor diabetic control may increase susceptibility to gum infection.

◆ **Risk of Infection** ~ more likely to get gum infections more often & more severely; longer to heal; loss of teeth much sooner.



◆ **Dental Checkups** ~ Diabetics should have a dental checkup with teeth cleaning **every 3-4 months**.



Dry mouth is often a sign of undetected diabetes.

- ◆ More than 400 drugs can cause dry mouth.
- ◆ Can cause infections, ulcers, tooth decay, especially root cavities in elders.
- ◆ Mouth rinses with high content of alcohol can dry the mouth.
- ◆ Caffeine, alcohol and smoking cause dry mouth.
- ◆ Saliva buffers acid produced by sugars & rinses away debris.

Sip all day, get tooth decay!

Sugar & Acid = Double Trouble

In addition to **CAVITIES**, heavy pop consumption has been linked to **DIABETES, OBESITY AND OSTEOPOROSIS**



**SODA HAS NO
NUTRITIONAL
VALUE!**

Gum Disease Solutions

- ◆ Brush and floss after every meal with fluoride toothpaste (at least rinse)
- ◆ Have teeth cleaned regularly to remove tartar – every 3-4 months
- ◆ Water Pik irrigation
- ◆ Make sure your dentist or a dental hygienist performs a PSR (periodontal screening record) at each cleaning to measure possible bone loss.



Diabetics are at risk because the fungus thrives on the high levels of sugar found in saliva.

High or uncontrolled blood sugar: the amount of sugar in your saliva increases and the bacteria in your mouth multiplies and can start gum disease (infection).



READ LABELS

4 grams = 1 teaspoon

Nutrition Facts

Serving Size 2.5 oz
(70g/about 1/2 Box)
(Makes about 1 cup)

Servings Per Container about 2

Amount Per Serving	In Box	Prep*
Calories	260	410
Calories from Fat	170	
% Daily Value***		
Total Fat 2.5g**	4%	28%
Saturated Fat 1.5g	8%	23%
Cholesterol 10mg	3%	3%
Sodium 560mg	23%	31%
Total		
Carbohydrate 48g	16%	16%
Dietary Fiber 1g	4%	4%
Sugars 7g		
Protein 11g		
Vitamin A	0%	15%

Nutrition Facts

Serving Size 1 Cup (50g/1.8 oz.)
Servings per Container About 10

Amount Per Serving	Cereal	Cereal with 1/2 Cup Vitamins A&D Fat Free Milk
Calories	180	220
Calories from Fat	5	5
% Daily Value**		
Total Fat 0.5g*	1%	1%
Saturated Fat 0g	0%	0%
Cholesterol 0mg	0%	0%
Sodium 280mg	12%	14%
Potassium 100mg	3%	9%
Total		
Carbohydrate 43g	14%	16%
Dietary Fiber 2g	9%	9%
Sugars 15g		
Other Carbohydrate 26g		
Protein 3g		

Ingredients: Rice, whole grain; Natural Flavors; Other Carbohydrates; Protein 3g; Butters (sugar, toasted oats [rolled oats, honey, brown sugar, soy oil], rolled wheat, crisp rice [milled rice, sugar, malt, salt], corn syrup, honey, cinnamon, artificial vanilla flavor, BHT [preservative]), high fructose corn syrup, salt, honey, malt flavoring, reduced iron, alpha tocopherol acetate (vitamin E), natural and artificial vanilla flavor, niacinamide, zinc oxide, sodium ascorbate II ascorbic acid (vitamin C), calcium pantothenate, yellow #5, pyridoxine hydrochloride (vitamin B6), riboflavin (vitamin B2), thiamin hydrochloride (vitamin B1) (preservative), vitamin A palmitate, folic acid, vitamin D

Nutrition

Serving Size 1 Cup (55g)
Servings Per Container about 9

Amount Per Serving

Less than	300mg	300mg
Less than	2,400mg	2,400mg
	3,500mg	3,500mg
Carbohydrate	300g	375g
Fiber	25g	30g

INGREDIENTS: WHOLE WHEAT, SUGAR, GELATIN, REDUCED FAT (A PRESERVATIVE), NIACINAMIDE*, ZINC OXIDE, L-ASCORBIC ACID*, RIBOFLAVIN*, THIAMIN*, PYRIDOXINE HYDROCHLORIDE*, FOLIC ACID*, VITAMIN B12.

OF THE B VITAMINS

WHOLE WHEAT INGREDIENTS.

DISTRIBUTED BY
THE QUAKER OATS COMPANY

All foods turn to sugar!

We are what we buy!



Control your blood sugar!



Fungus on tongue.



Fungus under a denture.



Fungus on tongue.



Nutrition

- ❖ Even more important to eat a well balanced diet as we grow older
- ❖ People with missing teeth or ill-fitting dentures tend to eat softer foods leading to poor nutrition
- ❖ May need daily multi-vitamin supplement
- ❖ Diet and exercise delay diabetes



NUTRITION

NUTRITION



NUTRITION