

H<sub>2</sub>O THE WAY TO GO  
For Thirst, Water's First



# Healthy Beverages Community Action Guide



Indian Health Service  
September 2006  
Updated March 2013

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# Water Prayer

*We give thanks to all the Water of the world for quenching our thirst and providing us with strength. Water is life. We know its power in many forms—waterfalls and rain, mists, and streams, rivers and oceans. With one mind, we send greetings and thanks to all the spirits of water.*

## **Mohawk Thanksgiving Address**

# Why Do Healthy Beverages Matter?

- Sweetened beverages linked to obesity
- Obesity Rates Increasing
- Diabetes Rates Increasing
- Dental Caries at high rates
- Soda intakes increasing (3X)
- Milk intakes decreasing
- 5-15% dietary energy intake increase
- Portion sizes increasing

# Indian People Care

## Lummi Tribal Healthy Beverage Actions

- 25 emails asking for a program
- Lummi Tribal Resolution
- Stop Increasing Health Care Costs
- Stop Human Suffering

## Timing is Right

- Tribal Sovereignty focus is food security and food quality
- USDA requires school lunch programs prepare wellness plan
- First Lady Michelle Obama focus on obesity prevention through “Let’s Move”
- Former President Clinton drafts agreement with beverage industry
- New York City regulation to limit large sodas
- More interest in decreasing sugar intake



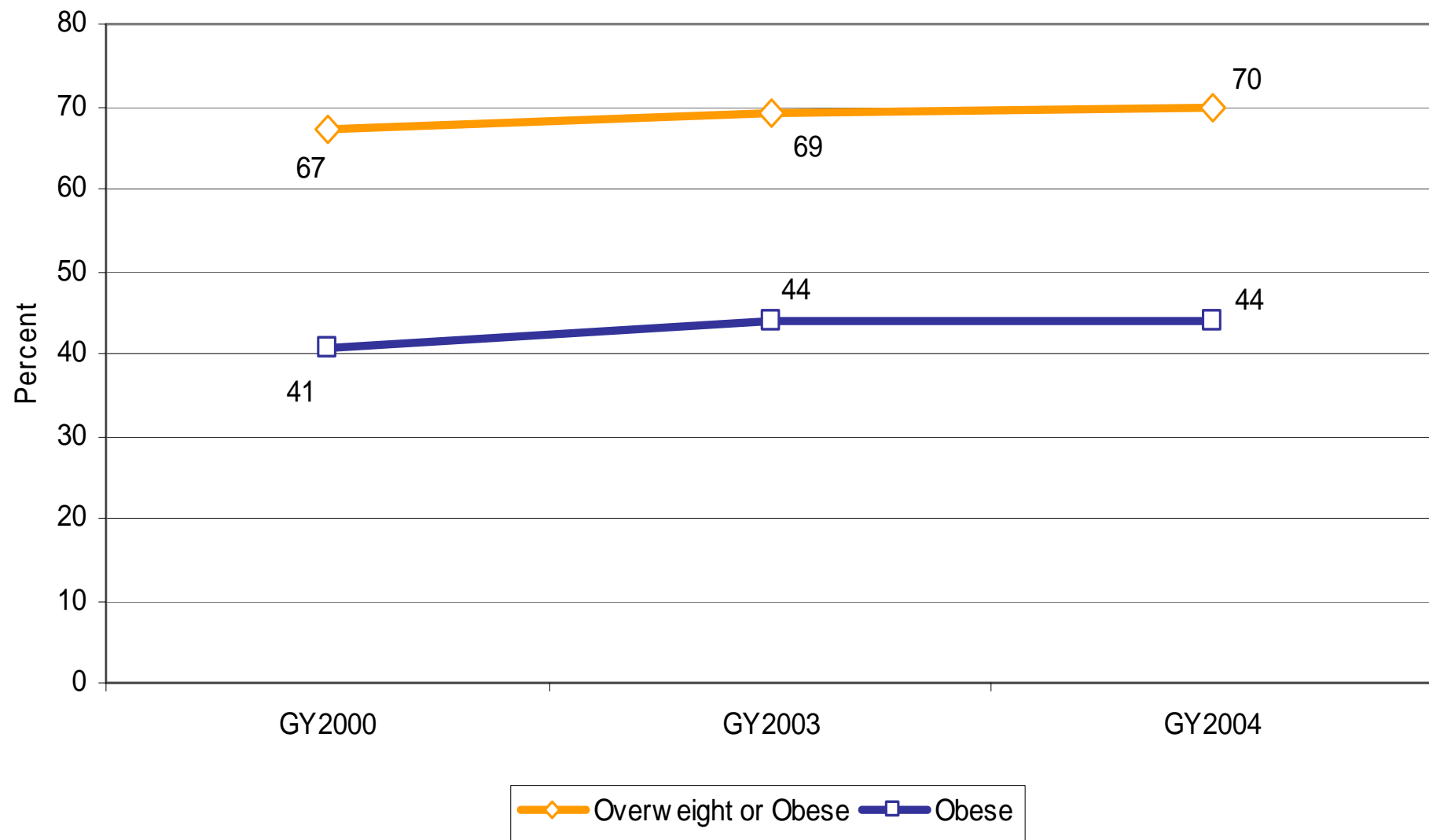
# Indian Communities Mobilizing for Food Issues

- Community-owned actions
- Capitalize on strengths & resources
- Community Buy-in
- Community Directed
- Community Based
- Collaboration of Partners

# TRENDS

- Americans drinking more soda pop than ever before
- On average Americans drink 597 cans of soda pop in one year
- American teens drink almost a GALLON per month, ½ quart weekly
- AI/AN consume soft drinks at more than twice the US national average rate

**AI/AN Active Users Age 2-74 with a Body Mass Index Recorded  
(60% of All AI/AN Active Users Reported in GPRA 2004) Who Are Obese  
or Obese and Overweight  
Indian Health Service 2004**



# PORTIONS

- Bigger serving sizes
- Drank more frequently
- 1950s – 6.5 ounces
- 1990s – 20 ounces
- One 12 ounce soda contains an average of 10 teaspoons of sugar and 150 calories



**\$1.09**

**53 tsp sugar  
800 kcal**

**99¢**

**37 tsp sugar  
550 kcal**

**89¢**

**27 tsp sugar  
400 kcal**

**79¢**

**16 tsp sugar  
250 kcal**

**1 cup sugar = 48 tsp**

# Resources

- *A New Proposed Guidance System for Beverage Consumption in the United States*, The American Journal of Clinical Nutrition, Vol. 83, No. 3, 529-542, March 2006
- ***Healthy Beverage Community Action Guide***, Indian Health Service

# Tooth Decay—Dental Caries



## Tooth Decay

- Is a bacterial disease
- Is an infectious disease
- Is caused by the streptococcus mutans bacteria
  - Lives in the plaque in your mouth

# Tooth Decay Chain of Events

- Plaque (bacteria) living on the tooth uses sugars (carbohydrates) to make acids
- Acid dissolves tooth minerals
- Tooth surface softens
- Tooth surface breaks
- Time the acid stays on the tooth determines how fast the tooth will decay



# More Than Double Trouble



Pop = sugar, acid, phosphorus, caffeine

Sugar	Obesity and Tooth Decay
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Acid	Tooth Decay
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Phosphorus and bones	Removes calcium from the body weakening teeth
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Caffeine	Dependency on caffeinated soda pop
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# Consistency of sugar(cariogenicity)

Ismail, Burt and Eklund JADA Aug 1984

- Little Research: Vipeholm study had the greatest acceptance.(6 year experiment with pts who ate Carmel or toffee)
- Several studies show sucrose rinses have significant increase in decay. (Stephans,Von der Fehr)
- NHANES (1971-74 24 hrs) frequency between meals more important than actual amount.
- NHANES(1988-94 Heller, Burt, Eklund)) increase DMFS age 25

# Foods That May Harm Teeth

- Foods that have lots of sugar and/or stick to teeth
  - Hard or sticky candies like lollipops, mints, taffy and caramel), cookies, cakes and muffins, and snacks like chips because the amount and type of sugar that they have sticks to teeth.
- Sugar-containing drinks
  - Soda, fruit drinks, lemonade, juice and sweetened coffee or tea (iced or hot)
- Nutritious, acidic foods like tomatoes and citrus fruits and sticky dried fruits
  - Eat acidic foods with meals
  - Eat fresh rather than dried fruits

# Acid Production



- Sugar between meals = acid for production for 20 minutes.
- 3 soda pops between meals = acid for production for 80 minutes
- 3 meals = acid production for 60 minutes for 3 meals.

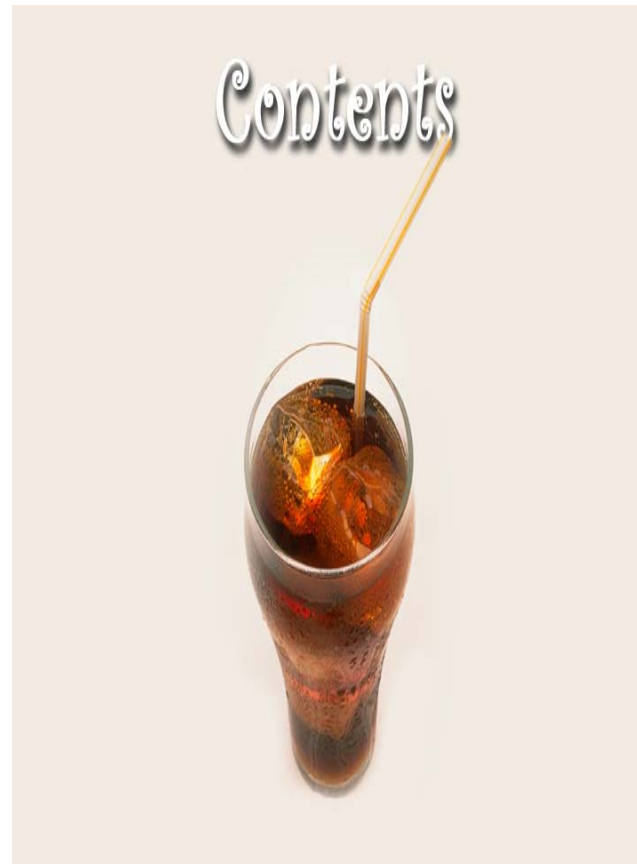
**Your mouth is producing acid for 4 hours.**

# Florida dental association

## Mouth Wise

### REGULAR SODA

Carbonated  
water  
High fructose  
corn syrup  
Sucrose  
Coloring  
**Phosphoric  
acid**  
**Citric acid**  
**Natural**  
Flavors  
Caffeine



### DIET SODA

Carbonated  
water  
Caramel color  
Aspartame  
**Phosphoric  
acid**  
**Citric acid**  
Potassium  
benzoate  
Natural flavors  
Citric acid  
Caffeine

# Sipping Pop

- A 16 yr old after one year of sipping pop
- Found 15 cavities



Courtesy Roseville Family Dental Care

# Soda Pop Effects

- Obesity
- Tooth decay
- Caffeine dependency
- Weakened bones



# Soda Pop Caffeine Effects

- Fluid loss
- Sleep disruption
- Irritable
- Children stomach pains



# Beverage caffeine content

Brewed Coffee	85 milligrams
Instant Coffee	60
Decaffeinated coffee	3
Tea	50
Cocoa	5(=250 milligrams of theobromine)
Cola – type soft drinks average	35 pr can
Mountain Dew	55
Diet Coke	45
Coca cola classic	35
Pepsi	37.5

# Caffeine

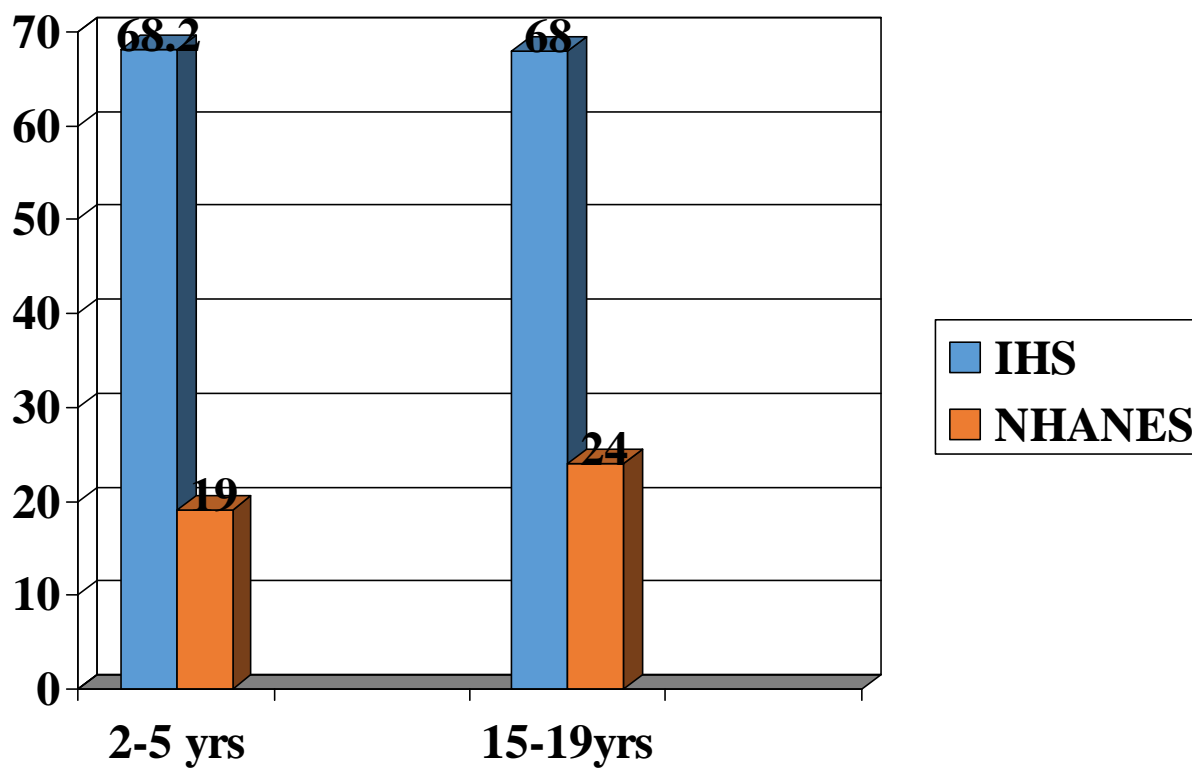
- 180 milligrams of caffeine can cause nausea, vomiting, diarrhea, cramps and muscle twitching in a 40 lb child.
- 184 milligrams of caffeine in 2 - 20 oz bottles of mountain dew.

# Traditional Diets

- Hunters, foragers, gatherers
- Northern Plains foods
  - Turnips, wild game, berries, calcium from wild game bone marrow
- Government rations of flour sugar, lard, commodities, land allotments
- Boarding school introduced desserts and sugar



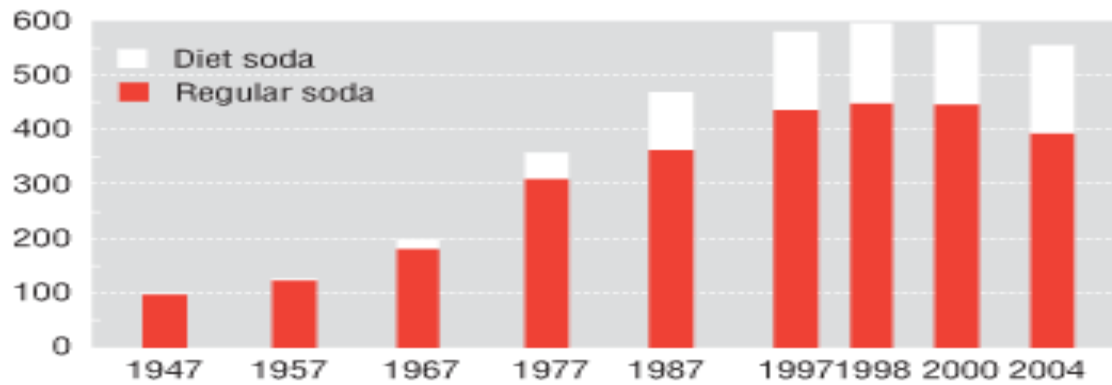
# 1999 Oral Health Survey History of Tooth Decay



# Soft Drink Production

**Figure 1**

**Annual soft drink production in the United States  
(12-oz. cans/person)**



**Sources:** USDA Economic Research Service (1947–87); Beverage Digest (1997–2004).

About \$

# Energy Drinks

- Caffeine and Sugar.



# Caffeinated Energy Drink Dangers

- Energy drinks linked to dizziness, jitteriness, anxiety, diarrhea and vomiting, blood pressure and heart disorders, and death (FDA)
- Alcohol + energy drinks = wide awake drunk
  - Drinkers think less drunk that they are and drink more
  - Can lead to high-risk physical behaviors that lead to dangers such as sexual abuse, rape, and car wreck injuries.

# Sports and Energy Drinks Not for Children

- Caffeine and other stimulants in energy drinks should not be in children's and adolescents' diets.
- Frequent or excessive intake of caloric sports drinks can greatly increase overweight in children and adolescents.  
<http://pediatrics.aappublications.org/content/early/2011/05/25/peds.2011-096>
- Young athletes in long training hours in hot environments may use sports drinks but.....
- Almost all ordinary child and adolescent athletes under ordinary circumstances need only water.
- Coaches should encourage young athletes to drink water before, during, and after exercise.

<http://blogs.webmd.com/childrens-health/2011/06/sports-and-energy-drinks-are-not-for-kids.html>



# Vending Machines Advertise Drinks



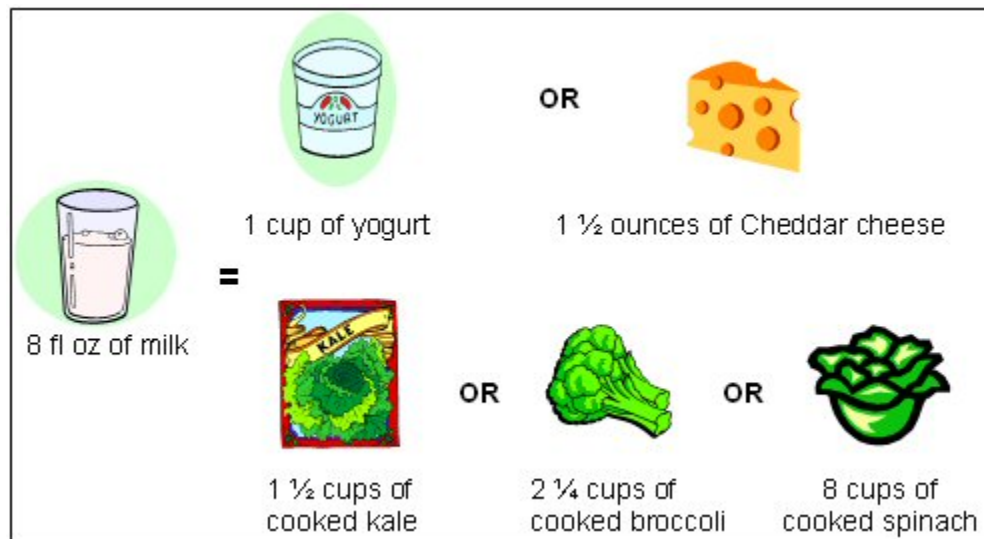
# Most beverages don't have enough calcium to meet dietary need

- 9-13 year olds need 1300 mg/day of calcium



# Vending Machines with healthy drinks

**Figure 1: Calcium Content of 8 fl oz of Milk Compared to Other Food Sources of Calcium**



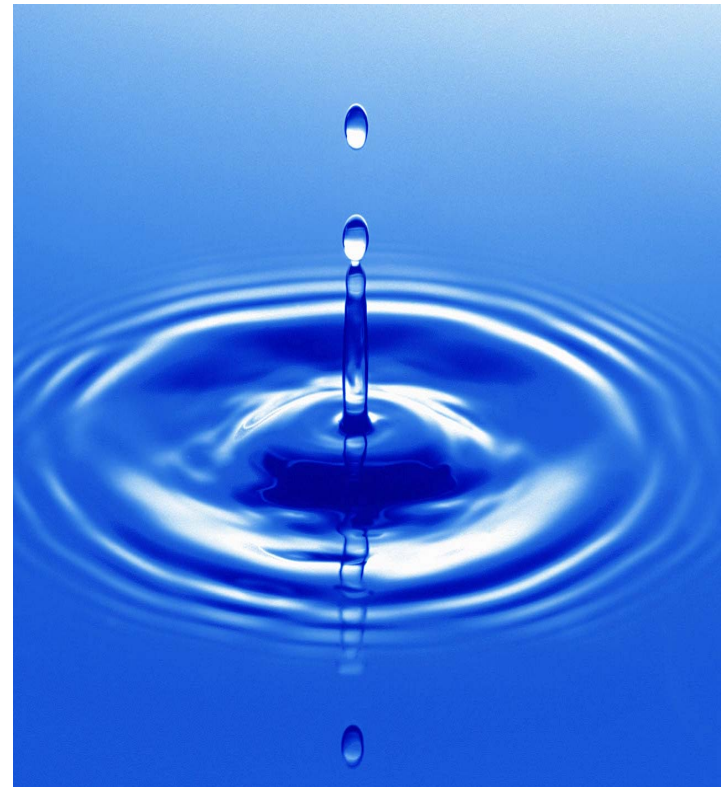
# Water

- Thirst is nature's way of telling us to drink water.
- More than half of your body weight is water.
- Helps digest food
- Contains needed minerals.
- Keeps you healthy.



# Water the First Choice

- Essential nutrient of life
- Men need 10-12 cups
- Women need 8-10 cups
- Children no specific recommendation—let thirst guide
- Fluoridated water



# Healthy Beverages Community Action Guide

- “The best thing for Indian Country”
- Drink Sensible
- Healthy drinks
- Think before you drink







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# Questions

