Most nutrition education focuses on what people eat. Yet, what they drink can affect their health as much as food. Liquid calories count the same as food calories. In the last two decades the average person has added 150 to 300 calories per day to their diets. Half of those calories are from liquids. In addition to obesity, the over consumption of high calorie beverages leads to other health problems. For example, with young people drinking more soda and less milk, they are at increased risk for osteoporosis. Dental health has also been compromised.

However, by understanding the nutrition science behind beverage consumption, people can change their drinking habits and improve their health.

**REVIEW**

**Directions:** After watching “Obesity in a Bottle: Update on Beverages and Nutrition,” answer the following questions.

1. Why is the video titled Obesity in a Bottle?

2. Excess weight is a factor in what adult disease, which now affects children?

3. How many teaspoons of sugar are in a can of soda? ________________

4. There are about 400 calories in a 32-ounce soda.
   What are some foods you could eat for those same 400 calories? ________________

5. Boys drink an average of _____ cans of soda each day while girls drink, on average, _____ cans of soda a day.
6. How can drinking diet soda actually cause a person to gain weight?
__________________________________________________________________________

7. What is high fructose corn syrup? ____________________________________________

8. What is a serving size of juice? ______________
   How many servings of juice or fruit per day are recommended? ______________
   How can you make a juice serving go further? ____________________________

9. What is the difference between a sports drink and an energy drink?
________________________________________________________________________

10. What is a healthy alternative to a high sugar calorie commercial smoothie?
________________________________________________________________________

11. Why are fancy coffee drinks not a nutritional value?
________________________________________________________________________

12. What are the recommended daily servings of milk and other dairy products?
________________________________________________________________________

13. Why is water a nutritional bargain?
________________________________________________________________________
Teacher’s Key

Directions: After watching “Obesity in a Bottle: Update on Beverages and Nutrition,” answer the following questions.

1. Why is the video titled Obesity in a Bottle?
   The title reflects the role high calorie beverages play in the current obesity epidemic among children, teens and adults.

2. Excess weight is a factor in what adult disease, which now affects children?
   Type 2 Diabetes

3. How many teaspoons of sugar are in a can of soda? ______ 10 teaspoons ______

4. There are about 400 calories in a 32-ounce soda.
   What are some foods you could eat for those same 400 calories?
   Two bagels, an enchilada and taco, seven pancakes, two brownies, 1 1/2 cups of macaroni and cheese, three bowls of cereal with milk, five cups of chicken noodle soup or a roast beef sandwich.

5. Boys drink an average of ______three____ cans of soda each day while girls drink, on average, ______two____ cans of soda a day.

6. How can drinking diet soda actually cause a person to gain weight?
   If the diet beverage isn’t satisfying your hunger, you may eat more food. Plus, dieters often eat more food calories thinking they are saving on beverage calories.

7. What is high fructose corn syrup?
   High fructose corn syrup is a sweetener, which is sweeter and less expensive than sugar.
8. What is a serving size of juice? **six ounces**

   How many servings of juice or fruit per day are recommended? **three**

   How can you make a juice serving go further? **add plain or carbonated water**

9. What is the difference between a sports drink and an energy drink?
   A **sports drink replaces fluid. An energy drink delivers a stimulant.**

10. What is a healthy alternative to a high sugar calorie commercial smoothie?
    **Blend fresh or frozen fruit, low-fat milk and ice in a blender.**

11. Why are fancy coffee drinks not a nutritional value?
    **They contain a lot of sugar calories.**

12. What are the recommended daily servings of milk and other dairy products?
    **Three cups**

13. Why is water a nutritional bargain?
    **Water is a non-caloric thirst quencher. The clear liquid carries nutrients through the body and keeps it hydrated.**
**WHAT ARE YOU DRINKING?**

Create a log documenting your beverage servings for five days.

<table>
<thead>
<tr>
<th></th>
<th>DAY 1</th>
<th>DAY 2</th>
<th>DAY 3</th>
<th>DAY 4</th>
<th>DAY 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Milk:</td>
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</tr>
<tr>
<td>Juice</td>
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<tr>
<td>Water</td>
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<tr>
<td>Soda</td>
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<tr>
<td>Diet Soda</td>
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<td>Sport Drink</td>
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<tr>
<td>Energy Drink</td>
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<tr>
<td>Other</td>
<td></td>
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</tr>
</tbody>
</table>

Evaluate your five-day log.

Are you drinking enough healthy beverages including water, milk and juice?

_____________________________________________________________________

Approximately how many beverage calories are you drinking each day?________

What changes would you like to make? _________________________________

How can you make these changes? _________________________________
Water is clearly best, but look at the alternatives

Lisa Ryckman, Minneapolis Star Tribune Writer


When did it all get so complicated?

There are people -- myself included -- who find it next to impossible to drink all the water they’re supposedly supposed to, an alleged 64 ounces a day.

I tend to follow a more manageable approach: If I drink when I’m thirsty and stop when I’m not.

But if I’m lifting weights, I’ll need something more.

In that case, the American College of Sports Medicine recommends drinking five to 12 ounces of fluid every 15 to 20 minutes of exercise for periods less than an hour. Studies show that adding a little flavor and a little sweetener -- as in enhanced or fitness water -- can make it go down easier.

If you are working out for more than an hour, a sports drink with carbs and electrolytes can help.

Actually, there’s a risk of dehydration during exercise even if it’s only 60 degrees, according to Craig Horswill of the Gatorade Sports Science Institute. Symptoms include dry mouth, lightheadedness, a headache, fatigue or muscle cramps, all of which are signals to stop exercising and drink fluids. If it gets worse, with symptoms such as shortness of breath, high body temperature, nausea or incoherence, it’s time to hit the emergency room.

Speaking of ERs, extreme caffeine has become fashionable. Makers of energy drinks such as Red Bull, Monster, Rockstar and Full Throttle have hit the motherlode: Marketing research shows a 700 percent increase from 2000 to 2005, pushing the market to more than $1.1 billion.

Here are some tips:

More tips on the back!

<table>
<thead>
<tr>
<th>WATER</th>
<th>tap, bottled</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Upside:</strong></td>
<td>The ultimate hydrator. Cheap, available everywhere and gym-friendly -- many clubs allow only water in the exercise studio or weight room. Unless you’re exercising hard for an hour or more, water’s the best thing for you.</td>
</tr>
<tr>
<td><strong>Downside:</strong></td>
<td>You should drink 4 to 6 ounces of water for every 15 to 20 minutes of exercise. If you have a problem with tap water, bottles can get pricey.</td>
</tr>
<tr>
<td><strong>Dark side:</strong></td>
<td>It’s actually possible to drink too much water. Hyponatremia -- water intoxication -- can happen to anyone exerting themselves in a major way and has happened among ultramarathoners and long-distance cyclists. Salt-loss through sweating, combined with dilution of the blood through excessive fluid, upsets the body’s sodium levels, a condition that can lead to coma and death.</td>
</tr>
<tr>
<td><strong>Good for:</strong></td>
<td>Everybody.</td>
</tr>
</tbody>
</table>
**SPORTS DRINKS** | Gatorade, Powerade, Accelerade

| **Upside:** | Contain electrolytes, which are essential minerals that control the body’s absorption of water; sodium to help replace what’s lost through sweat; carbohydrates for an energy boost. Has fewer calories than juice. |
| **Downside:** | Less sugar and calories than juice, but more than water. These can be an acquired taste, and some of the flavors don't occur in nature, but there are so many that you're bound to find one you can tolerate. |
| **Dark side:** | Your electrolyte levels might be stabilizing, but your teeth are disintegrating. A study last year found that sports drinks, energy drinks and bottled lemonade caused enamel damage three to 11 times greater than colas. Chug that sports drink rather than sipping it. Alternate with sips of water, and rinse your mouth with water afterward. |
| **Good for:** | People who are working out for an hour or more, those exercising in extreme heat or doing endurance events. Also helpful to rehydrate people who are vomiting or having diarrhea. |

**ENERGY DRINKS** | Red Bull, Full Throttle, Monster, Rumba

| **Upside:** | They often contain B-complex vitamins, and the big hit of caffeine can give athletic performance a boost. |
| **Downside:** | High schools have started banning energy drinks for their athletes because of adverse reactions to the excessive caffeine, which can be five times that of the same amount of cola. Too much can cause irritability, insomnia, heart palpitation and dizziness. It's possible to overdose. |
| **Dark side:** | Popular as an alcohol chaser in bars because of the erroneous belief that its ingredients offset the impact of the booze. Sorry -- you might feel more awake, but you're still just as drunk. |
| **Good for:** | Nobody, but one won't hurt when you need to stay alert. |

**ENHANCED WATER, AKA FITNESS WATER** | such as Propel, Vitaminwater, Fruit20 Plus

| **Upside:** | Make it sweeter, and they will drink. Studies show that people will drink more water if it tastes sweet, from sugar or artificial sweeteners, and has some flavor. Usually contains no caffeine, but check labels. |
| **Downside:** | It doesn't come from the tap, so you're going to pay. |
| **Dark side:** | Popular with anorexics as a way to get vitamins without all those nasty calories. |
| **Good for:** | People who have a tough time drinking lots of water. |

**TEA** | Arizona, Honest, Snapple, Lipton

| **Upside:** | Antioxidant-rich tea -- particularly green -- has health-protective properties, plus there's a bit of a caffeine boost. |
| **Downside:** | Green tea's bitter taste means it isn't everybody's cuppa; Starbucks has whipped it into a Frappuccino, but some think it tastes like grass. Bottled teas often contain sweeteners that add up to 200 calories or more per bottle, and tea does contain caffeine, which can act as a diuretic. |
| **Dark side:** | Mixing green tea and aspirin can increase risk of bleeding because both inhibit clotting. Research suggests green teas have negative interactions with certain antipsychotics, antidepressants and chemotherapy drugs. |
| **Good for:** | people who want more from their drink than mere hydration. |