What’s Your Beverage?

Learner Objectives
Participants will be able to:
• identify alternative beverages to sugar-sweetened drinks;
• identify functions of water in the body and its health benefits;
• identify symptoms of dehydration; and
• identify one goal or action related to making smarter beverage choices.

Discussion
1. Discuss beverages people drink every day.
   • Mention water; sugar-sweetened, carbonated sodas or pop; fruit drinks; sport drinks; diet drinks; milk; fruit juice.
   • How much water do you drink every day?

2. Which beverages should you drink more often? Which should you drink less often? Why? How easy is that to do?
   • Sugar-sweetened sodas or pop provide empty calories and few or none of the vitamins and minerals growing bodies need.
   • If you drink sugared pop and also eat as many calories as you need in a day, you will consume too many calories and gain weight.
   • Sugary drinks are bad for your teeth.
   • Diet drinks don't have extra sugar, but they also provide few, if any, nutrients. Often people drink them instead of healthier choices such as low-fat milk and water.
   • Water is the drink of choice for maintaining a healthy body.
   • Preteens should have 3 cups of low-fat dairy, such as skim milk and low-fat yogurt, a day.
   • Don’t drink more than 1 cup of 100% fruit juice a day. Fruit juice does not provide the fiber whole fruit does, and fruit drinks, which are often super-sized, contain extra calories.

3. What is hydration?
   • Hydration is to supplying water to restore and maintain fluid balance.

Materials
• Plastic bowling ball and pin sets; may substitute 10 empty beverage containers and a plastic or rubber ball.
• If using empty beverage containers, try those that represent the beverages being discussed: low-fat milk, water, sugared beverages, and 100% fruit juice.
4. Discuss the importance of hydration. Water plays a vital role in all bodily processes such as:
- chemical reactions,
- lubrication,
- nutrient delivery,
- waste disposal,
- heat dispersion, and
- temperature regulation.

5. Explain the hydration pyramid to the students.
- Most of your fluid intake should come from water.

Tips for choosing the most beneficial and low-sugar fruit juice
- Choose 100% juice because it is high in vitamins.
- Look for “no sugar added” on labels to reduce calories.
- Artificially sweetened drinks are lower in calories.
- Sports drinks are high in carbohydrates and electrolytes. They should only be consumed after 60 minutes or more of a high-intensity workout.
Bowling Thirst Quencher Game

Use this game to remind youth which beverages to drink more often and which to drink less often.

1. Set up bowling pins (or beverage containers) in the normal bowling arrangement. Code each on the bottom so that for 10 pins you have:
   - 1 labeled “100% fruit juice”
   - 1 labeled “sugar-sweetened beverage”
   - 3 labeled “low-fat milk”
   - 4 labeled “water”
   - 1 labeled “diet drink”

2. Everyone bowls to see how well they “quench” their thirst!
Players roll the ball once for each turn (frame), and keep score for a given number of frames.
The object is to get as many points as possible in a set number of frames or turns at bowling. Points are scored or lost by knocking down pins. Note: Sugar-sweetened beverages subtract points, and fruit juices break even. Randomly code and set the pins each time so the bowler does not know which pins he or she might strike and knock down.

3. Point values
Water: gain 2 points
Low-fat milk: gain 2 points
100% fruit juice: break even — no gain or loss of points
Diet drink: lose 1 point
Sugared beverage: lose 3 points

4. Examples
A strike, knocking down all 10 pins, equals:
4 pins of water × 2 points = 8 points
3 pins of milk × 2 points = 6 points
1 pin of fruit juice × 0 points = 0 points
1 pin of diet drink × -1 point = -1 point
1 pin of sugar-sweetened beverage × -3 points = -3 points
Total = 10 points

Knocking over 2 pins of water and 1 pin of fruit juice equals:
2 points × 2 = 4 points
0 points × 1 = 0 points
Total = 4 points

During the game, students who are not bowling record the scores of the others. After everyone has bowled, they compare calculations.
### Instead of…

<table>
<thead>
<tr>
<th>Beverage</th>
<th>Try…</th>
<th>Approximate Calories Saved</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 cup fruit drink</td>
<td>½ cup fruit drink + ½ cup club soda</td>
<td>65</td>
</tr>
<tr>
<td>1 cup bottle coffee drink</td>
<td>1 cup black coffee + ¼ cup vanilla soy milk</td>
<td>100</td>
</tr>
<tr>
<td>1 cup apple juice</td>
<td>½ cup apple juice + ½ cup water</td>
<td>60</td>
</tr>
<tr>
<td>1 cup sweet tea</td>
<td>½ cup unsweetened tea + ½ cup light lemonade</td>
<td>35</td>
</tr>
<tr>
<td>1 cup orange juice</td>
<td>1 cup light orange juice beverage</td>
<td>60</td>
</tr>
<tr>
<td>12 ounce can regular soda</td>
<td>12 ounce can diet soda</td>
<td>140</td>
</tr>
</tbody>
</table>

### Beverage

<table>
<thead>
<tr>
<th>Beverage</th>
<th>Calories per 8 ounce Serving</th>
</tr>
</thead>
<tbody>
<tr>
<td>bottled water</td>
<td>0</td>
</tr>
<tr>
<td>club soda</td>
<td>0</td>
</tr>
<tr>
<td>100% apple juice</td>
<td>120</td>
</tr>
<tr>
<td>100% grape juice</td>
<td>152</td>
</tr>
<tr>
<td>100% orange juice</td>
<td>112</td>
</tr>
<tr>
<td>100% pineapple juice</td>
<td>136</td>
</tr>
<tr>
<td>100% tomato juice</td>
<td>40</td>
</tr>
<tr>
<td>fruit punch juice drink</td>
<td>128</td>
</tr>
<tr>
<td>grape juice drink</td>
<td>144</td>
</tr>
<tr>
<td>lemonade, powder mix</td>
<td>104</td>
</tr>
<tr>
<td>orange juice drink</td>
<td>136</td>
</tr>
<tr>
<td>whole milk</td>
<td>144</td>
</tr>
<tr>
<td>2% reduced fat milk</td>
<td>120</td>
</tr>
<tr>
<td>1% lowfat milk</td>
<td>104</td>
</tr>
<tr>
<td>nonfat milk</td>
<td>88</td>
</tr>
<tr>
<td>2% reduced-fat chocolate milk</td>
<td>192</td>
</tr>
<tr>
<td>caffeinated cola</td>
<td>88</td>
</tr>
<tr>
<td>diet cola, caffeinated</td>
<td>8</td>
</tr>
<tr>
<td>ginger ale</td>
<td>80</td>
</tr>
<tr>
<td>grape soda</td>
<td>104</td>
</tr>
<tr>
<td>sports drink</td>
<td>64</td>
</tr>
</tbody>
</table>

### Symptoms of dehydration:
- increased thirst,
- dry mouth,
- light-headed feeling,
- fatigue,
- low urine output,
- inability to produce tears, and
- dry skin.

### Sources of water:
- drinking water,
- other beverages, and
- water in solid foods (e.g. fruits and vegetables).

### Sugary and carbonated beverages:
- are absorbed more slowly,
- cause stomach cramps,
- cause nausea, and
- cause bloating and diarrhea.

### Caffeinated beverages:
- may cause nausea,
- cause headaches, and
- act as diuretics (increase water loss from urination).

Water helps cool the body.
Children should drink 8 or more cups of water per day.
How to Form the Water Habit

1. Carry a bottle
Get a bottle, fill it with water, and carry it around with you all day. When it’s empty, fill it up and keep drinking.

2. Substitute it in place of other drinks
Choose water or low-calorie beverages instead of sugar-sweetened beverages. Choose water with meals and stock the fridge with water instead of other beverages.

3. Jazz it up
Make water more exciting by adding slices of lemon, lime, cucumber, or watermelon, or drink sparkling water. Add a splash of 100% juice to plain sparkling water for a refreshing, low-calorie drink.

4. Set a reminder
Set your watch or cellphone to beep during your class breaks to remind you to drink water.

5. Track it
When forming a new habit, it helps to keep track of it. Keep a log. It can be as simple as a tick mark for each glass of water you drink.

6. Show others
Be a role model for your friends and family by choosing water and other healthy, low-calorie beverages.
Worksheet

What are some signs of dehydration?

In the Bowling Thirst Quencher Game, if you knock over 3 waters, 2 low-fat milk, and 1 sugared beverage, how many points will you earn?

Why should you avoid sugary or carbonated beverages during exercise?

What is one of the most important functions of water?

What are some sources of water?
6
How many calories do you save if you drink a 12-ounce can of diet soda rather than a 12-ounce can of regular soda?

7
How many more calories are in a grape juice drink than 100% apple juice?

8
How much water should you drink every day?

9
If you drink 8 ounces of 100% orange juice, 8 ounces of 1% milk, and 16 ounces of diet caffeinated cola, how many total calories will you be consuming?

10
What is one thing you can do today to make a smarter beverage choice?
### Kansas School Wellness Policy Model Guideline — Nutrition Education

#### Classroom: Middle-High School

<table>
<thead>
<tr>
<th>Requirements achieved in this lesson:</th>
<th>Basic</th>
<th>Advanced</th>
<th>Exemplary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic, Advanced, and Exemplary</td>
<td>At least 25 percent of nutrition education involves hands-on activities that engage students in enjoyable, developmentally appropriate, culturally relevant, participatory activities.</td>
<td>At least 50 percent of nutrition education instruction involves hands-on activities that engage students in enjoyable, developmentally appropriate, culturally relevant, participatory activities.</td>
<td></td>
</tr>
<tr>
<td>Topic</td>
<td>Importance of drinking adequate water.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### References

Capri Sun image [http://lamar.colostate.edu/~hillger/products/capri-sun.jpg](http://lamar.colostate.edu/~hillger/products/capri-sun.jpg)

### Answer Key

1. Increased thirst, dry mouth, light-headed, fatigue, low urine output, inability to produce tears, dry skin.
2. Seven points total. $3 \times 2 = 6, 2 \times 2 = 4, 10 - 3 = 7$
3. Stomach cramps, nausea, bloating or diarrhea.
4. It plays a vital role in all bodily processes.
5. Water, other beverages, fruits and vegetables.
6. 140
7. $144 - 120 = 24$
8. 8 cups
9. $112 + 104 + 8 = 224$
10. Answers vary.

The author gratefully acknowledges the contributions of Catherine Metzgar (senior in dietetics, graduated May 2010); Kyleen Krehbiel (senior in dietetics, graduated May 2011); reviewed by Lisa Friesen, R.D., Virginia Barnard, MPH; additional review and editing by Erika Bono, MPH, R.D., and Yijing Li, M.S.

Brand names appearing in this publication are for product identification purposes only. No endorsement is intended, nor is criticism implied of similar products not mentioned.

Publications from Kansas State University are available at: [www.ksre.ksu.edu](http://www.ksre.ksu.edu)

Publications are reviewed or revised annually by appropriate faculty to reflect current research and practice. Date shown is that of publication or last revision.

Contents of this publication may be freely reproduced for educational purposes. All other rights reserved.

In each case, credit Tandalayo Kidd, Ph.D., R.D., LPN, associate professor, human nutrition, *What's Your Beverage?*, Kansas State University, November 2013.