

Thirst for Nutrition

Add Value to Your Choices
(Grades 8 to 12)

Overview

This lesson accompanies BC Dairy Association’s tool “Thirst for Nutrition – Add Value to Your Choices”. The tool focuses on common beverages consumed by teenagers and compares their nutrient values. It illustrates and compares the nutritional composition of various beverages. Students learn how to assess their own fluid intake and compare it to the recommended daily fluid intake for their age group. They also set personal goals for improving their fluid intake and developing strategies for overcoming the barriers to consuming optimal fluid intake.

Estimated time: 30-40 minutes

Food Cost: \$15-20 depending on items used and size of class.

Key Concepts

- Canada’s Food Guide says to ‘Satisfy your thirst with water!’
- Students who drink more pop and sweetened fruit beverages have lower intakes of many nutrients, such as calcium, folate, and iron. On the other hand, the consumption of dairy products and flavoured dairy products such as chocolate milk is positively associated with calcium intakes in adolescents.
- Teens need to drink 8 to 11 cups (1.8 to 2.6 litres) of fluids a day according to the most recent recommendations. These needs can be met by a variety of beverages including milk, juices, and water.

Materials

- One or two large trays
- Small cups
- Various beverages (all refrigerated before class)
- Class set of “[Thirst for Nutrition–Add Value to Your Choices](#)” (available from BC Dairy Association)
- Teacher Backgrounder: “ Health Impacts of Teen Beverage Choices”

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Procedure

Learning Activity 1: Which beverage would you choose?

- a. Prepare a tray with small cups filled with different beverages: pop, 100% juice, milk, flavoured milk, fruit punch, sport drink, and water.
- b. Circulate the tray in the class and ask each student to take a cup. Analyze the popularity of each beverage and graph the results.
- c. Ask students what made them choose a certain beverage (i.e. taste, health reason, nutritional content, appearance, peer pressure, media influences...)
- d. Ask students which beverages are nutritious. Refer to the chart in the “Thirst for Nutrition” tool for comparing the nutrient value of the beverage they chose with other beverages. Point out that water does not have nutrients but is essential to life. Canada’s Food Guide recommends drinking water regularly. You can also refer to the teacher backgrounder “Health Impacts of Teen Beverage Choices”.

Learning Activity 2: What did you drink yesterday?

- a. Ask your students: Do you think you are getting enough fluids? How do you know?
- b. Distribute the “Thirst for Nutrition” tool.
- c. Have students check how much they drank the day before and compare it to their recommended daily intake (Steps 1 and 2 of the tool).
- d. If students need to improve their fluid intake, have them make a plan to drink enough fluids for the next day. If they are already meeting their fluid needs, have them make a plan to choose more nutritious beverages (Step 3 of the tool).
- e. Remind students that water is a calorie-free way to quench thirst and to drink more water in hot weather or when they are very active.
- f. Discuss any barriers (personal, social, and environmental) which might prevent them from meeting their plans.

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Extension Activities

Grocery Store Tour

Tour the beverage section of a grocery store and record the various beverages available in the store. What are the factors that influence your choices? (e.g., in-store display, price, peers, nutrition knowledge). Take this opportunity to [explore nutrition labels](#).

Analysis of Health Information

Organize a group of five students. Choose a nutrition pamphlet, handout, website, video tape (see below for suggestions) or select a topic that interests you. Examine critically the information given and analyze it for personal relevance, reliability, and possible biases. Report your findings to the class.

Tip: Check [HealthLink BC for health topics/resources](#)
Check [BC Medical Association's resource Finding Health Information on the Web](#)

Some suggested materials:

- BC Dairy Association resources:
 - [Sport Nutrition – Tips on food intake and fluid replacement for athletes and active individuals](#)
 - [Top 10 Reasons to Drink Milk](#)
- [Eating Well with Canada's Food Guide](#) (available from your local health unit or downloadable from Health Canada's website)

Research Project

Search for and bring back a print advertisement or a TV/radio/web commercial clip of a beverage. Discuss strategies that the food industry and the media use to promote their products and how these advertising strategies influence your choices.

Example: How do soft drink companies influence your choice of beverages? Perform a web quest for articles on food industry/media and food choices or for beverage companies such as Coca-Cola, Pepsi, and Gatorade.

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More information for Teachers

To offset food costs, find out about [mini food grants](#).

Refer to [Kitchen Equipment for your Classroom](#) for more preparation and food safety tips.

Curriculum Links

- Grades 8-9: This lesson supports the Big Ideas and Learning Standards in Physical and Health Education [BC curriculum](#) and can also link to other subject areas.
- Grades 10-12: This lesson supports Big Ideas, Competencies and Content in Applied Design, Skills and Technology, Physical and Health Education and other [BC curriculum](#) areas.

Background

Teenagers need to drink between 8 and 11 cups (1.8 to 2.6 litres) of fluids daily.¹ These recommendations can be met by drinking a variety of beverages, including milk, juice and water.

According to Health Canada, many foods and beverages are sources of water and no one source is essential for normal physiological function and health. Canada's Food Guide promotes water as a calorie-free way to quench your thirst. The Food Guide also advises limiting beverages that are high in calories and low in nutrients. These include fruit flavoured drinks, soft drinks, sports and energy drinks, and sweetened hot or cold beverages.²

Thirst for Nutrition looks at the different types of beverages commonly consumed by teens and compares their nutrition value. These beverages are listed alphabetically. Water does not have nutrients but is a calorie-free way to satisfy your thirst. Other beverages such as milk and chocolate milk are good fluid sources and provide additional nutrients.

Research shows that children and teens who drink more soft drinks and fruit-flavoured drinks have lower intakes of many nutrients, such as calcium, folate, and iron.³ These sweetened beverages often displace the intake of dairy products.⁴

A Harvard study shows that girls in grade 9 and 10 who drink soft drinks regularly have three times the risk of bone fractures compared with those who do not drink pop.⁵

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On the other hand, the consumption of dairy products and flavoured dairy products such as chocolate milk is positively associated with calcium intakes in adolescents.⁶

Sport drinks are also very popular beverages among teenagers, especially during sport events. But plain, cool water is the fluid of choice in most situations. Foods and fluids consumed after practice are excellent sources of carbohydrates and electrolytes (such as sodium and potassium) and replenish the body. Sport drinks are needed to replace energy and electrolytes only when workouts last more than 60 to 90 minutes or when several games occur in a short period of time. An easy recipe for making a homemade sport drink is to dilute equal parts of 100% fruit juice and water, and add a pinch of salt. It is as good as commercial sport drinks and much less expensive!

Vitamin water may come up in your classroom discussion as it is gaining popularity among teens due to its savvy packaging and attractive labeling. Vitamin water is presented by its manufacturers as a healthier alternative to soft drinks that could satisfy certain nutritional requirements for vitamins while providing adequate hydration. The truth is that vitamin water is just distilled water with added sweeteners, artificial flavours and colours and vitamins. It is no better than soft drinks in terms of sugar content and the vitamin levels are not high enough to provide any health benefit. It is also a very expensive source of water.

Energy drinks are another popular beverage choice among teenagers. Aside from its high sugar content, it also contains caffeine, and other substances that may produce adverse health effects. As such, they are also not recommended as beverage choices.

Website Resources

- [BC Dairy Association](#)
- [Dietitian Services at HealthLink BC](#)
- [Dietitians of Canada](#)
- [Why is water so important for my body? How do I know when I'm dehydrated?](#)

Community Resources

- Dietitian Services at HealthLink BC
Call 8-1-1 to speak with a dietitian for nutrition information, counselling and advice.
- Local Health Unit.

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Want to do more nutrition education with your class?

Explore our other [lesson plans](#) or book a [free 1-hour workshop](#).

References

1. Dietary Reference Intakes for Water, Potassium, Sodium, Chloride and Sulfate. National Academy of Sciences, 2004.
2. Eating Well with Canada's Food Guide. Health Canada, 2007.
<http://www.hc-sc.gc.ca/fn-an/food-guide-aliment/index-eng.php>
3. Frary C.D., Johnson R.K., Wang M.Q. Children and adolescents' choices of foods and beverages high in added sugar are associated with intakes of key nutrients and food groups. *Journal of Adolescent Health*. 34(1), 2004, p. 56-63.
4. American Academy of Pediatrics. Soft Drinks in School. Policy Statement. 113(1), 2004, p. 152-154.
5. Cromie W.J. Soda pop increases risk of bone breaks. *Harvard University Gazette* 2000. www.news.harvard.edu/gazette/2000/06.15/soda.html
6. Murphy M., Douglass J., Latulippe M., Barr S., Johnson R., Frye C. Beverages as a source of energy and nutrients in diets of children and adolescents. *Experimental Biology* 2005, Abstract #275.4.