

Using Health Information

Lesson 1.5

Essential Question

How can you locate, evaluate, apply, and communicate reliable health information?



Key Terms

advocate
consumer
Food and Drug Administration (FDA)
health claim
health fraud
health literacy
health promotion
lifelong learning
pseudoscience
science

Learning Outcomes

Look for the skills icon  to practice health skills.

After studying this lesson, you will be able to

- 1.5-1 explain how to locate reliable sources of health information.
- 1.5-2 use criteria to evaluate whether a source of health information is reliable.
- 1.5-3 apply reliable health information to make healthy decisions.
- 1.5-4 communicate health information with your family and the community.

Reading and Notetaking Activity

Draw a cartoon for one of the key terms. The cartoon should express the meaning of the term. After you finish drawing, find a partner and exchange cartoons. Take turns explaining to each other how your cartoons show the meaning of the term you chose.



Warm-Up Activity

Can You Trust This Website?

Access Information Using online resources, search for information about a health topic. Use a variety of different words and phrases. When you use different search terms, do you get different results? Review the list of results. What are some signs the websites listed have a slant, false information, or bias? credible information? Read the information on a few of the websites. Which websites can you trust? Why?

1.5-1 Locating Health Information

What is the best way to control asthma, muscle cramps, or acne? How can you better manage the stress in your life? How can you help a friend with an eating disorder? Do you know how to find good, reliable answers to these questions? You would not want answers based on rumors or unreliable sources of information.

Health literacy is the ability to locate, evaluate, apply, and communicate information related to your health. It is an important skill for promoting health and wellness. How can you make healthy decisions if you do not know how decisions will impact your health? Your health literacy

health literacy ability to locate, evaluate, apply, and communicate information pertaining to health

builds on the basic facts you learn at home and in school. What you learn helps you make informed, healthy decisions. Your health and wellness also depend on your ability to access and use reliable information.

Websites, newspapers, magazines, TV, and radio shows share health-related information. While some information is true, some is not. By locating reliable sources for health information, you can avoid inaccurate information. You will also avoid information that is misleading or too good to be true. You will find health information that is applicable to your situation (Figure 1.5.1).

You can use the internet to find reliable health information. You will see several websites when you search online, but not all of this information is reliable. In general, you can find reliable information through organizations that provide education, research, or direct healthcare. URL stems for reliable sources include .gov, .edu, and .org.

Business websites are often not trustworthy. The main goal of business is to earn profits. Businesses use marketing and advertising to influence people to use their products. An advertisement might use scientific words to make a product seem science-based, when it is not.

The image shows a screenshot of the MentalHealth.gov website's 'About Us' page. The page content includes the site's mission statement, target audience (general public, professionals, policy makers, etc.), and a list of content providers (Centers for Disease Control and Prevention, MedlinePlus, NIMH, SAMHSA, and Youth.gov). The page also shows a 'Last Updated' date of 06/21/2017. Several callout boxes with green borders point to specific parts of the page, each containing a question or tip for evaluating the website's reliability.

Does the URL end in .gov, .edu, or .org? Websites with URLs ending in .net or .com are less likely to contain reliable, health-related information.

If there is an author, is the author an expert in the field? You can usually find the author's name at the top of an article. To determine if the author is an expert, note the author's credentials and degrees and research the author's other work online.

Does the website or article cite the sources for all statistics, data, and health claims?

What is the sponsor's goal in creating the website? Some websites contain mission statements that outline the goal of the information presented.

Do all links lead to active websites? Broken links (links to content that has been removed) indicate that information is outdated or unreliable.

When was the website created and last updated? A website's header or footer should list its publication and update dates.

Are advertisements on the website clearly identified? If it is easy to confuse the content on the website with advertisements, this indicates the information might be biased.

Is the sponsor of the website a respectable, credible organization or individual? A website's header or footer should list the organization or individual sponsoring the site.

Mentalhealth.gov

Figure 1.5.1 The “About Us” page on a health website is often a great place to evaluate that source. *Can some of these tips also help you evaluate printed sources? Explain.*

Health in the Media

Analyzing Health Advertisements

The goal of advertising is to promote products and services. Advertisements try to convince people a product is important and necessary. Some advertising

strategies try to influence your emotions. Part of applying health information is seeing through these strategies and making an informed decision.

Bandwagon	Appeal to Authority	Scare Tactic	Unproved or Unprovable Claims	Testimonial
XYZ is trending! Don't be the last to try it!	I prefer using XYZ when I compete.	Take XYZ or you could get sick!	Using XYZ will improve your study skills and grades!	Use XYZ and you could be like me.
A popular product is not necessarily a good product and might not be right for your needs. Owning a popular product does not make you popular too.	Experts are paid to appear in the advertisement. They might have no experience with the product.	Your decision not to buy a product will not cause bad consequences. Advertisers do not know if you need their product.	Evidence and scientific studies back reliable claims. Vague, unspecified claims cannot be proved.	Companies pay celebrities or other people to be in advertisements. These people may not like or even use the product.
Popularity is not a good reason to buy any product.	Do not be influenced by the opinion of a person appearing in an advertisement.	Do not be scared or intimidated into buying a product.	Be suspicious of claims that do not make sense, are not specific, or are not measurable.	Know that success does not depend on any product, and be skeptical of people appearing in advertisements.

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Practice Your Skills

Analyze Influences

With a partner, reflect on the strategies for marketing and selling products. Choose one strategy discussed and complete the following steps:

1. Tell your partner why you think the strategy encourages people to buy a product or service. How can people resist the message and make good, informed decisions?
2. Reflect on your own experiences. Have you ever bought a product or service

because of an advertisement? Why did you buy it, and were you happy with your decision?

3. Suppose you see an advertisement for a new health product or service. Make a short how-to video about how you will decide whether to buy the product or service. Describe how you will use the advertisement in your decision-making and how you will gather any information you need.

Advertising might exaggerate the benefits of certain products and play down negative information. Organizations promoting a certain cause may only share information that supports its cause.

You should also be careful about trusting information from nonexperts such as celebrities. Famous people are often paid to advertise and promote health products, even though they are not science and health experts.

Newspapers and magazines, whether printed or online, can be good sources for health information. The size or popularity of a newspaper or magazine is not a good marker of reliability. Avoid news and magazine articles written by businesses that manufacture or sell products. Newspapers and magazines from businesses that earn healthcare profits are not reliable. Reliable articles are written by experts and confirmed by other, reliable sources.

When in doubt, ask your school's library media specialist about a reliable media source. Library media specialists find and evaluate sources, so you can rely on their advice. Using a library and working with a library media specialist to find health information makes sure your sources are reliable.

One of the most reliable ways to get health information is to ask your doctor or another healthcare professional. Your doctor can give you scientifically accurate information about your health and answers to your questions. Talking with your parents, guardians, or another trusted adult can also help you learn more about health.

science body of knowledge based on observation and experimentation; answers questions about the natural world

1.5-2 Evaluating Health Information

“Get six-pack abs in two weeks!”

“You’ll catch a cold if you go outside with wet hair.”

“The bumps on your skull reveal your character.”

“Cell phones cause brain cancer.”

“Caffeinated energy drinks will make you perform better on exams.”

These are some of the health claims in magazines, websites, the media, and advertisements. Science supports none of these claims. If you act on these claims, you could waste money and time and harm your health.

Health and wellness are science-based disciplines. Your health and wellness depend on reliable information. You need to separate scientific information from health claims based on rumor, folk stories, and pseudoscience.

Science is a body of knowledge based on observation and experimentation (Figure 1.5.2). Science answers questions about the natural world. This includes the human body, health, and diseases.

Peer-reviewed

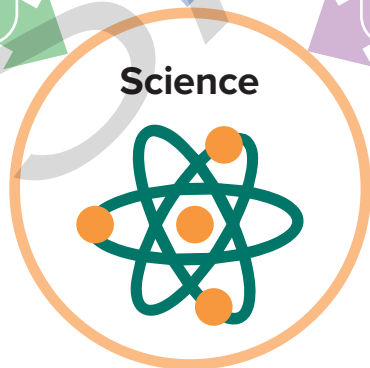
- Published in scientific journals following careful scrutiny by qualified scientists

Repeatable

- Confirmed by other scientists who conduct the same experiment

Based on experimentation and observation

- Backed by a significant amount of scientific research



drvector/Shutterstock.com

Figure 1.5.2 Health-related information that does not meet these criteria is not grounded in science. *What is the name for theories and health claims that are not science-based?*

In contrast, **pseudoscience** is theories and health claims that are described as science-based when they are not. Pseudoscience is not based on repeated experimentation. Other scientists cannot verify it, and scientific journals do not publish it. Pseudoscience is not peer-reviewed and is too good to be true.

pseudoscience theories and health claims that are described as science-based when they are not

When evaluating health information, ask yourself the following questions. They can help you know if the information is scientifically and medically accurate:

- Is the source reliable?
- Is the information current?
- Does the information apply to my life stage and situation?
- Does the source have a bias? Is the source making money or promoting a cause?
- Does the article refer to research published by medical scientists?
- Does the article give the names of the researchers and the journal with the original research?
- Can you find other reliable sources with the same information?

Evaluating health information is a process. Researchers constantly learn new information about the human body and health. Health information is constantly changing. Keeping up with it is an opportunity to engage in **lifelong learning** (Figure 1.5.3).



Figure 1.5.3 Learning can occur outside a formal environment like a school or workplace. Lifelong learners take information when and where they can throughout their lives.

lifelong learning practice of always trying to gather new information and learn new skills

1.5-3 Applying Health Information

Your health and wellness need your attention. There is a cause-and-effect relationship between some of your actions and health. For example, ignoring health information about diet can result in poor nutrition. Not following precautions for fitness equipment can lead to injury. You can avoid these effects by applying health information.

Reliable health information can guide how you choose and evaluate health services and products. Examples include medications, supplements, and hygiene and cosmetic products. You can use health information to find what products and services you need and how effective they are.

Health Products and Services

A **consumer** is someone who buys goods and services. You are a consumer. The informed consumer has knowledge and skills to make good decisions about health products and services.

consumer anyone who purchases goods and services

Consumers have rights and responsibilities. Consumer rights include the right to be safe from harmful products and deceptive business practices and to have complaints addressed. Regulations and laws protect these rights. For example, truth-in-advertising laws require advertisements and labels to be accurate and not misleading.

The US **Food and Drug Administration (FDA)** regulates the safety of food, health products, and medications. Consumer responsibilities are reasonable expectations for consumer actions and decisions. For example, consumers should learn about products and use them as directed.

Food and Drug Administration (FDA) federal organization that regulates and ensures the safety of food, health products, and medications

Research in Action

Debunking Health Claims

The internet, social media, and advertising spread health claims quickly. Sometimes they even appear on product labels. When you see health claims, you need to find out: are they true or false?

Are the products and behaviors advertised real or fake? Useful or useless? Safe or dangerous? Reliable health information, based on scientific research can help you confirm or debunk health claims.

Health Claim

What Research Says

False

Vaping is not harmful.

Vaping devices often contain more nicotine, which is highly addictive, than cigarettes. Nicotine harms the developing brains of teens and children. It impairs learning, memory, and attention and increases the chance teens will smoke. Vaping aerosol contains toxic chemicals that can cause lung damage.

False

Short-term detox diets remove toxins from the body and promote weight loss.

Short-term detox diets are fad diets. There is no evidence they work as promised, and they can lead to dehydration, mineral deficiencies, and malnutrition.

False

Energy drinks improve energy and concentration.

The caffeine in energy drinks may temporarily increase energy, but these effects wear off quickly. Energy drinks contain a large amount of caffeine and other stimulants. These increase heart rate and blood pressure and cause irritability and insomnia. Energy drinks also contain large amounts of sugar and can cause weight gain.

False

Diet soda is a healthy alternative to regular soda.

Diet soda contains less sugar than regular soda, but it is still not a healthy choice. Diet soda has no nutritional value and still increases a person's risk for cardiovascular disease and diabetes.

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Practice Your Skills

Access Information

In small groups, consider and evaluate the following health claim: Eating fat-free or nonfat food helps you lose weight.

1. In your group, research online, print, and other sources with information about this topic. Make a list of four credible sources to evaluate this health claim. The list may include websites, books and articles, trusted experts, and other sources.

2. With your group members, analyze why you selected these sources. What makes them credible? Why should you rely on them?
3. Discuss any possible weaknesses of the sources you chose. Why are they weaknesses? How do they impact the reliability?
4. According to the sources you chose, is the health claim true or false? Explain and cite your sources.

health claim a statement that a product can diagnose, treat, or prevent a specific disease or disorder

When choosing a health product, pay attention to health claims. A **health claim** is a statement that a product can diagnose, treat, or prevent a specific disease or disorder. The FDA reviews and approves health claims in product labels and advertisements. If a health claim is not FDA approved,

it should read, “This statement has not been reviewed and approved by the FDA.” This tells you the FDA did not review studies of the product’s safety and effectiveness. This product may not work and might be harmful. The FDA does not review health claims for dietary supplements.

The best way to choose a health product is to compare different brands and types of products (**Figure 1.5.4**).

Begin by knowing your health needs or questions. Research alternatives, compare services, and decide which service best meets your needs. You may consider cost, convenience, and reviews. For routine healthcare, visit your doctor or primary healthcare worker. If you need healthcare quickly for a serious illness or injury, go to an urgent care, immediate care, or emergency room (ER).

Consumer Issues

Sometimes people are unhappy or have issues with health products or services. To address these issues, always save receipts from your purchases. If you have a complaint, contact the business, store, or healthcare facility. Politely state the issue and how you would like it handled. If your issue remains, ask to speak with a manager. You can also contact organizations that work on solving consumer complaints.

Health fraud is illegal activity related to health products and services. Common examples include:

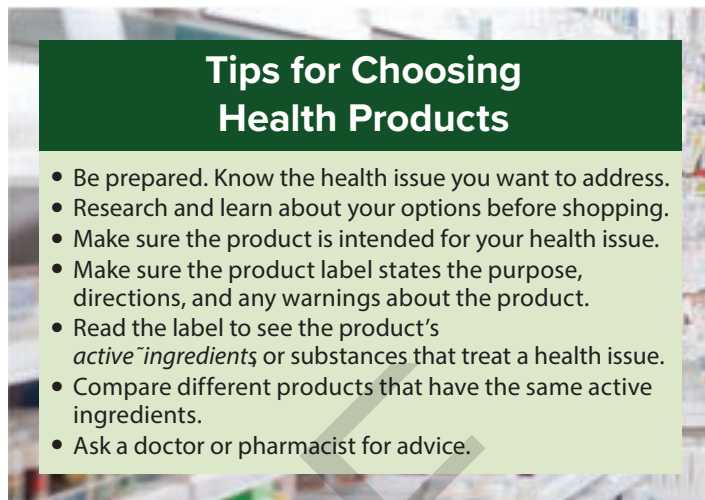
- a product with false health claims
- fake, ineffective medical devices
- intentionally mislabeled medications
- misleading or deceptive advertisements
- ineffective, unproven treatments
- health services from someone without a medical degree and license

1.5-4 Communicating Health Information

You can **advocate** for, or support, the health of your family and community by sharing health information. This is called **health promotion**. For example, if your parents smoke, consider encouraging them to quit. Research the health risks of smoking and present the information. Support their effort to quit.

Help your family find health information. If your family members have questions about a health-related topic and do not understand English, research the topic and translate the information you find.

You can also advocate for community health. Suppose your state has a high rate of obesity. Learn about public health services and write to your elected officials about supporting a healthy eating program. On a local level, start a fitness club at school. Attend community meetings and speak about health issues that concern you. Health promotion can apply beyond your local community (**Figure 1.5.5**).



Tyler Olson/Shutterstock.com

Figure 1.5.4 Evaluating health products can make sure they are safe and will be effective for you. *What organization regulates the safety of food, health products, and medications?*

health fraud illegal activity related to health products and services; for example, deceptive labeling or advertising

advocate to take actions that show support

health promotion process of advocating for the health of families and communities by sharing health information

The Wider Scope of Health Promotion

The government should...

- factor in public health when making policies regarding unhealthy or harmful products, air and water pollution, and safety regulations
- provide people with the opportunity and security to make healthy choices

Schools and communities should...

- teach health literacy to help people understand and make healthy choices
- be a safe environment for people to live and learn

Institutions and organizations should...

- raise awareness of and demand health services and resources
- engage in intentional dialogue with the public to facilitate change

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Figure 1.5.5 Organizations such as local, state, and federal governments; schools; corporations; and community establishments promote health for the public.

Lesson 1.5 Review and Assessment

Summary

- 1.5-1** To locate health information, use the internet, talk to a professional, or visit a library. Reliable websites contain .gov, .edu, or .org in the URL and have expert authors and current information.
- 1.5-2** Credible health information is based in science, which is repeatable. This means other sources should confirm what one source says.
- 1.5-3** To apply health information, analyze advertisements critically, read labels on health products, and comparison-shop when choosing health products and services.
- 1.5-4** Communicating health information is a form of health promotion and advocacy.

Comprehend Concepts

1. Which URL stem does *not* indicate that a source is probably reliable? (1.5-1)
 - A. .com
 - B. .org
 - C. .edu
 - D. .gov
2. Scientific information is (1.5-2)
 - A. repeatable
 - B. based on experimentation
 - C. peer-reviewed
 - D. All of these.
3. A product with a false health claim is (1.5-3)
 - A. reliability
 - B. health fraud
 - C. science
 - D. advertising
4. Sharing health information to help others is an example of (1.5-4)
 - A. advocacy
 - B. decision-making
 - C. goal setting
 - D. health claims

Critical Thinking Skills

1. With a partner, discuss whether websites and the media should be required to only share verified health information. Should websites that share false information be punished somehow? Explain.
2. Make a short list of your own standards for evaluating the reliability of health information. Analyze a website of your choice using this list.
3. What factors can make it difficult to comparison-shop for health products and services? What steps can people take to overcome these factors?
4. Imagine your older sibling is very depressed and has stopped completing homework. Your older sibling says treatment is not an option because your family does not have the money. How could you use health promotion to help your sibling?



Health and Wellness Skills

1. **Access Information** Compare two websites with information about a health-promotion strategy or product. For example, you could research dieting, physical activity plans, or energy drinks. Compare one website supported by a reliable organization to a website sponsored by a for-profit company. How do these websites differ? Which is more reliable? Do you notice any pseudoscience? Write a brief summary analyzing the reliability of each website.
2. **Access Information** Visit the website of the Centers for Disease Control and Prevention (CDC) and explain whether this source is reliable. Give examples of things that mark its reliability. Then, on the CDC website, research the leading causes of death among teens and adults. What are the top three causes of death in each age group? What information did you find that might explain these differences?