What Can I Trust?
Evaluating Heath Information

Health 102
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The Queen's University Library homepage is the gateway to the Library's collections and research tools.

Quick links to Search Tools, Types of Information, and library guides to Subjects & Courses.

Summon: the Library's Discovery Tool that allows you to search the QCAT and many of our electronic resources from a single search box.

QCAT: The Queen's Library catalogue
Evaluating Sources

• Evaluating your sources is a crucial step in the research process.

• You should evaluate each source (for example, articles, news stories, websites) to determine its relevance, accuracy and purpose.

• The most trustworthy health information is based on scientific research.

• Anyone can create a webpage so it is particularly important to analyze and assess information that you find on the Internet before including it in a research paper.

*Critically evaluating the information you find is central to successful academic research.*
Assessing the Quality of Health Information Sources

• There are a number of approaches for evaluating health-related information.

• The CRAAP Test is a list of questions to help researchers evaluate sources of information.

• It is a tool to help you think critically about the quality of health information.

• Evaluation criteria includes:
  – Currency: The timeliness of the information.
  – Relevance: The depth and importance of the information.
  – Authority: The source of the information.
  – Accuracy: The reliability of the information.
  – Purpose: The possible bias in the information.
Currency

The timeliness of the information

- **When was the information published or posted?**
  - Topics such as health or the sciences require current information.
  - Web pages should include the date the information was posted.

- **Has the information been revised or updated?**
  - The date of the last revision is usually at the bottom of the home page.
  - Be cautious when a website does not list any date for when the information was posted or last updated.
Relevance

Ensuring the information meets your needs

• Evaluation should take place in the context of your research task. What do you need? Are you browsing for new ideas or trying to find evidence to support a position?

  – Is the information relevant to your topic or does it answer your research question?
  – Does this source provide the kind of information that I need? For articles, read the abstract and conclusion.
  – Who is the intended audience?
  – Is the information at an appropriate level?
Authority
The source of the information

- Who is the author/publisher/source/sponsor of the information?
- What are the author's credentials?
  - Credentials are the author’s institutional affiliation, educational background, past writings, or experience.
- Is the source written on a topic in the author's area of expertise?
- Is the author's name cited in other sources or bibliographies?
- Is the author associated with a reputable institution or organization?
- Is the information reviewed by experts in the field?
Authority: Websites

• Who administers the website? Is it an individual or an organization?
  – If it is an organization, what type? For example, commercial, educational, government agency, or non-profit organization?
  – Look for links that say, about us, about this site, or contact us. Reliable health-related websites should make it easy for you to learn who is responsible for the site.
  – Is the organization recognized in this field of study?
• Is there a process for selecting or approving information on the site? An editorial or selection policy? Is the information reviewed before it is posted?
Does the URL reveal anything about the author or source?

The web address can provide additional information about the type of site and the author/sponsor’s intent.

.ca usually indicates a Canadian not-for-profit, government department (.gc.ca, .ontario.ca) or university/college (queensu.ca, stlawrencecollege.ca)
.com or .biz usually means the site is run by a commercial (for-profit) or private source
.edu indicates that the source of the information is part of an American educational system (such as a college or university)
.gov indicates a U.S. government agency or department
.org usually indicates a U.S. not-for-profit
.int indicates an international organization
Accuracy
The reliability of the content

Accuracy or verifiability of details is very important.

- How is the information documented? Facts and statistics should have references.
- Is the information supported by evidence? Can it be verified by another source?
- If you are using information from a website, does it give references to articles in medical or health journals or other sources to support its health information?
- If the information cites or links to other sources, where does this information come from?
- How was the data gathered?
- Are there spelling, grammar, or other typographical errors?
- Has the information been peer reviewed or refereed?

Reputable websites will list references from scientific journals that support the information included on the website.
Purpose

Why the Information Exists

• It is important to understand the purpose of the source as you consider its value for your assignment.

• Why the author has written about the topic and the nature of the information will help you determine if it fulfills your research requirements.

• To determine the purpose of a source, ask:
  – Is the purpose of this information to inform, to explain, to entertain, to persuade, to sell?
  – Is it a balanced presentation of information?
  – Is there a particular point of view or an ideological, political, institutional or personal bias?
  – Is the information fact, opinion or propaganda?
  – Is the information aimed at a specialized or a general audience?
Purpose: Websites

Purpose is often related to who administers the website or who writes or publishes the information.

• Do the authors/sponsors make their intentions or purpose clear? In most cases, this information can be found by clicking on “About This Site” or “About Us.”
• Who provides the funding for the website?
• If there is a sponsor or if the author is affiliated with a specific organization, how does that affiliation relate to the content?
• If a website about the treatment of a particular disease recommends only one drug by name, it may be that the website is sponsored by the drug company.
• What kind of advertising content, if any, is on the website?
  Some reputable websites have advertisements. However, advertisements should be labeled as "Advertisement" or "From our Sponsor."
Going Beyond the CRAAP Test: Organization/Layout/Interactivity

Website design does not affect the quality of the content however it can have an impact on the delivery and use of the information.

• Is the site logically organized for easy navigation?
• Is there ability to search for information on the site?
• A good website should include a feedback mechanism for users to offer comments, corrections and raise questions.
• Is the order of the material clear and easy to find?
• Is there a table of contents?
• Are there links to other pages? Are these links functional?
Example of a Credible Website

Health Canada

**Authority:** The author/publisher is Health Canada, Government of Canada.

**Currency:** Provides a publishing date and is current.

**Purpose**

**Relevance**
Death by sugar
How the sweet killer is fuelling the biggest health crisis of our time

Author is an award-winning journalist.

Even the rising Alzheimer's epidemic could be linked, at least in part, to our modern diets. Suzanne de la Monte, professor of neurosurgery at Brown University, suggests that Alzheimer's might be a form of insulin resistance in the brain—a "Type 3 diabetes," as she calls it. Insulin, she explains, is "the master hormone" throughout the body, including in the brain, where it plays a crucial role in plasticity, and stimulates brain cells to take up and metabolize glucose for energy. While Alzheimer's does have a genetic component, "you can't really explain this soaring increase in Alzheimer's disease on the basis of genes alone," de la Monte says. "It has to be the environment, because we've changed the environment and what we eat so drastically."

Still, there's a rolling debate among scientists about whether the fructose in sugar really is the devil that Lustig and others make it out to be. Dr. John Sievenpiper, a scientist at St. Michael's Hospital's Li Ka Shing Knowledge Institute in Toronto, has published a series of papers concluding that excess calories from fructose aren't any worse from other sources. He believes science doesn't justifiably recommending a daily limit for sugar consumption: "I don't care if it's five grams or 100 grams," says Sievenpiper. "If it's providing excess calories, it's a problem."

Following its public consultation, the WHO is now finalizing its updated guidelines on sugar. Earlier this year, Health Canada launched a public consultation of its own: one aimed at improving our country's nutrition labels. Many will be watching to see what is said about sugar. For now, though, that space on every nutrition label in the country remains troublingly blank.
Compare these two health articles

**Turmeric Health Benefits: How Can This Powerhouse Spice Help With Inflammation**

The Huffington Post Canada | By Brian Pang

Nutritionist and author of *Meals That Heal Inflammation*, Julie Daniluk, suffered from arthritis, bursitis and colitis: all conditions rooted in painful inflammation.

But Daniluk says she was able to push her symptoms into remission thanks to a few dietary changes. Along the way, she discovered a powerhouse spice called turmeric.

Now she sneaks it into everything from dips to smoothies.

Turmeric contains a powerful antioxidant called curcumin. The compound lowers the levels of two enzymes in the body that cause inflammation, according to the Medical Center at the University of Maryland but that’s just scratching the surface, says Daniluk.

**Source:** The Huffington Post Canada
Should you trust a reference source that can be edited by anyone?

Wikipedia is one of the most accessed sources of health information online.

Wikipedia articles can be written and edited by anyone and therefore are works in progress.

For some subjects, Wikipedia may be useful for:
• Providing an overview of a topic;
• Finding current information in fields that are rapidly changing;
• Becoming familiar with terminology or key words; and
• Finding additional sources through the references and cited works links.

• Primary and scientific sources found in scholarly journals and trustworthy websites are the best sources of health information.

Never cite Wikipedia in an academic paper.

For more information, refer to Wikipedia's page on Researching with Wikipedia.
“We advise special caution when using Wikipedia as a source for research projects. Normal academic usage of Wikipedia and other encyclopedias is for getting the general facts of a problem and to gather keywords, references and bibliographical pointers, but not as a source in itself. Remember that Wikipedia is a wiki. Anyone in the world can edit an article, deleting accurate information or adding false information, which the reader may not recognize. Thus, you probably shouldn't be citing Wikipedia. This is good advice for all tertiary sources such as encyclopedias, which are designed to introduce readers to a topic, not to be the final point of reference. Wikipedia, like other encyclopedias, provides overviews of a topic and indicates sources of more extensive information. See researching with Wikipedia and academic use of Wikipedia for more information.”

“If you do decide to cite Wikipedia, remember that its articles are constantly changing: cite exact time, date, and version of the article version you are using. Page history and toolbox features "cite this article" and "permanent link" are very useful for finding that information.”
Understanding Health News

• The media is one of our main sources of information regarding health.

• News stories about health-related issues are found on websites, social media, newspapers, blogs and magazines.

• It can be difficult to know whether a news source is misleading or missing important information unless you read the original sources or scientific studies used for the news story.

• Newspapers and magazines are not considered scholarly sources of information.
• Media reports about new medical research findings sometimes give conflicting information.

• You may read that a food prevents disease or certain behaviours have negative health effects, and later read a conflicting news report.

• Consider the source of the information and apply the CRAAP test.

• Conduct more research.
  – Using cues from the source of information, locate the original study/research.
  – Find additional studies on the topic. Do they support or conflict with the source information?

The Acai berry is very high in Vitamin C and ellagic acid, an immune-system-boosting combination that has been shown to suppress the growth of cancer.
Fake News

• Fake news is completely made up, manipulated to resemble credible journalism and attract maximum attention.

• Fake news:
  – Is often hosted on websites that follow design conventions of the online news media.
  – Is often biased information used to promote or publicize a particular political cause or point of view.
  – Can be found through social network services such as Facebook and on the Internet.

‘Of All the Categories of Fake News, Health News Is the Worst’

The Atlantic, Julie Beck, June 25, 2017
How to Identify Fake News in 10 Steps

Select "Yes" or "No" to the following questions. The more thumbs-down icons you select, the more likely the news article is fake.

1. **Do a Visual Assessment**
   - Assess the overall design. Fake news sites often look amateurish, have lots of annoying ads, and use altered or stolen images.
   - Overall, does the news article and website seem high quality? [Yes] [No]

2. **Identify the News Outlet**
   - The Wall Street Journal and CNN are examples of news outlets. If you haven’t heard of the news outlet, search online for more information.
   - Is the news outlet well known, well respected, and trustworthy? [Yes] [No]

3. **Check the Web Domain**
   - Many fake news URLs look odd or end with ".com.co" or ".io" (e.g., abcnwes.com.co) to mimic legitimate news sites.
   - Does the URL seem legitimate? [Yes] [No]

4. **Check the "About Us" Section**
   - Trustworthy news outlets usually include detailed background information, policy statements, and email contacts in the "About Us" section.
   - Does the site provide detailed background information and contacts? [Yes] [No]

5. **Identify the Author**
   - Fake news articles often don’t include author names. If included, search the author’s name online to see if he or she is well known and respected.
   - Does the article have a trusted author? [Yes] [No]

6. **Identify the Central Message**
   - Read the article carefully. Fake news articles often push one viewpoint, have an angry tone, or make outrageous claims.
   - Does the article seem fair, balanced, and reasonable? [Yes] [No]

7. **Assess Spelling, Grammar, and Punctuation**
   - If the article has misspelled words, words in ALL CAPS, poor grammar, or lots of "I'll," it’s probably unreliable.
   - Does the article have proper spelling, grammar, and punctuation? [Yes] [No]

8. **Analyze Sources and Quotes**
   - Consider the article’s sources and who is quoted. Fake news articles often cite anonymous sources, unreliable sources, or no sources at all.
   - Does the article include and identify reliable sources? [Yes] [No]

9. **Find Other Articles**
   - Search the Internet for more articles on the same topic. If you can’t find any, chances are the story is fake.
   - Are there multiple articles by other news outlets on this topic? [Yes] [No]

10. **Turn to Fact Checkers**
    - FactCheck.org, Snopes.com, PolitiFact.com are widely trusted fact-checking websites.
    - Do the fact checkers say the news story is true? [Yes] [No]

Based on your research, do you think the article is more likely to be true or false? Explain.
Resources on Evaluating Information

Queen’s Library’s guide to *Evaluating Sources Checklist*.

Health Information

- **Evaluating Internet Health Information** (National Library of Medicine)
- **Medline Plus Guide to Healthy Web Surfing**
Scholarly vs. Popular Writing

• Articles in **scholarly journals** are a critical source of authoritative information, as they contain the results of original academic research or experimentation.

• **Scholarly Journals**
  ✓ Report on original research or experimentation.
  ✓ Have articles that are written by a scholar/expert in the field.
  ✓ Have articles that use the terminology and language of the covered subject.
  ✓ Have articles that are footnoted and/or have a bibliography.
  ✓ Are generally published by a professional organization or a scholarly press.

**Distinguishing Scholarly Journals from Other Periodicals**
Popular Works such as magazines and newspapers:

- Are written for the general public.
- Are written to inform, entertain, sell products or promote a point of view.
- Often avoid specialized terminology of the field.
- Do not have bibliographies.
- May be written by authors who have no expertise on the topic.
- Often leave out some important information.
• One way researchers try to ensure the legitimacy of their work is to have it peer reviewed prior to publication.

• **Peer Review** is the evaluation of scientific or academic work by others working in the same field.

• A peer-reviewed or refereed journal is one in which manuscripts submitted by authors are reviewed by experts on the topic before being accepted for publication in the journal.

• Only articles that meet good scientific standards are accepted for publication.
  – For example, articles that acknowledge and build upon other work in the field, rely on well-designed studies and substantiate claims with evidence.
What is a Citation?

- A citation is a reference to a source that enables readers to identify it.
- Citations usually include the author, title, name of book or journal and volume (for articles) publisher, date and other identifying information.

For example:

Choose a Citation Format:

<table>
<thead>
<tr>
<th>APA (American Psychological Assoc.)</th>
</tr>
</thead>
</table>

Format preview


Article Title

Journal Title

Volume and Issue Number

Portland State University Library shows how to [read a citation](#) to determine if it is a book, book chapter or journal article.
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• The **Health Studies liaison librarian** is available for research consultation and can help you design research strategies, access key databases, and effectively use the information resources of Queen's University Library and beyond.