

Evaluating Health Information on the Internet

Zonal Health Information Committee
Central Zone Public Health Unit
Public Health Services
Queensland Health
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Health related websites are frequently used by members of the public and health professionals. Almost 100 million American adults regularly seek online information about health care and over 100,000 sites offer health related information¹. Excellent search engines such as Google (www.google.com) can pluck material from more than 2 billion online pages. Information is widely and rapidly available but large amounts of it is not reviewed for scientific accuracy.

The British Library and the University of Oxford 1997 developed the DISCERN questionnaire (www.discern.org.uk) which was initially developed for use with consumer health information in conventional print media, but may also be a useful tool for assessing a broad range of consumer health information on the internet.

NETSCORING (www.chu-rouen.fr/netscoring/netscoringeng.html) provides a more academic means of scoring websites according to a variety of criteria including credibility, content and design.

There are manual or automatic filters that evaluate websites. For example, OMNI (<http://omni.ac.uk/>) contains health and medical Internet resources that have been hand selected and quality evaluated by a detailed and useful evaluation process described at <http://biome.ac.uk/guidelines/eval/howto.html>

Health professionals are often presented with Internet information from members of the public or are asked by them about interpreting information. The following Fact Sheet is to enable members of the public to appraise health information on the Internet. It is mostly taken from <http://www.cdc.gov/od/nvpo/tips.htm>. Some is from QUICK (QUality Information CheckList) (www.quick.org.uk) which is a simple but very good site designed for children to check health information.

The following information can be used when dealing with enquiries. The tips are from <http://www.cdc.gov/od/nvpo/tips.htm> with minor changes and additions.

1. The ownership of the site, the aims of the site and who wrote the information should be clear.

Is the name of the organisation or individual posting the information in clear view? A good web site will tell you who it is for, what it is about and what it is trying to do. Look for highlighted text that tells you more about the author of the site. In some programs the ownership can be found by clicking 'View' and then 'Document Source' or 'Document Information.

2. The information provided should be based on sound scientific study.

Scientists discover truth by testing their findings repeatedly, to be sure that their thinking and methods are not flawed, influenced by their own assumptions, or marred by special circumstances. Studies with hundreds of participants or cases bear more weight than descriptions of a single case. The most useful studies compare the findings in one group of people or cases with the findings in another group (*control groups*). A mark of sound scientific study is the findings are endorsed by groups or institutions dedicated to science, such as professional associations or universities.

3. The information on the site should be able to be checked.

Are clear references given for statements on the website.

4. The site should carefully weigh the evidence and acknowledge the limitations of the work.

What does the *weight* of the evidence indicate? If conclusion #1 is found in three studies, but conclusion #2 is found in 30 studies, which is more likely to point to truth? Be wary of people who proclaim that they, and only they, have discovered the "hidden truth." The scientific approach takes time, and often, answers are slow in coming or don't come at all.

¹ Wilson P. How to find the good and avoid the bad or ugly: a short guide to tools for rating quality of health information on the Internet. *BMJ* 2002; 324: 598 – 602

This can be very frustrating if the answers will have an impact on our--or our children's health and well being. Solid researchers, however, are not afraid to address the weaknesses as well as the strengths of their findings. To say that the findings were inconclusive, or to say that additional research is needed before any conclusions can be drawn. A scientifically sound web site will reflect these circumstances.

5. Beware of "junk science" and suggestions of "conspiracies."

The hallmarks of junk science are hasty, and often sensational, claims that other scientists have not seen, reviewed, or verified. Media attention does not necessarily mean a claim is true. 'Conspiracy' theories often offer a quick and exciting answer to a puzzle. If the pieces of 'evidence' are taken apart do they really fit together again? Is this the most likely and reasonable explanation for the findings?

6. The individuals or group providing the information should be qualified to address the subject matter.

Are the author's qualifications and position able to be verified? Beware of information attributed to unnamed 'noted researchers' or 'world-renowned scientists'. A researcher who has done good, solid work would insist that his or her name be attached to that work, even if it's controversial. Who stands behind the information? What educational background do they have that relates to the health topic area? What other work have they published, and where? Is this publication, or their other publications, available in peer-reviewed journals. If you want to see what other publications they have in peer-reviewed journals look their name up in PubMed at www4.ncbi.nlm.nih.gov/PubMed/

7. Arguments should be based on facts, not conjecture.

Beware of sites that mix fact with fantasy, without distinguishing between the two. As with junk science, the resulting 'theories' can be sensational but are not scientifically sound.

8. The motives of the site should be clear.

Is the site biased? Is the site a sales and promotional device? There is nothing wrong with selling books or enlisting you in a cause, but motives should be clear.

9. The information provided should make sense.

If it's too good to be true ('Rub peanut butter on your knees and you'll never have cancer!') or too awful to be true ('Millions die when injected with vaccines!') then it probably isn't true.

10. One sign of a scientifically sound Internet site is that it contains references from and to recognised peer-reviewed publications.

Major peer reviewed journals can be checked at PubMed at www4.ncbi.nlm.nih.gov/PubMed/

11. Is the site up-to-date?

If it is an old site, it may have not included recently available information that may affect the statements made on the site.

12. The site should indicate the choices available to you.

Is the site giving you the full story on the options. For example if it is about vaccination does it provide information on the risks of being unvaccinated as well as the risks of vaccination.

13. You should be able to obtain additional information if you need it.

Is an email or postal address, or a telephone number provided for further information? Is a reading list or source list provided? Is the reading available through a public library, or is the list a source of income for the site owner?

Further Information

Information on site addresses and content is subject to change.

A very good site designed for children to check health information is QUICK (Quality Information Checklist) at www.quick.org.uk. Information is also available at www.immunizationinfo.org/parents/evaluatingWeb.cfm. The Royal Society of Medicine in the UK has produced 'The Patient's Internet Handbook' (1992) which provides excellent information on using the Internet, evaluating information and many (mainly UK) sites with information on specific disorders (www.patient-handbook.co.uk).