Evaluating Health Information on the Internet

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**Recommended Citation**


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Evaluating Health Information on the Internet

Posted on February 1, 2007 by Editor

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The Importance of Critical Thinking

On a recent morning, my son and I were passing time watching one of his favorite television programs when an advertisement for a breakfast cereal captured my son’s attention. Noticing the degree to which my son sat enthralled with the commercial, I asked him what he thought of the advertisement. To my delight, my son thoughtfully responded, “It sure was flashy and all, but that’s just because they want you to buy their product. it doesn’t mean that it’s really any good.”

Feeling pride in my son’s insight, I (not one to leave a good moment unexamined) began to wonder how well his critical thinking skills would serve him in situations that could have significantly more impact on his wellbeing than his choice of breakfast cereal. Given my research background, my thoughts turned to how information presented on the Internet often functions much like the commercial that my son so ably dismantled. Through my investigations, I have not only become aware of the vast diversity of information that people encounter online, I am constantly reminded of the need for careful evaluation of such information.

The Internet is growing at an exponential rate and it is estimated that over 20,000 Web sites are dedicated to health information alone [1]. The growing popularity of the Internet as a source of health information necessitates a level of critical evaluation as individuals encounter information ranging from valuable and highly reliable to misleading and potentially dangerous.

Given the ever-increasing number of Web sites devoted to issues of health, how can one effectively identify those of value and those that “just want you to buy their product?”

Following are six fundamental questions one should ask when encountering health information:
online. Note that this is by no means an all-inclusive list nor are these in any specific order of importance as all provide valuable information useful in the evaluation of health information on the Internet.

**Who Authored the Web site?**

As in most media, authorship proves itself a valuable criterion in the evaluation of online health information. If the author of information presented online presents themselves as an authority on a given health topic, one needs to know precisely from what basis of authority the author speaks [2]. It is often useful to see if the author of the information contained in the site lists such things as their professional affiliation, contact information, or other biographical information. While one cannot necessarily assume that just because such information is not detailed on the Web site that claims within the site are questionable, one has reason to view the site with increased caution.

It should also be noted that quite a few medical and health Web sites often post information that they have collected from other sources. In situations where the organization (or individual) in charge of the site did not develop the source material, the original author should be clearly identified [2, 3].

**Who Owns the Web site and what is its purpose?**

In addition to information regarding the authorship of specific content on a Web site, an evaluation of Web site ownership provides valuable insight into the purpose of the material contained within the site. A Web site should make clear what organization or individual holds ownership of the site and the information contained within it [2, 4]. If this information is not readily available, one should be critical of the information contained within the site.

Furthermore, insight into ownership can be gained through examination of the Web site address domain itself. For example, Web addresses that end in .edu are those used by educational institutions, .gov domains are used by the Federal Government, .org most often by noncommercial organizations, and .com generally by commercial (or for profit) organizations.

While ownership of a particular site will often give valuable insight into the Web site’s purpose. Many sites also have a link labeled “About this site,” which provides a clear statement of purpose of the site itself and the audience to whom the information is intended [2]. As a general rule, one should always question if the authors or owners of a particular Web site have anything to gain from proposing one particular point of view over another? If the information contained within the site appears biased or slanted it is best to either avoid the site altogether or look for verification of information in other reputable sites.

**How current is the Information?**
With advancements in our health knowledge occurring almost daily, information contained in Web sites addressing issues of health and health care becomes out of date very rapidly [1, 2]. It is important that health related Web sites be reviewed and their content updated on a regular basis and such updates need to be clearly posted. To determine how current a particular site is, look for the date at which the information contained in the site was last updated. In situations when the information contained within a given site has not changed, those maintaining the site will often post the date on which the information was last reviewed to ensure that it is still valid.

It is also useful to look for dates when the information contained within the site was gathered. For example, are claims made in the information based on current statistics? Are any bibliographic sources listed recent sources [3, 4]?

**Is the Information in the Web site Verifiable?**

Not only should the information on a site be current, it should also be easily verifiable. The Web site should make clear the evidence on which any material presented within it is based [2, 3]. The site should describe all research evidence completely with detail given to the methodology used in the collection of research information presented. All facts and figures contained within the site should have complete and accurate references that can be established with minimal effort.

There should also be a clear demarcation between research results and opinions or simple advice [6]. Additionally, it should be made clear if the content contained within the site has been reviewed and by whom. If one cannot distinguish between verifiable research evidence and conjecture or if no clear statement of content evaluation is present, then one should question the validity of the information contained within the site.

If you have questions or concerns regarding the content within a site, there should be a clear way for users to contact the Web site owners for further information. If no contact information is available or if the individual responsible for maintaining the Web site and the information that it contains either fails to respond or provides a less than adequate response, this site should be avoided.

**Does the Web site request personal information?**

It is not unusual for a Web site to track how users navigate to and within their pages to determine user activity with the site, however any Web site that asks for personal information should explain exactly what will and what will not be done with such information [3]. Many commercial sites sell data they collect to other companies about their users (albeit in aggregate form) for profit. If information regarding how personal data collected is not explicitly detailed in a privacy statement contained within the Web site, one should avoid providing this information. The collection of personal information is not itself a questionable practice, the misuse or non-disclosed use of the information, however, is something to be avoided.
Does the Web site make Unbelievable Claims?

The old adage of “If it sounds too good to be true, it probably is” holds true for online health information in particular. If the authors of the site make outrageous claims with little medical evidence to back up such claims, the information contained in the site should be viewed with considerable caution [5]. This is especially true when health claims made within a site are unique to a single site or seem out of step with current trends in medical research. While many still look for the magic bullet when it comes to issues of health, it is highly unlikely that one will find it on the Internet.

Additional Considerations

Beyond the six fundamental questions previously mentioned, a number of additional tips can prove valuable as one assesses online health information [1, 5].

- Approach the adoption of online health information much like you would select your own doctor. Just as you would obtain opinions from several doctors to satisfy health concerns, survey multiple Internet sites for your health information. By reviewing information from multiple perspectives, one can often separate quality sites from those that are possibly more questionable.
- Avoid Web sites that proclaim themselves as the single source of knowledge on a given health topic. If something is relevant and reliable, you will find this information repeated in a number of sites.
- Steer clear of any online physician who claims the ability to diagnose or treat you without a proper examination (either physical or mental) especially when there has been no attempt at consultation regarding your medical history.
- Make sure you read the Web site’s privacy statement and verify that any information that you supply will be kept strictly confidential.
- In general, don’t rely on generic search engines (i.e., Google, Ask, etc.) when looking for health information online. Instead, one should go directly an established source of medical information such as Medline Plus (http://www.medlineplus.gov), The American Medical Association (http://www.ama-assn.org) or The American College of Physicians (http://www.acponline.org) whose reviews are prepared by physicians.

What If You Find Misleading Information?

In the event that you encounter false or misleading health information, you should contact the Federal Trade Commission (FTC). As part of its mission to enforce consumer protection laws, the FTC investigates complaints about health claims that are posted on the Internet [3]. The Federal Trade Commission, through its Operation Cure-All, is targeting unsubstantiated health claims. You can file a complaint directly with Operation Cure-All at http://www.ftc.gov/bcp/conline/edcams/cureall/ or you can contact the FTC at 1-877-382-4357.
Conclusion

The vast amount of health information on the Internet offers great potential to improve health [7]. With such a wealth of information, however, comes an increased need for critical thinking and decision making in the evaluation of online health information.

Inasmuch as the recommendations previously mentioned can (and should) apply to the evaluation of most any information that one encounters online, there are few domains as personally relevant as is information concerning our health. Browse the Internet with a critical eye, keeping in mind that it can be a valuable tool. As with any other tool, however, the user should be careful and educated in its use.

ENDNOTES

[1] See http://www.ihealthcoalition.org/content/tips.html


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13 THOUGHTS ON “EVALUATING HEALTH INFORMATION ON THE INTERNET”

Russel Niblock
on January 30, 2014 at 6:13 PM said:

Thanks for sharing superb informations. Your web site is very cool. I’m impressed by the details that you
**miter saw reviews**
on**February 2, 2014 at 12:33 AM** said:

This is a very good tip particularly to those new to the blogosphere. Simple but very accurate information... Appreciate your sharing this one. A must read post!

**folding bike reviews**
on**February 4, 2014 at 12:17 AM** said:

What’s up, its good paragraph about media print, we all know media is a fantastic source of facts.

**best robotic pool cleaner**
on**February 4, 2014 at 12:44 AM** said:

I’m not sure exactly why but this website is loading very slow for me. Is anyone else having this problem or is it a issue on my end? I’ll check back later on and see if the problem still exists.

**best espresso machine**
on**February 4, 2014 at 1:46 AM** said:

Thanks for one’s marvelous posting! I definitely enjoyed reading it, you happen to be a great author.I will make certain to bookmark your blog and will come back from now on. I want to encourage that you continue your great work, have a nice evening!

**recumbent exercise bike reviews**
on**February 4, 2014 at 3:45 AM** said:
Does your website have a contact page? I’m having a tough time locating it but, I’d like to send you an email. I’ve got some creative ideas for your blog you might be interested in hearing. Either way, great website and I look forward to seeing it expand over time.

**induction cooktop reviews**  
on **February 4, 2014 at 4:20 AM** said:

I couldn’t refrain from commenting. Exceptionally well written!

**best electric kettle**  
on **February 4, 2014 at 4:34 AM** said:

I am extremely impressed together with your writing talents as neatly as with the layout in your weblog. Is that this a paid subject or did you modify it your self? Anyway keep up the excellent quality writing, it’s uncommon to see a great weblog like this one nowadays.

**humidifier reviews**  
on **February 4, 2014 at 4:52 AM** said:

Thanks for every other great post. Where else may just anyone get that kind of info in such an ideal way of writing? I’ve a presentation subsequent week, and I’m at the look for such info.

**best garbage disposal**  
on **February 4, 2014 at 5:06 AM** said:

Way cool! Some very valid points! I appreciate you penning this post plus the rest of the
website is also very good.

scroll saw reviews
on February 4, 2014 at 5:08 AM said:

Excellent post. I used to be checking constantly this weblog and I am impressed! Very useful information specially the final part 😊 I deal with such information much. I was seeking this certain info for a long time. Thanks and good luck.

best crossfit shoes
on February 4, 2014 at 6:05 PM said:

I do not even know the way I finished up here, but I thought this publish was great. I do not realize who you might be but definitely you’re going to a well-known blogger should you aren’t already.

Cheers!

best table saw
on February 4, 2014 at 8:23 PM said:

Hey! I just wanted to ask if you ever have any issues with hackers? My last blog (wordpress) was hacked and I ended up losing several weeks of hard work due to no data backup. Do you have any solutions to prevent hackers?