

Centre for Research in Evidence-Based Practice

Evaluating Health Claims

How to decide if they're legitimate

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“BOGUS” BINGO

If you see an advert, webpage or social media link describing a therapy, we should always ask ourselves – do the claims provide evidence of efficacy, or should you be *skeptical*?

Did the information use any of the following “bogus health claim” red flags?

Argument from Antiquity “Uses ancient wisdom...”	Post hoc ergo propter hoc “It worked for me!”	Miscellaneous Discovery pitched straight to media (rather than scientific community)	Post hoc ergo propter hoc Use of testimonials	Special Pleading “Western science is unable to explain...”
Miscellaneous Discover has worked in isolation	Appeal to Nature Phrase such as “the way nature intended it” or “harmony with nature” used	Paranoid accusations Mention of “Big Pharma” or “Shill”	Argument from Popularity “Thousands of people around the world use this product!”	Paranoid accusations “They” are trying to hide treatment from you or suppress their work (whoever “they” might be...)
Miscellaneous Over-stating benefits or claims to be a “cure all” for numerous unrelated illnesses.	Argument from Authority Claims of use by a celebrity or person of standing	Scientific Jargon Mention of toxins or detoxification	Tu quoque Claim that because “conventional medicine” has done something bad, this makes them good.	Argument from Authority Celebrity endorses of brand
Argument from Authority Doctor <i>opinion</i> used in place of evidence.	Special pleading Claiming that belief in cure will provide a cure.	Appeal to Nature “All-natural ingredients...”	Argument from Popularity “Bestselling/ Number one brand...”	Scientific Jargon Use of the word “Quantum”
Argument from Antiquity “Traditionally used by the peoples of...”	Any other Informal Logical Fallacy Any other logical fallacy used (see over page)	Miscellaneous Discovery seems to break the laws of nature/ requires new laws of nature to explain observation	Post hoc ergo propter hoc Uses anecdotes as main source of evidence	Argument from Antiquity “Has been used for thousands of years...”

Go to <https://www.gcskeptics.com/flaws-in-logic-101> for more information on forming an argument and informal logical fallacies.

Did you tick anything off?

If **YES**: your *skepti-senses* should be tingling! The information provided may not be giving you actual evidence but merely using marketing tactics.

RATING CRITERIA

Rating Criteria	Satisfactory (S)	Not Satisfactory (NS)	Your Rating (S or NS)
Novelty	The article clearly states the intervention is genuinely new OR an old intervention with a new use OR there is new research about the intervention. The article can also alert the reader that this 'new' intervention is not a new.	Does not mention (or inaccurately represents) if treatment is genuinely new or just a rebadging of an existing treatment.	Rating
			Comment
Availability	The article states whether the intervention is available in Australia or not, or when it might become available.	Does not mention availability of treatment in Australia.	Rating
			Comment
Options	The article mentions appropriate alternative interventions and how they compare (better, worse, equal)	No mention of alternatives	Rating
			Comment
Disease Mongering	The article appears to provide an honest assessment of the need for the intervention	The article reads like a sales pitch for the intervention, or the disease or disorder. It is medicalising a normal human condition . It appears to exaggerate the prevalence or incidence of the problem.	Rating
			Comment
Evidence	The article talks appropriately about the evidence supporting the intervention eg 'Results from clinical trials published in The Lancet show...'	Mentions evidence but interpretation or discussion is inappropriate eg "There is scientific evidence...". There is only anecdotal evidence provided.	Rating
			Comment

Benefits	The article presents the benefits or risks of the intervention in numerical form (eg 20% of patients benefited) and describes them in a way you can easily understand.	Only a descriptive statement of benefits, eg 'It has a significant impact on recovery' or 'the majority of people improved'.'	Rating
			Comment
Harms	The article mentions possible harms or side effects (or the lack of these) associated with this intervention. Financial harms also count.	No mention of harms, or plays down potential harms	Rating
			Comment
Costs	The article mentions the cost of the intervention, comparative costs or cost-effectiveness . This can include subsidisation by the Pharmaceuticals Benefits Scheme or cover by Medicare.	No mention of costs, or downplays cost as an issue	Rating
			Comment
Sources of Information	States whether the sources of information have any potential conflict of Interest AND Provides an independent source of information	No mention of sources or possible conflicts of interest AND No attempt to use an independent source	Rating
			Comment
Headline	The headline is a balanced and accurate reflection the content of the article	The headline is misleading, overly dramatic or inconsistent with the article content	Rating
			Comment

OVERALL QUALITY SCORE AND STAR RATING

Number of "S" ratings	0	1	2	3	4	5	6	7	8	9	10
Star rating	0 ★	0 ★	1 ★	1.2 ★	2 ★	2.5 ★	3 ★	3.5 ★	4 ★	4.5 ★	5 ★

KEY TERM DEFINITIONS

Term	Definition for the purpose of this tool
Alternative interventions	Any other intervention used to treat this disease or disorder. If the article is discussing a new drug for diabetes, for example, how does it compare to existing drugs or diet? Is it better, worse or equivalent? Does the article say why people should use this drug if there is another drug already doing a good job?
Anecdotal evidence	This is evidence based on someone's experience and is the lowest form of evidence. This is often a 'human interest' story where someone recounts their experience with an intervention.
Comparative cost	Does the article discuss how the intervention compares to other interventions (or no intervention) in terms of cost? Is it cheaper or more expensive?
Conflict of interest	This is when someone could benefit or be biased about the intervention. Benefits can include being employed or paid by the developer or researcher, or being part of the research behind the intervention. If the source of information is the inventor or researcher, then they have a conflict of interest even if they are a professor.
Cost effectiveness	When the cost of the intervention is worth the benefit it provides.
Independent source	An independent source is an expert in the area who has nothing to do with developing or selling the intervention and will not benefit in any way from its success or failure (see 'conflict of interest').
Intervention	A treatment, drug, therapy, test, product, surgery, diet, exercise, meditation, etc
Medicalising "selling sickness"	This is when normal human conditions are marketed as if they are medical issues and includes ageing, menopause, balding, wrinkles, menstruation or erectile dysfunction[8]. Some people do need or want interventions for these conditions but these should be addressed in a case-by-case manner. Not everyone with these conditions needs medical interventions.
Re-badging	Often 'new' interventions are existing or old interventions that have been given a new marketing profile. An old drug may be given a new name and be released in order to boost sales. While it is not always possible to know if this is the case, if the article says the intervention is new and it appears to be, then rate this item as satisfactory.
Source	This is where the information in the article comes from. This includes researchers, company representatives, journals, spokespeople for expert groups, and government sources such as the Australian Bureau of Statistics.

USEFUL QUESTIONS TO ASK

WHAT QUESTIONS SHOULD I ASK WHEN I LOOK AT A WEBSITE THAT INCLUDES HEALTH INFORMATION?

National Centre for Complementary and Integrative Health: <https://nccih.nih.gov/health/webresources>

1. Who runs and pays for the website?
2. What's the source of the information?
3. How do you know if the information is accurate?
4. Is the information reviewed by experts?
5. How current is the information?
6. What's the site's policy about linking to other sites?
7. How does the site collect and handle personal information? Is the site secure?
8. Can you communicate with the owner of the website?
9. Is it safe to link to Twitter or Facebook through a website?

WHAT QUESTIONS SHOULD I ASK MY HEALTH PROFESSIONAL IF I AM UNSURE ABOUT A TEST, TREATMENT OR PROCEDURE?

<http://www.choosingwisely.org.au/resources/consumers/5-questions-to-ask-your-doctor>

1. Do I really need this test, treatment or procedure?
2. What are the risks?
3. Are there simpler, safer options?
4. What happens if I don't do anything?
5. What are the costs?

HANDY RESOURCES

SPOTTING BOGUS CLAIMS: CHECKLISTS AND HOW TO'S

Ten ways to avoid being Quacked by Stephen Barrett, M.D. co-founder of the National Council Against Health Fraud (NCAHF), and the webmaster of Quackwatch: <https://www.quackwatch.org/01QuackeryRelatedTopics/avoid.html>

Seven warning signs of Bogus science by Robert L Park. The Chronicle of Higher Education, Jan 31, 2003: <https://www.unl.edu/rhames/park-seven-signs.pdf>

Flaws in Logic: 101 by Dr Paulina Stehlik: <https://www.gcskeptics.com/flaws-in-logic-101>

Media Doctor Australia Checklist by Prof David Henry et al: <https://www.gcskeptics.com/medical-doctor-australia>

Informed Health Choices: Key Concepts: <https://www.informedhealthchoices.org/key-concepts-2-2/>

WHERE CAN I FIND RELIABLE HEALTH INFORMATION?

The Cochrane Library <https://www.cochrane.org/>

Patient <https://patient.info/>

National Prescribing Service (NPS) MedicineWise <https://www.nps.org.au/>

Choosing Wisely Australia Consumer information <http://www.choosingwisely.org.au/home#consumers>

Health on the Net provides tools to help you find reliable websites and information <https://www.hon.ch/en/tools.html>

PODCASTS AND BOOKS

Informed Health Choices Podcast for parents: <https://www.informedhealthchoices.org/podcast-for-parents/>

Testing Treatments: English: <https://en.testingtreatments.org/>; All languages: <http://www.testingtreatments.org/>

OTHER WEBSITES

Centre for Research in Evidence Based Practice: <https://www.creb.net.au/>

Gold Coast Skeptics: www.gcskeptics.com

Not Just Mum: <https://www.notjustmum.com.au/>

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