HPAC COURSE · MODULE 2

Searching

The internet will hand you an answer in half a second. Knowing whether to keep it is the skill.

Health Professions Affinity Community · Student research track

WHERE WE ARE GOING

By the end of this module you can...



Search on purpose

Turn your question into search terms, and use operators to cut a million results down to twenty.



Know why you got these results

Ads, optimization, personalization, and AI summaries all sit between you and the source.



Read laterally

Judge a page by leaving it, not by staring harder at it.



Recognize the common traps

Advertorials, testimonials, predatory journals, screenshots, and content generated to fill space.



Keep a source log

So that six weeks from now you can still prove where a number came from.

BEFORE YOU TYPE

Turn your question into search terms

> Do students at our school skip breakfast even though it is free, and why?

Pull out the concepts

- school breakfast
- participation
- high school students

Three or four ideas, not a sentence. Search engines match words, not questions.

Add the words other people use

- universal free meals
- breakfast after the bell
- adolescents

Researchers and agencies have their own vocabulary. Borrow it from the first good article you find.

Say where and when

- Ohio
- urban district
- 2020 to 2026

Place and date narrow more than any other terms you can add.

Then search the combination three different ways. The first phrasing you think of is rarely the best one.

CUTTING THE PILE DOWN

Six operators worth memorizing

"exact phrase"

`"breakfast after the bell"`

Only pages with those words in that order.

site:

`site:cdc.gov teen vaping`

Search inside one site or one domain. Try site:.gov and site:.edu.

minus sign

`vaping study -buy -shop`

Removes results containing a word. Kills most of the sales pages.

filetype:

`filetype:pdf county health report`

Finds reports and data files instead of articles about them.

OR

`teens OR adolescents OR youth`

Catches the synonyms in one search. Capital letters required.

Tools, then date

`Past year · Custom range`

Under the search bar. Essential for anything that changes.

These work in Google, Bing, and Google Scholar. Practice each one once and they stick.

NOT ALL OF THE INTERNET IS THE SAME

Where to look first

Start here

- MedlinePlus, for plain-language health topics written for the public
- CDC, NIH, and your state and county health department
- County Health Rankings, for local numbers you can compare
- Professional associations: American Academy of Pediatrics, American Heart Association
- University extension and .edu health centers

Slow down here

- Sites that sell the thing they are describing
- Pages with no author, no date, and no references
- Anything a friend sent as a screenshot
- Blogs and news that summarize a study without linking to it
- AI chat answers, including the one at the top of the results page

Slow down does not mean throw away. It means find the original before you use it.

WHY YOU GOT THESE RESULTS

The results page is not a ranking of truth

1. **Ads come first**

   The top results are often paid. The label is small and gray on purpose.

2. **Optimization is a business**

   Whole companies exist to push a page up the rankings. Being first means someone worked at it.

3. **Results are personalized**

   Your location, your history, and your device shape what you see. Your neighbor gets a different page.

4. **The AI summary is a starting point**

   It compresses sources you cannot see and sometimes states things no source said. Click through before you cite.

None of this makes the internet useless. It makes position on the page a bad reason to trust something.

THE SINGLE BEST HABIT

Read laterally

1

Leave the page

Do not read the suspicious page harder. Open a new tab.

2

Look up who published it

Search the site name plus the words funding, owner, or criticism. One search usually settles it.

3

Look up the claim itself

Search the claim in your own words and see whether anyone independent says the same thing.

Why it works

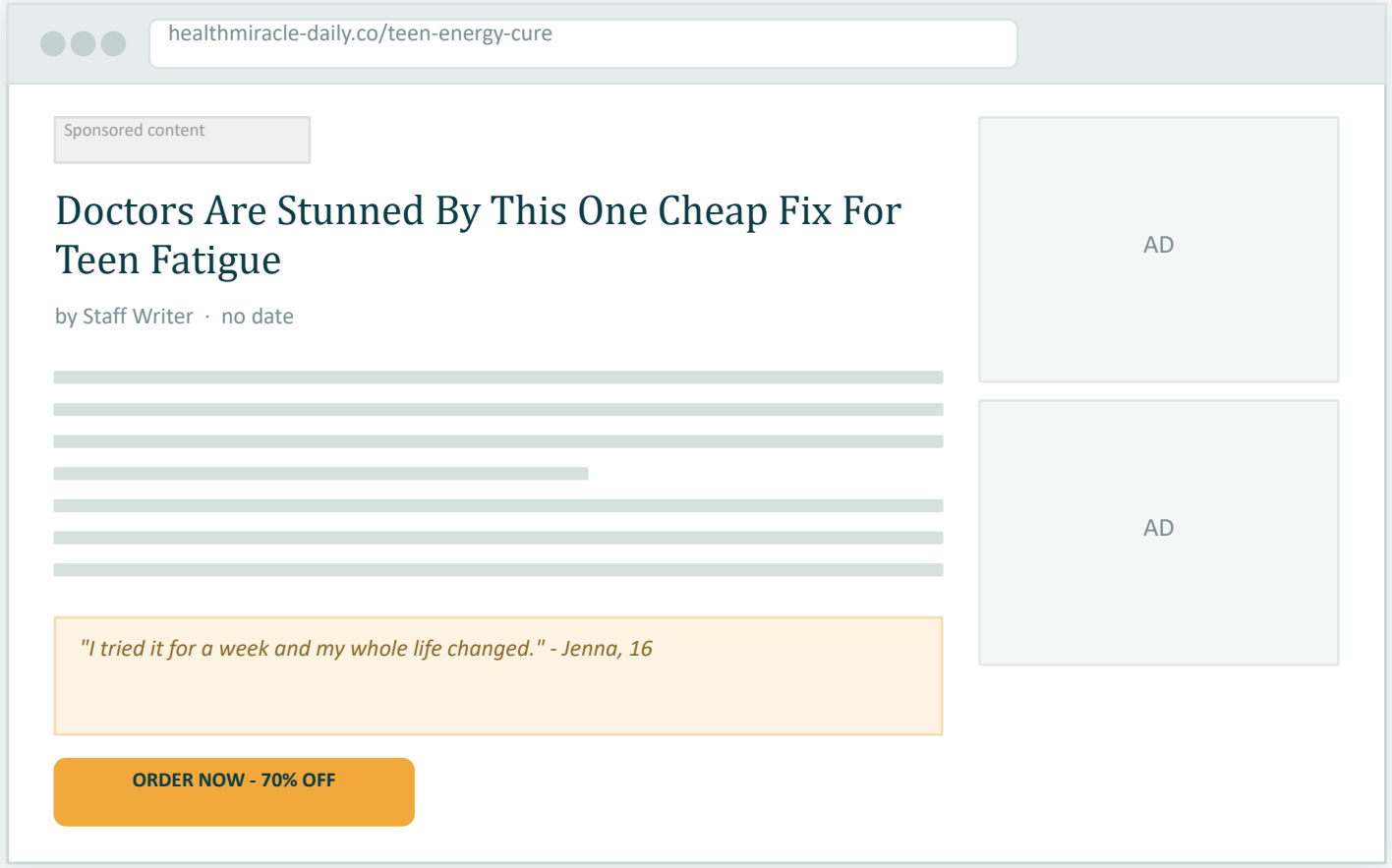
Fact checkers were studied doing exactly this. The people who stayed on the page and evaluated its design and tone got fooled. The people who opened new tabs did not.

It is also faster. Thirty seconds of looking up the publisher beats ten minutes of squinting at the page trying to decide how you feel about it.

The question is never how good does this page look. It is who is behind it and who else says this.

WHAT A TRAP LOOKS LIKE

Anatomy of a page built to fool you



1. **A domain you have never seen**

   Ending in .co, .info, or a name built to sound like a magazine.

2. **Labeled sponsored, quietly**

   It is an ad written to look like an article. That label is the whole disclosure.

3. **No author, no date, no sources**

   Nobody is willing to put their name and the year on it.

4. **A story instead of evidence**

   One person's testimonial is a story, and a story is not a sample.

5. **Something to buy**

   Follow the money before you follow the advice.

KNOW THEM AND YOU SEE THEM

Traps that have names

Advertorial

An ad in the shape of an article. Look for sponsored, promoted, partner content, or brand studio.

Testimonial as proof

One person got better. You have no idea what else changed, or how many people it did not help.

Predatory journal

Looks like a journal, charges the author to publish, reviews nothing. A real-looking citation for a fake review process.

Sourceless screenshot

A chart with no source, a headline with no article, a quote with no speaker. Always find the original.

Filler content

Pages generated in bulk to catch searches and sell ads. Fluent, confident, sourced to nothing.

Rage bait and satire

Written to be shared, not to be right. Check whether the site describes itself as satire before you quote it.

Naming a trap is most of defeating it. You cannot dodge what you have no word for.

CHECKING A CLAIM

When a page says a study found something

Who?

Who was studied, and are they anything like the people you care about?

How many?

Twelve people is a hint. Twelve thousand is a finding.

Versus what?

A result with no comparison group is a story with numbers in it.

Who paid?

Funding does not automatically mean wrong. It means read harder.

Where is it?

If you cannot find the actual study, you do not have a study. You have a rumor.

The one-click rule

A trustworthy article links to the study. If the link goes to another article, which links to another article, which links to a press release, stop and search the study title yourself.

Press releases exaggerate. The university communications office and the researchers are not always saying the same thing.

Module 3 is where we go get the study itself.

READING CLAIMS CAREFULLY

Three ways numbers mislead honest people

Together is not because

Ice cream sales and drowning both rise in July. Neither causes the other. Summer causes both. When a page says linked to or associated with, that is the honest version of together, not because.

One study is not the answer

Single studies get overturned all the time. That is not a scandal, it is how the process works. Look for whether other researchers found the same thing before you build on it.

Percentages hide the size

Doubles your risk sounds alarming. If the risk went from one in a million to two in a million, the number is true and the alarm is not. Always ask: doubled from what?



Ask this out loud

What would have to be true for this claim to be wrong? If you cannot answer that, you have not understood the claim yet, only agreed with it.

CHECKING MEDIA

Images, video, and things that never happened

Reverse image search

- Right click the image, or use Google Lens, and search for where else it appears
- Sort by oldest to find the original posting
- Very often the photo is real and years old, from a different country or a different event
- For video, search a distinctive phrase from the caption plus the word original

Generated media

- The old tells, like extra fingers, are disappearing. Do not rely on spotting them
- Rely on provenance instead: who posted it first, and does any independent source have it
- Be most skeptical of media that makes you feel something instantly
- A real event almost always has more than one source and more than one angle

A poster that uses an image you cannot source is a poster with a hole in it. Use your own photos, or clearly licensed ones, and say where they came from.

USING THEM HONESTLY

Wikipedia, YouTube, and the group chat

Wikipedia

A good place to start and a bad place to stop. Use it to learn the vocabulary and the shape of a topic, then scroll to the references at the bottom and go read those. Cite the reference, not the article.

YouTube and TikTok

Excellent for seeing a procedure or hearing someone describe an experience. Not evidence of how common something is. Check whether the person has credentials and whether they are selling something.

Forums and group chats

Real information about what people actually experience and what they are worried about, which you will not find in a journal. Treat it as a source of questions, not answers.

The honest version

You are allowed to start where you start. What matters is whether you end somewhere better, and whether your poster says which is which.

DO THIS EVERY TIME

The ninety-second credibility check

1 Who is behind it?

Name the person or organization. If you cannot find one, that is your answer.

2 What are they selling?

Product, membership, ideology, or clicks. Everything is selling something. Name it.

3 When was it written?

No date is a red flag by itself in health information.

4 What is it based on?

Follow one link. Does it lead to evidence or to another opinion?

5 Who else says this?

One new tab. Does an independent source agree?

6 Would I cite this?

If you would not be comfortable putting it on your poster, keep looking.

When in doubt

Do not use it. There is always another source, and a poster is stronger with four solid citations than with nine you cannot defend.

KEEP A SOURCE LOG

Write it down when you find it, not later

Link

The full URL, pasted

Who and when

Author or organization, and the date on the page

The claim

In your own words, one line

Why you trust it

One line. If you cannot write it, drop the source

Bring to the next session

- Five sources on your topic, logged, with one line on why each one is trustworthy
- One trap you found in the wild, with the reason it is a trap
- One claim you could not verify, and what stopped you

Next module

Google Scholar and evidence-based research: how to stop reading about studies and start reading them.