



Understanding Research: Finding the Information You Need

Everywhere you look these days there is health information – in Readers Digest, in Good Housekeeping, in Men's Health, in the magazine that comes with the Sunday newspaper, even in those sleazy newspapers you see in the grocery store checkout line. Even radio and TV commercials have celebrities talking about “studies at leading universities” as they show you data and diagrams telling how each new over-the-counter medicine works. Places like these are where you're likely to hear stories like, “caffeine causes bladder cancer.” Or, “new drug to cure spinal cord injury discovered.” When you hear stories like these, you should:

- A. Laugh and change the station or cancel your subscription to the magazine*
- B. Immediately change your life. Quit drinking coffee; mortgage you home to invest in that “cure drug”*
- C. Call your doctor*
- D. Get more information*

You should have picked D. A, B, and C might all be correct – but not until you get some additional info. You'll need to:

1. “Read” between the lines of your first source of information
2. Find the initial source of information

Read between the lines:

It's important to understand that newspapers, radio, TV, and popular news magazines all have one thing in common: they're very expensive to produce. Each word, each sentence, and each paragraph – whether it's written, spoken, or video – costs money. As a result, they can rarely provide you with all the details you need. Even if they're not intentionally twisting the facts, they must shorten things. That shortening affects the quality and completeness of the information you end up with.

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Carefully chosen words...

In addition, the specific words used in describing medical research findings are very important. Medical writers choose their words carefully to avoid misleading people. However, these carefully chosen words change each time an article is edited and rewritten for another source – such as for a popular magazine, a newspaper, or television. The original scientist may have written, “Bladder cancer appears to be related to caffeine.” The newspaper could say, “Coffee linked to bladder cancer,” while a TV news anchor reports, “Bladder cancer can be caused by coffee drinking.” Though all seem to be saying the same thing, these are all very different statements.

Some useful advice would be to watch for key words that should raise your level of suspicion. “Cause” is one of those key words. It’s a word that you’ll rarely see in good research. Because so many different things affect all of us every day, it’s very difficult to conclude that any one thing – such as coffee drinking – actually causes another – like bladder cancer. Coffee drinking may be *related* to bladder cancer, or cancer may appear more often in coffee drinkers, but to say that one causes the other is very misleading. Have more confidence in what you’re reading when you see verbs and words like *believe*, *appear*, *seems related to*, *is associated with*, *increases in frequency*, or *decreases in prevalence*.

A word that you probably *won’t* see or hear in the popular media is “limitations.” It’s an important piece that medical journals typically *require*, but often is omitted in later reviews or summaries of research projects. Basically, all research needs to be “taken with a grain of salt,” and when researchers describe the “limitations” of their study, all those “grains” are dealt with.

Let’s go back to that bladder cancer story for a second. What the radio might have failed to tell you is that bladder cancer was only found in people who drank 20 cups of coffee a day for more than 30 years. Or that the coffee might have been supplied by injection or IV. Or that the people in the study were all smokers, too. Or they were all recruited from a senior citizens’ center and were already in a high-risk group. Worse yet, maybe only five people were in the study. And so on. Regardless, understanding limitations helps readers decide how similar the research participants are to “real people” and helps them determine how seriously to take a particular research finding.

Unfortunately, it’s these limitations that are likely to get edited out of a shortened piece. Other words that you should watch or listen for are those that give you clues as to who did the original research. Somewhere, you should get a hint about where to go for more information: an individual’s or a university’s name where the research was done; a medical journal where it was first published; an organization like the American Heart Association or the American Cancer Society.

Finding the initial source of information

The clues we just mentioned above should give you an idea about where the information came from. Now it's up to you to try to track down the original source. Nowadays, that's not as hard as it used to be. Here are some strategies:

1. Your job is easiest if you know the scientific journal where it first appeared. You can go to a medical library, or you can go on line and surf the Internet to the journal's website, if it happens to have one. The media tends to only report on "late-breaking" stories, so it's likely that the journal you'll need to check will be a very recent one. Simply read through tables of contents until you find a title that looks like your story. Once you know this much, if you can't actually get your hands on the article itself, you can ask a local university library to request it for you through their inter-library loan services.
2. Suppose you know the researcher's name but nothing else. You can go on-line and search one of the medical databases (like *Medline*) using the person's name. Or you can go to a local library, to the reference area, and look in a recent *Index Medicus*. This is a catalogue of recently published medical articles. It will have listings by subject and by author. You'll want the volume that has authors. Use it like you would a dictionary, an encyclopedia, or even a telephone directory: once you find the author's name, it will list all of his or her publications, along with the journal, date, and even page numbers, where you can find them.
3. The third approach would be to search by topic. Time to hit the Internet again. If the topic you're trying to track down has to do with cancer, check out the American Cancer Society's website. Some health websites will have anticipated that people like you will be visiting, and they'll have loaded the information you're looking for. Others may provide a way for you to e-mail them a question. Worst scenario: copy down their phone number and give them a call.
4. Still no luck? Call the newsroom of the TV or radio station where you heard the report, or contact the reporter who wrote the article in the newspaper or magazine; if no reporter's name is listed, ask for the section editor. Ask them for their sources, or who it was they were quoting or citing in their reports.
5. Still striking out? It might be time to give your doctor a call to see what he or she has heard. Or, you can call a specialist or specialty center to see if the folks there know anything: a spinal cord injury rehab center, a cancer treatment center, a nutritionist, etc. These people probably won't offer, so ask them if they have a copy of the article you're interested in. Ask them to make you a photocopy. Offer to pay their copying or mailing costs.

Your goal is to end up with either a copy of a scientific magazine in your hand or on your computer screen, or a photocopy of the article. Now the really hard part begins: reading through all of that medical mumbo-jumbo.

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