

Miracle Drug! Or not.

How to read and understand medical news.

BY LISA PHILLIPS

The headlines of your daily newspaper promise the world. There's a new "breakthrough" medication for this disease, a "groundbreaking" treatment for that one. But when you get to the article, the findings are usually a lot more complicated. It can be hard to know what to do with the information, other than wait for tomorrow's news to contradict what you just read.

Want to become a more savvy reader? Follow the advice of these doctors and health care journalists—and some who are both—on how to decipher medical news.

FORGET ABOUT HEADLINES

Short and flashy, headlines are designed to grab attention—often at the cost of accuracy. Susan Ince, a health writer and an American Academy of Neurology journalism fellow, points out that reporters usually don't write headlines to their own stories—editors do—and the results can be misleading. Once the headline pulls you in, forget it.

BEWARE OF EXAGGERATED LANGUAGE

Gary Schwitzer, the director of the Master's program in health journalism at the University of Minnesota, reviews news stories about medications, supplements, therapies, procedures, and medical devices on his Web site HealthNewsReview.org to help consumers evaluate accuracy. He posts a list of words that medical journalists should never use and readers shouldn't be fooled by. Three of the biggies: "cure," "miracle," and "breakthrough."

"If something is shown to be 99 percent effective with no side effects in a large, long-term study, maybe that's a breakthrough, but I'd challenge anyone to show me many things in health care like that," Schwitzer says. "There are always tradeoffs. How many people will benefit? What are the potential or real harms?"

Researchers rarely use these terms.



Considering a new therapy? Ask your doctor:

- ▶ Is the treatment truly new or a slight twist on an existing one?
- ▶ How does the treatment compare to existing treatments?
- ▶ What are the benefits versus the side effects?
- ▶ Is the treatment available locally?
- ▶ How much does it cost?

Ivan Oransky, M.D., an adjunct professor of medical journalism in New York University's Science and Environmental Reporting Program, recalls a newspaper article he read about Prozac's loss of status as a "miracle" drug. "Miracle" was in quotes a few times, which in journalism means someone somewhere has used that exact word," Dr. Oransky says. "But it was never attributed. That says to me there might be a straw man."

Jazzed-up language can also occur in discussions of risk. You should understand the difference between relative risk and absolute risk, says Maria Sim-

bra, M.D., a neurologist and medical reporter for KDKA-TV in Pittsburgh, PA.

Schwitzer uses the following example on HealthNewsReview.org to illustrate the difference: If a group of diabetes patients treated with one drug has a two-percent risk of developing blindness over five years, and a group of diabetes patients treated with a new drug has a one-percent risk of developing blindness over five years, the marketing claim for the new drug could be: "Reduces the risk of blindness in people with diabetes by 50 percent!" But there might be no mention of the small decline in absolute risk: one percent.

LOOK FOR THE EVIDENCE

Is the finding based on a large study? Observation of a few cases? Rumor? At the bottom of the “Research Pyramid” are test-tube research and animal studies. At the top is the gold standard of medical evidence: randomized, controlled, double-blind studies, in which treatments are assigned to subjects at random; one group gets the treatment being studied and a second group—the control group—gets the current standard treatment. Neither the subjects nor their evaluators know which group the subjects are in, though other members of the research team keep track so the results can be analyzed.

Not every study can or should achieve this standard. If researchers are looking at the impact of a harmful chemical, it would be unethical to ask one group of subjects to be exposed to that chemical. In that case, observational studies, though lower on the pyramid, are best.

Some claims are made without any basis in research. “A lot of reporters are too eager to embrace alternative therapies, an impulse that comes from the desire to always find something new that challenges the orthodoxy,” says Dr. Oransky. “The first thing you should do is ask for the evidence.”

Dr. Simbra points out that consumers should be wary of stories that rely only on one source or on comments by medical experts without mentioning research results.

Even findings with solid research behind them can be preliminary, according to John H. Noseworthy, M.D., editor-in-chief of *Neurology* and professor of neurology at the Mayo Clinic in Rochester, MN. “The FDA approves drugs based on short-term studies,” he says. “To date, the FDA has not required follow-up studies to see if early claims bear truth.”

LOOK FOR THE MONEY

A good news story will disclose whether any of its sources have financial ties to the companies manufacturing the drug or device in question, or whether the study was funded by pharmaceutical companies. Many major medical journals, including *The Journal of the American Medical Association*, *The New England Journal of Medicine*, and *Neurology*, now require financial disclosures from researchers before they accept studies for publication.

“You have to be aware of bias,” said Janet Jankowiak, M.D., a geriatric and behavior neurologist at Radius Special Hospital in Boston, MA. “Is the source reliable? Does the source have a stake in the product?”

Unfortunately, many mainstream news stories still don’t include information about financial ties, according to Schwitzer. “We need to educate the public that more research is funded these days by private interests,” he says. “That doesn’t necessarily mean the findings are tainted, but that the potential for conflicts of interest is growing and should be noted.”

SHOULD YOU CHANGE YOUR TREATMENT PLAN?

Medical news about new studies, medications, and surgical approaches can generate excitement, especially if you’re suffering from the condition in question. Should you rush to convince your doctor to try the Next Best Thing on you?

Ince points out that study results don’t always apply to everyone. “Sometimes exactly who was studied gets lost in the editing process,” she said. “Results may only apply to one type of epilepsy or a particular stage of Alzheimer’s disease.” Ask your doctor if the results apply to you.

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Dr. Noseworthy says patients should keep themselves informed on the latest developments concerning their disease, as long as they consult with their doctor. “Information is power, but

patients need to know how to manage it,” he said. “The interpretation is often complex, so it’s critical for patients to have physicians they trust.”

BE PATIENT

Good science takes time. Just because something makes the news doesn’t mean it will be available any time soon, or even turn out to be safe and effective, according to Ince.

Before clinical trials on a drug begin, the treatment is tested on animals to determine its safety and toxicity. After that, trials take place in three phases. Phase I evaluates how a new drug should be given, how often, and what dose is safe. Phase II continues to test the safety of the drug and how well it works. Phase III tests how effective the new treatment is compared to the current standard treatment.

Some of the research that gets the most attention from patients is in genetics and stem cell research. But Dr. Jankowiak says it may be decades before practical applications emerge. “Sometimes people get disillusioned because they read about research and then don’t see how it’s going to help them,” she says. “We expect answers immediately, but for research to be good, it takes a lot of effort, money, and time.” NN

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