

food Insight™

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Food Safety and Nutrition

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If It Sounds Too Good to be True...

It Probably Needs A Second Look

Health fraud. Quackery. Misinformation. Junk science.

They seem to be the buzzwords of the day in food and health communications. Webster's Dictionary defines misinformation as "Untrue or misleading information." Quackery can be broadly defined as "Promoting health products, services or practices of questionable safety, efficacy or validity for profit." While there are differences between the two, they frequently have the same outcome: confused consumers or consumers who simply ignore food and health information.

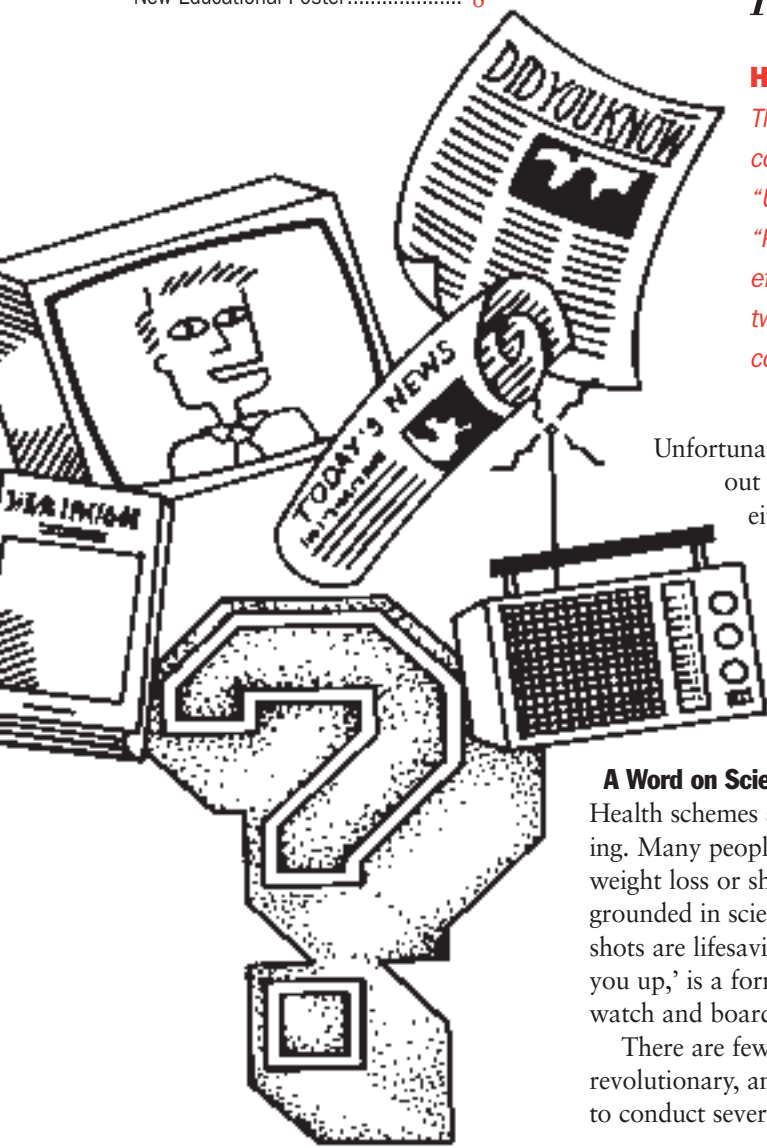
Unfortunately, misinformation abounds. But, it is not wise to "throw the baby out with the bath water," and avoid or ignore all new health findings either, because there are a lot of exciting discoveries occurring. New discoveries make it necessary to be curious, yet cautiously skeptical. In the words of Marcia Angell, M.D., editor of *The New England Journal of Medicine*, "If it sounds too good to be true, it probably is."

This article is the first of a two-part series on how to help consumers and others better navigate through the maze of information and misinformation available on food, nutrition and health.

A Word on Science

Health schemes and misinformation proliferate because they thrive on wishful thinking. Many people want an easy answer to their medical ailments, a "magic bullet" for weight loss or short cuts for personal appearance improvements. Often, claims appear grounded in science—but frequently it is only half the story. "For example, vitamin B₁₂ shots are lifesaving in cases of pernicious anemia, but giving them frequently to 'pep you up,' is a form of medical fraud," said Stephen Barrett, M.D., chairman of Quackwatch and board member of the National Council Against Health Fraud.

There are few if any true "scientific breakthroughs." Science is evolutionary, not revolutionary, and the road to scientific discovery takes many detours. It is necessary to conduct several iterations of a study before a hypothesis is deemed definitive.



If It Sounds Too Good to be True...

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Health schemes and fraudulent product promotions are distinctly different from the publicity surrounding new health science. Yet, they both require that consumers ask appropriate questions and have a healthy dose of skepticism to determine the reliability of the information. When you hear of a new health report or finding on television, don't first reach for the remote control and tune out. But, don't swallow the story whole either. Often, television news can serve as a "heads up" for new health information. But, due to the time limits for this medium, it is not always possible to provide all the information consumers need to evaluate the new research. If you think the new findings might apply to you, seek more details by reading articles on the subject in several newspapers, paying close attention to how the issue is presented and who and what organizations are quoted.

Although newspapers also have some space limitations, they are useful for gathering further information. They allow for more details about a study and thus more context than other mediums, particularly through interviews with scientific and health experts. For instance, look for the opinions of reputable science-based organizations, such as the American Heart Association or government health organizations, including the U.S. Department of Agriculture's Center for Nutrition Policy and Promotion. After a story is initially reported, read longer-lead publications, such as magazines and health newsletters, to provide more in-depth information and analysis.

He Said, She Said and They Said

It is best to check out more than one news report about a scientific finding, because the more varied the experts quoted, the more perspectives you can extract. This may seem contradictory—shouldn't we be searching for "the right answer" and not conflicting opinions? There is rarely one "answer" to health and food discoveries, so a variety of perspectives helps consumers gauge the issues surrounding the scientific study. Varied positions on the



Red Lights for Health Claims

Although specific products, claims and practices may have changed over the years, nutrition "quackery" still succeeds because some people believe in the unsubstantiated promise of a better, healthier life. The U.S. Office of Consumer Affairs lists product statements that should alert consumers to be skeptical:

- Claim to be quick, painless and effortless
- Claim to have special, secret, foreign, ancient or natural ingredients
- Claim to be effective for a wide variety of conditions
- Rely on personal stories of success rather than on scientific data for documentation
- Claim that the medical community or government agencies refuse to acknowledge the effectiveness of the cure, product or treatment

issues may lead to the conclusion that the new research is an interesting tidbit, but a personal change in behavior is not warranted. If, on the other hand, the research findings seem to apply to you, consult a doctor or other credentialed health professional about making dietary or other health behavior changes.

It is also important to keep in mind that sometimes there is "imbalance" in a story for the sake of "balance." In other words, two experts with opposing views may be quoted (for balance), but one expert may represent 90 percent of

current thinking in the scientific community while the other may represent only 10 percent (the imbalance). This is why it is critical to determine what is the consensus—not just polar opposites—of scientific thinking on a subject. Look for the opinion of a reputable health or government organization to validate the positions.

Make a List and Check it Twice

When perusing the news accounts of a particular study, it is helpful to have a few key questions in the back of your mind to help evaluate not only the merits of the study, but also whether it is applicable to you. Look to news reports to address the following:

How does this work fit with the body of existing research on the subject?

Even the most well-written article does not have enough space to discuss all relevant research on an issue. Yet, it is extremely important for the article to address whether a study is confirming previous research and therefore adding more weight to scientific beliefs, or whether the study's results and conclusions take a wild departure from current thinking on the subject.

Could the study be interpreted to say something else?

Scientists often reach different conclusions when commenting on the same or similar data. Look for varying conclusions from experts, because certain issues they address may be important when putting the findings into context.

Are there any methodological flaws in the study which should be considered when making conclusions?

The more experts who are quoted, or provide background, in a news story, the more likely potential flaws—such as confounding variables—will be described. "Dig deeper and find out more about the study," advised John Renner, M.D., family physician and president of the National Council for Reliable Health Information. "Research is not an exact science and it has its limitations; so you need to look for what questions the study both answers and doesn't answer." Remember, not every study can answer all research questions.

10 Red Flags of Junk Science

The Food and Nutrition Science Alliance (FANSA) is a partnership of four professional scientific societies whose members have joined forces to speak with one voice on food and nutrition science issues. Discouraging Americans from overreacting to headlines is FANSA's goal.

- Recommendations that promise a quick fix
- Dire warnings of danger from a single product or regimen
- Claims that sound too good to be true
- Simplistic conclusions drawn from a complex study
- Recommendations based on a single study
- Dramatic statements that are refuted by reputable scientific organizations
- Lists of "good" and "bad" foods
- Recommendations made to help sell a product
- Recommendations based on studies published without peer review
- Recommendations from studies that ignore differences among individuals or groups

Are the study's results generalizable to other groups?

Not all research incorporates all types of people: men, women, older adults or people of various ethnicities. Also, a study may have been conducted on animals and not humans. If study results are only applicable to a narrow group of people, it should be reported as such.

The subject of research funding gets reported many times in news accounts. While it is interesting to note the source of funding, it is by no means a reason to dismiss—or accept completely—the findings. "Some research is too specific and not broad enough to warrant government or foundation funding," stated Jeanne Goldberg, Ph.D., R.D., associate professor and director of the Center on Nutrition Communication, Tufts University School of Nutrition. "But that's not to say it's not important to conduct the

research or that the results are biased because it was funded by industry." Critically evaluating research on its own merits is the best way to assess its validity and importance. If the study is good, the results will stand on their own, regardless of who supported it.

These Deserve a Second Look

The following are just a few examples of claims that fall into the "too good to be true" or "needs a closer look" categories and should be approached with some skepticism.

Scientific Breakthrough...

Don't be fooled by "breakthroughs," someone else's success story or the lure of a "quick fix" option that appears effortless. "Products that promise increased energy are hot these days because everyone's so tired," said Ann Grandjean, Ed.D., director of the International Center for Sports Nutrition. "People think, 'oh good, there's a magic bullet, and I can get by on three hours of sleep.'" The best way to feel rested is to make sure you get an adequate amount of sleep. Proper rest combined with healthful eating habits and physical activity should energize you.

Lose Weight and Inches While You Sleep

The "energy in <is less than> energy out" weight loss concept is easy to grasp, but it does not usually "grab" people who are trying to lose or maintain their weight. Although it is certainly doable, it does require some individual effort. Deep down inside, many of us realize that the only safe and effective way to lose weight is to decrease the number of calories consumed and increase physical activity. Yet, a quick and effortless road to weight loss is very appealing. Bottom line—be suspicious about products promising permanent weight loss, especially when the products require long-term use (and purchases) for these results.

Modern processing methods and storage remove all nutritive value from our food

While food processing may change the nutrient content of food slightly, other techniques enhance nutrient content. For instance, processing and cooking food

may remove some nutrients, but enrichment or fortification can put them back. "Fortifying food not only puts more of a nutrient back into a food but also, in many cases such as some juices and ready-to-eat cereals, it actually improves the nutrient profile of the food," commented Fergus Clydesdale, Ph.D., professor and head of the department of food science, University of Massachusetts. Overall, a balanced variety of foods can provide all the nourishment you need.

While new food and health science can be confusing, tools are available to help consumers evaluate it. Further, this discussion would be amiss if it did not include the Internet and the wealth of food and health information—both sound and not-so-sound—it contains. In the next issue of *Food Insight: Evaluating nutrition and health information on the Internet*.

For More Information...

The International Food Information Council's "How to Understand & Interpret Food and Health-Related Scientific Studies" (ifcinfo.health.org/brochure/ifcrevu.htm)

Position of The American Dietetic Association: Food and Nutrition Misinformation (www.eatright.org/amisinfo.html)

The U.S. Department of Agriculture's Center for Nutrition Policy and Promotion (www.usda.gov/cnpp)

The Food and Nutrition Science Alliance (FANSA) (www.ift.org/sc/sc_h00.html)

The U.S. Department of Commerce's Office of Consumer Affairs www.doc.gov/oca has information, and an on-line product complaint form is also available. The Federal Trade Commission (FTC) www.ftc.gov also has an on-line form.

Quackwatch (www.quackwatch.com)

Healthscout (www.healthscout.com)