

# Health and Nutrition Research: How to Separate Fact From Fiction

Never has there been a time when we have had such a wealth of readily available information on health and nutrition. With the advent of the Internet and growing use of chat rooms, blogs and newsgroups, hardly a day goes by when we are not bombarded with recommendations on diets to follow, foods to avoid and ingredients that will change our lives. With more information coming from the media, marketing and advertisements, family and friends, we are in a constant state of information overload.

On one hand, we are fortunate to have so many sources of information upon which to draw ... a huge improvement over the past when we were dependent upon our annual visit to the doctor. But, with information comes choices. How do we process all of it? Who do we believe? Is it applicable to *me*? Should I make changes to my diet based on what my neighbor, friend or colleague tells me? In addition, often what we hear or read is conflicting and confusing.

It is more important than ever to develop and use critical-thinking skills to distinguish between solid fact and marketing hype. Your healthcare provider, of course, should remain your final authority, and before changing your lifestyle or dietary habits drastically you should check with him or her. By practicing healthy skepticism, knowing research terms commonly used and asking the right questions, however, you can often draw your own conclusions.

## Research terms with which to be familiar

- **Blind experiment**—an experiment in which subjects do not know what treatment they are getting. This is important in avoiding the “placebo effect”—when the treatment “works” because the subject *expects* it to work.
- **Control group**—the group who gets the same treatment as the experimental group except for whatever is being tested. Including a control group is important to make sure any effect is actually a result of treatment and not anything else.
- **Experimental group**—the group who gets the treatment being studied.
- **Placebo**—a sham treatment to test the psychological effect of getting a treatment. This could be a drink or diet containing everything *except* what is being studied.

- **Peer-reviewed manuscript**—a research paper that is reviewed and approved by other experts in the field before it is published, helping to ensure that the science is sound.

## Can we trust the media?

We often hear about nutrition and diet research on the radio, television and from other media outlets, where results are summarized in a 30-second time slot. While this is a timely way to glean information on recent studies, you will need to be careful in how you interpret it for the following reasons:

- Results are often published in the media and in the popular press based on the results of a single study, which may or may not agree with previous studies. Rarely does the reporter include any background or “paint the picture” of how it fits into older research.
- The media often takes studies that were done in animals and extends the results to people ... or extends results from a certain group of people to the entire population.
- Reporters often do not have knowledge or expertise in the topic and tend to oversimplify the results.
- The media often sensationalizes findings, making the headline more interesting in order to sell more copies or increase readership.

## Ten Red Flags of Junk Science

The Food and Nutrition Science Alliance (FANSA), a partnership of four nationally recognized, highly credible health organizations, established the following 10 “red flags” of junk science to help you recognize exaggerated or false claims:

1. Recommendations that promise a quick fix
2. Claims that sound too good to be true
3. Simple conclusions drawn from a complex study
4. Recommendations based upon a single study
5. Dramatic statements that are refuted by a reputable scientific organization
6. Recommendations based upon studies without peer review
7. Recommendations based upon studies that ignore differences among individuals or groups
8. Dire warnings of danger from a single product
9. Lists of “good” and “bad” foods
10. Recommendations made to help sell a product, or by the manufacturer itself

Questions to consider when you hear about a new study:

What was the original source of the study?	<i>If you read about it in the popular press, find the original source, which should be in a peer-reviewed, scientific journal.</i>
Is it based on a single study?	<i>Solid recommendations are based on multiple studies and years of research.</i>
Does it seem too good to be true?	<i>If so, it probably is!</i>
Does it promise a “quick fix” to a health problem or issue?	<i>Remember there are no quick fixes, only long-term healthy lifestyle habits that pay off.</i>
Does it recommend excluding a whole food group or family of foods from the diet?	<i>Foods are grouped into “families” for a reason—to provide similar nutrients—so avoiding a whole food group could easily result in nutrient deficiencies.</i>
Does it highlight a single component as being the cause of multiple health issues?	<i>Health issues are generally the result of many factors rather than a single cause or component.</i>
Does the information result in categorizing foods as “good” or “bad”?	<i>Categorizing foods as such is too simplistic. There are no “bad foods” ... all foods, with care, can be worked into a healthy diet.</i>
Does a reputable health organization stand behind the recommendations?	<i>See the list of resources below for examples of reputable health organizations.</i>
Does it involve buying a specific product or ingredient?	<i>If so, it could be the manufacturer marketing it in an attempt to sell more product!</i>
How does this information fit into other information you have heard on this topic?	<i>If it is in contrast with what you already know, be suspicious. Future research will either prove or disprove what you are hearing and it’s best to wait until the jury is “in.”</i>

**List of Resources**

American Dietetic Association (ADA)  
 American Heart Association (AHA)  
 Dairy Council of California (DCC)  
 Food and Nutrition Information Center  
 National Heart, Lung and Blood Institute (NHLBI)  
 United States Department of Agriculture’s site  
 on human nutrition for consumers

[www.eatright.org](http://www.eatright.org)  
[www.americanheart.org](http://www.americanheart.org)  
[www.dairycouncilofca.org](http://www.dairycouncilofca.org)  
<http://fnic.nal.usda.gov>  
[www.nhlbi.nih.gov](http://www.nhlbi.nih.gov)  
[www.nutrition.gov](http://www.nutrition.gov)



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