Don't Believe Everything You Read -- Even in Medical Journals

By ACSH Staff — July 15, 2005

When reading the medical news, you might want to start asking for a second opinion. A report in this week's *Journal of the American Medical Association* (JAMA) found that it is not unusual for medical studies to contradict one another: 16% of highly-cited original clinical studies were contradicted by subsequent ones, and another 16% were shown by later trials to have overstated results. The JAMA findings are significant because the author reviewed high-impact medical journals such as the *New England Journal of Medicine*, JAMA, and *The Lancet*, and each article reviewed had been cited at least 1,000 times. That translates into a lot of medical misinformation!

Anyone who follows the news is inundated daily with information about new health scares and new miracle cures, but often these reports are later refuted. For example, a Swedish study in 2002 suggested [1] that acrylamide, a substance created by the breakdown of carbohydrates at high temperatures, causes cancer. The study made quite a splash; people were advised to avoid popular foods such as potato chips and coffee, and editorialists and activists alike called for a ban. But recently a second Swedish study has announced that there is no connection between acrylamide in food and cancer after all. (Interestingly, the second study is receiving much less media attention.)

This, of course, does not mean that medical studies are of no value or that health reports are always wrong. It simply serves as a caution that science is fluid, not static or absolute. Study design, sample size, and whether a study is prospective or retrospective in nature will all affect the outcome of a trial. Scientists require more than one study, regardless of how large or well designed that one may be, before they accept a result -- and so should you. Every time that you see a headline claiming that X causes cancer or that Y prevents it, proceed with caution. A little skepticism may be just what the doctor ordered.

Sources:


"Acrylamide 'does not increase the risk of cancer'." *The Local* (Sweden) July 14, 2005.

See also: ACSH's booklet *Good Stories, Bad Science: A Guide for Journalists to the Health Claims of "Consumer Activist" Groups* [2].

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