HealthNewsReview.org: 1st systematic analysis of health care PR

Minnesota Health Strategy and Communications Network
April 27, 2017

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HealthNewsReview.org turns 11
New study suggests that vitamin D decreases risk of cancer

Increasing vitamin D levels may lower the risk for developing cancer, according to a study conducted by Creighton University with cooperation from the University of California San Diego. The results of the study were released today in the Journal of the American Medical Association. The study, funded by the National Institutes of Health, is a randomized clinical trial of the effects of vitamin D supplementation on all types of cancer combined.

Vitamin D, calcium supplementation among older women does not significantly reduce risk of cancer

Date: March 28, 2017
Source: The JAMA Network Journals
Summary: Among healthy postmenopausal women, supplementation with vitamin D3 and calcium compared with placebo did not result in a significantly lower risk of cancer after four years, according to a study.
Tweets 30 minutes apart
Mindless, back-and-forth, not helpful to readers
How we operate

• 11 years reviewing news stories by major media
• Eligible: include a claim about an intervention
• 3 reviewers per story - usually a journalist, an MD, another journalist
• Team of 50 part-time reviewers, only 4 FT staff
• If your work is reviewed, we email you a link
• All of this posted online for all to see
• Since Jan. 2015 we’ve reviewed PR news releases, too
• We apply 10 systematic criteria: the most objective process we’ve been able to develop
### 5 of our review criteria: Did the article......

<table>
<thead>
<tr>
<th></th>
<th>% unsatisfactory</th>
<th>% unsatisfactory</th>
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<tbody>
<tr>
<td></td>
<td>News stories</td>
<td>PR releases</td>
</tr>
<tr>
<td>Adequately discuss cost?</td>
<td>69%</td>
<td>92%</td>
</tr>
<tr>
<td>Adequately assess how big (or small) are potential benefits?</td>
<td>66%</td>
<td>71%</td>
</tr>
<tr>
<td>Adequately assess scope of potential harms?</td>
<td>63%</td>
<td>75%</td>
</tr>
<tr>
<td>Evaluate quality of evidence?</td>
<td>62%</td>
<td>70%</td>
</tr>
<tr>
<td>Discuss alternative options?</td>
<td>54%</td>
<td>58%</td>
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HealthNewsReview.org analysis of news & PR about health care interventions
Common flaws:

news release spin

• Using cause-and-effect language to describe observational studies
• Exaggerating effect size – usually by using relative risk data
• Definitive health claims made from preliminary studies and animal research
Does the language fit the evidence?

Language to avoid when describing observational studies

• Reduces risk
• Increases risk
• Prevents
• Cuts risk
• Lowers risk
• Improves
Does the language fit the evidence?

Accurate descriptive language

- “This was an observational study, not a trial.”
- “An observational study like this can’t establish cause and effect, so using terms like ‘protective effect’ is inaccurate.”
- “In this observational study some other factor might have decreased x. That doesn’t mean that the statistical link (association) isn’t real; it just means a study like this can’t prove that the y was the culprit.”

\[\text{correlation} \neq \text{causation} \]
• Only 23% of press releases mentioned any study limitations.
• Only 22% of news releases mentioned industry funding.
• Nearly half relied on relative risk descriptions that are “prone to exaggeration.”
• Summary: “Press releases do not routinely highlight study limitations or the role of industry funding. Data are often presented using formats that may exaggerate the perceived importance of findings.”
23% of news releases contained more direct or explicit advice than was found in their relevant journal articles.

Likelihood of news stories containing exaggerated advice was 2.4 times higher for studies whose news releases included exaggerated advice.

Odds that a news story would use stronger cause and effect language than the related journal article were 11 times higher if the news release also contained exaggerated causal claims.
Positive “spin” was identified in about half of press releases and news stories. The main factor associated with “spin” in press releases was the presence of “spin” in the journal article abstract conclusion.

In other words, a direct link from published study ➔ news release ➔ news story.

Who thinks about the reader, the consumer, the patient...at the end of this food chain?
The association between exaggeration in health related science news and academic press releases: retrospective observational study

<table>
<thead>
<tr>
<th>When press release had such exaggeration...</th>
<th>40% of press releases exaggerated advice</th>
<th>33% press releases exaggerated cause-and-effect claims</th>
<th>36% press releases made exaggerated leap from animal studies to humans</th>
</tr>
</thead>
<tbody>
<tr>
<td>58% of news stories echoed the exaggeration</td>
<td>81% of news stories echoed the exaggeration</td>
<td>86% of news stories echoed the exaggeration</td>
<td></td>
</tr>
<tr>
<td>When press release did NOT have such exaggeration...</td>
<td>17% of stories did not</td>
<td>18% of stories did not</td>
<td>10% of stories did not</td>
</tr>
</tbody>
</table>
Infoxication – Polluted stream of health news & info drowning the public
How did this.....

The synthesis and functional evaluation of a mitochondria-targeted hydrogen sulfide donor, (10-oxo-10-(4-(3-thioxo-3H-1,2-dithiol-5-yl)-phenoxy)decyln)triphenylphosphonium bromide (AP39)

....become this?
And all of this... > 500,000 results on a Google search!

Smell Of Flatulence May Reduce Risk Of Cancer, Stroke, Heart Attack And Dementia, Experts Find

The Huffington Post UK | By Rachel Moss
Posted: 14/07/2014 10:52 BST

Silent, not deadly; how farts cure diseases
The Guardian - 12 hours ago
A recent study from the University of Exeter has been reported as showing that smelling farts can cure cancer, as well as many other diseases. Although the study itself doesn't actually say this at any point, if farts do have healing powers it would have ...

Smelling farts could be the best thing you do today
CNET - by Anthony Domanico - Jul 11, 2014
But instead of being ashamed when you fart in public, you should ... and flatulence could reduce the risk of cancer, heart attack, strokes, arthritis ...
Concussion-Related Measures Improved in High School Football Players Who Drank New Chocolate Milk, UMD Study Shows

COLLEGE PARK, Md. — Fifth Quarter Fresh, a new, high-protein chocolate milk, helped high school football players improve their cognitive and motor function over the course of a season, even after experiencing concussions, a new preliminary University of Maryland study shows.

The study, funded through the Maryland Industrial Partnerships program and conducted by Jae Kun Shim, a professor of kinesiology in the School of Public Health, followed 474 football players from seven high schools in Western Maryland throughout the fall 2014 season.

“High school football players, regardless of concussions, who drank Fifth Quarter Fresh chocolate milk during the season, showed positive results overall,” said Shim. “Athletes who drank the milk, compared to those who did not, scored higher after the season than before it started, specifically in the areas of verbal and visual memory.”

Football players were tested before the season, after concussions and post-season using Immediate Post-concussion Assessment and Cognitive Testing, also called ImPACT™, a widely used computer-based evaluation for concussions. Overall, 36 variables for attention span, working memory, sustained and selective attention time, response variability, non-verbal problem solving and reaction time were measured in the study.
“Athletes who drank the milk, compared to those who did not, scored higher after the season than before it started, specifically in the areas of verbal and visual memory.”

--Jae Kun Shim, professor, University of Maryland
Release claiming chocolate milk improves concussion symptoms in student athletes is out-of-bounds

Reviewed by:

Rating: ★★★★★

Categories: University news release

Tags: concussion, dietary supplements, high school athletes

Concussion-Related Measures Improved in High School Football Players Who Drank New Chocolate Milk, UMD Study Shows
Excerpts of our prescient review:

• “Got facts? They are almost absent from this boastful news release.”

• “Perhaps the most worrisome aspect of this case is the status of the ‘study’ it is based on, which does not appear to have been independently reviewed or published.”

• “The release paints a picture of benefits that goes far beyond any specific research results that are provided. The most troubling comment comes from a local school official who says that based on this study the school district plans to provide this commercial milk product to all athletes, because ‘There is nothing more important than protecting our student-athletes.’“
We asked for more details but got none

6 days later we blogged, “Why won’t the University of Maryland talk about the chocolate milk/concussion study it was so eager to promote?”

We were being stonewalled, but clearly, the University was stunned as they looked further at our questions. Remember: no one had ever systematically reviewed news releases like this.
Then nationwide news coverage followed our lead....
Clearly, the University couldn’t run from this

So, just 8 days after our initial news release review, they announced an internal investigation.
3 months later...and after we’d written 9 articles about the PR fiasco

The University said it found:

“...a concerning lack of understanding of the basic principles of conflict of interest in research at all levels of the process. The principal investigator, as well as several others, expressed less concern for, and were perhaps less attentive to, the potential for a research conflict of interest in part because they felt that this project was in support of small business which is highly encouraged by the state and actively promoted by the university.”

The lead researcher did not declare a conflict of interest when his project received $200,000 from the Allied Milk Foundation
“There are simply too many uncontrolled variables to produce meaningful scientific results. We found this particularly troubling because students were used as subjects. (and) There is no institutional protocol for approval of press releases and lines of authority are poorly defined.”

The report found that the researcher was given default authority over the news release, and that he disregarded generally accepted standards as to when study results should be disseminated in news releases. It recommended that in the future:

“Press releases should never include study data or conclusions, even preliminary, until they have been subject to peer review and, under most circumstances, accepted for publication in an appropriate peer-reviewed journal or book. The strictest standards for peer review should be applied to research results that are based on human subjects or animals.”
15 recommendations to bring University in line with accepted norms

And it’s a safe bet that none of this would have come to light if our little non-profit watchdog effort hadn’t been looking at health care PR news releases & hadn’t stumbled onto this one.

How many other examples will we find?
Unprecedented offer of help introduced this month

• Rather than receiving our constructive criticism after your work is published, we’ll review a draft prior to publication.
• Send us a draft.
• We’ll ask 3 reviewers to analyze/comment.
• We’ll send comments back ASAP.
• No cost. No obligation to follow our advice.
• Just an attempt to help improve the final product.
Our slow rollout of this offer

• Wrote to 250 whose work we’ve reviewed
• Gave talk on this at Association of American Medical Colleges in Puerto Rico this month
• 4 individuals inquired
  – Freelancer works with 3 European medical groups
  – University staff writer
  – Owner of a PR firm
  – Independent communications consultant
Two releases reviewed so far

Feedback:

1. “We've reworked the release incorporating a number of your suggestions.”
2. “It is extremely helpful to get a view from ‘outside the bubble.’ There are often things which I miss, or which I hadn’t thought of.”
7 words you shouldn’t use in medical news | Intention-to-treat analysis
---|---
Absolute vs. relative risk | NNT or number needed to treat
Animal & lab studies | Non-inferiority trials
Biohype bibliography | Limits of observational studies
Commercialism | Odds ratios
Careful with composite endpoints | Off-label drug marketing
Resources for reporting on costs of interventions | Caveats about news from scientific meetings
Phases of drug trials | Single-source stories
Medical device approval | Statistical significance
FDA approval not guaranteed | Surrogate markers may not tell whole story
Another new feature – telling patient stories

• Man with glioblastoma thrilled by exciting treatment news, hopes then dashed as he got actual details
• Founder of a rare disease advocacy group on harm caused by misleading journal article title
• Migraine media mess, with patient advocate
• Breast cancer blogger criticizes celebrity breast cancer news
• Young breast cancer patient: what it’s like making decisions while conflicting news stories swirl about
“The trouble with people is not that they don't know, but that they know so much that ain't so. … I honestly believe it is better to know nothing than to know what ain’t so.”

JOSH BILLINGS
(PEN NAME OF HUMORIST HENRY WHEELER SHAW, 1818 – 1885)
With thanks for funding from The Laura and John Arnold Foundation