

GOOD QUESTIONS 3*

WHO IS RESPONSIBLE FOR CORRECTING MISINTERPRETATIONS?

Who should correct misinterpretations of a study about the health impacts of a treatment? If not the study's authors, then who?

The issue can be illustrated with a study of the risks of Type 1 Diabetes when using different types of infant formula (Knip et al. 2018). The study was done with infants who were highly susceptible to the disease on a genetic basis.

The study's objective was, "To test the hypothesis that weaning to an extensively hydrolyzed formula decreases the cumulative incidence of type 1 diabetes in young children."

The conclusion was, "Among infants at risk for type 1 diabetes, weaning to a hydrolyzed formula compared with a conventional formula did not reduce the cumulative incidence of type 1 diabetes after median follow-up for 11.5 years."

However, the National Institutes of Health misreported that study, twice, saying the study showed that infant formula is not linked to diabetes (National Institutes of Health 2018a, 2018b). On March 3, 2018 I wrote to NIH:

A report in NIH News in Health used the headline, "Infant Formula Not Linked to Diabetes (National Institutes of Health 2018)." However, the study on which this statement was based only compared one type of infant formula with another type, introduced after breastfeeding was ended. It did not compare either of them with breastfeeding, which is commonly recognized as the gold standard against which other methods of feeding should be compared. The NIH headline and the accompanying statement was misleading. Even if feeding with one infant formula does not increase diabetes risk compared with another infant formula, it is important to discuss the diabetes risks of both with the diabetes risks of breastfeeding.

NIH responded. "Thank you for your thoughtful note. We will keep this in mind for future articles."

They made corrections in a subsequent version of the story (National Institutes of Health 2018b). However, even this version did not make a clear distinction between the hypothesis that "infant formula made from cow's milk might cause children to develop type 1 diabetes" and the

* George Kent, Deputy Editor of *World Nutrition*, is also its Curator of Good Questions. This column is the third in the Good Questions series.

narrower hypothesis that “early exposure to the complex proteins in cow’s milk might lead the body to mistakenly attack the cells that make insulin.” The 2018 study was about the second of these questions, not the first.

Another version from NIH was not corrected (National Institutes of Health 2018c).

A Facebook post from NIH on March 24, 2018 (accessed at <https://www.facebook.com/nih.gov/posts/10155944591601830>), began with the assertion, “Infant formula is not linked to diabetes”.

There have been similar misinterpretations of the JAMA study in other media (Harris 2018; Sauerwein 2018; Shoup 2018).

It could be that both types of formula increased the incidence of type 1 diabetes. The JAMA study did not address that question. I wrote to the lead author of the study, saying:

In the attached email you will see a note I sent to NIH news and their response to me. The issue is a matter of concern not only because NIH News published a misleading report on your JAMA article, but a number of other popular press reports on your study also did similar things.

I would welcome comments from you and your colleagues on this point. Also, I think it would be useful if you sent a clarifying message to the relevant media outlets about how they interpreted your study for their readers.

I have not received a reply.

The idea that the introduction of infant formula of any kind might increase vulnerability to type 1 diabetes could be inferred from an earlier study by Knip and others. A table in their study says both short duration of breastfeeding and early introduction of cow’s milk predispose infants to type 1 diabetes. Longer duration of exclusive breastfeeding tends to be protective (Knip, Virtanen, and Åkerblom 2010, Table 1).

In the 2018 study, why did they compare the impacts of using two types of formula without also making a comparison with the option of using no formula?

Leaving misleading information about infant feeding uncorrected can increase the risks to infants. Misinterpretations require correction. Who will do it?

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