

## How do I debunk science reporting in the news?

### ANSWER KEY

List Becky and Nsikan's 6 tips for being a smart science news consumer.  
*Tips are shared throughout the video, keep track of them here.*

1. Be skeptical of catchy headlines making claims that seem outrageous
2. Follow the data to see if claims are supported
3. Not all study results can be generalized
4. Find an expert to help explain things
5. See who conducted the study to check for conflicts of interest
6. Make sure study is published in a peer-reviewed journal

What are some of the reasons Nsikan was skeptical of the article he read about the millennial horns study?

- Claim seemed "beyond too good to be true"/outrageous
- "Catchy viral headlines about popular issues like cellphones always give me pause"

Name **at least two issues** Nsikan found when he looked further into the millennial horns study.

1. Study didn't look at cell phone use at all/didn't prove anything about how cellphone use affects our bodies
2. Study was about bone spurs not horns, conflating the two is misleading
3. Study results were generalized to apply to all millennials/young people even though the sample was not representative or random. It was patients who had already gone to a chiropractor for pain, so very different from general young population
4. Scientist had an undisclosed conflict of interest

Nsikan stated that if the subjects of a study are both **representative** and **random**, then the things scientists learn about them can be generalized to make claims about a bigger group. What does it mean for a group of subjects to be:

**a. Representative**

The group is demographically representative of the whole; it's makeup is similar to the large group, but the size is just smaller

**b. Random**

The subjects in the group are chosen at random, researchers don't pick and choose who to include

Nsikan said it's important to look for the **source data**. What is that and why is it so important?

Source data is the actual raw data collected in a study. It's important to get this because the media reports might exaggerate or flat-out misreport it, like with the millennial horns study.

Why is it a problem that one of the scientists conducting this study about posture also sells posture pillows?

The study's results encourage people to improve their posture and he sells something that can do that. This is a conflict of interest, meaning that the scientist's personal life conflicts with his professional life.

This problem is called a **conflict of interest**. Based on this example, define a conflict of interest in your own words.

When someone's personal life conflicts with their professional life in a way that might affect their professional decisions.

Further thinking:

This story went viral partly because cellphone use is a topic that interests almost everyone. What are some topics that affect your life enough to click on a science article about them?

How can you make sure you're not being fooled by bad science reporting on these topics? **Pick two** of Becky and Nsikan's tips and explain how you might use them in real life.

Why do you think so many media outlets reported on the millennial horns study instead of digging deeper and realizing that it wasn't reliable like Nsikan did? Do you think "viral" social media culture has to do with it?