| Question | Preferred Answer | | Raises a Red Flag | |
|---|---|---|---|---|
| 1. What is the basis for the story? | Hypothesis test | ☐ | Untested assertion. No data to support claims in the article. | ☐ |
| 2. What is the affiliation of the scientist? | Independent (university or government agency) | ☐ | Employed by an industry or advocacy group. Data and conclusions could be biased. | ☐ |
| 3. What is the funding source for the study? | Government or nonpartisan foundation (without bias) | ☐ | Industry group or other partisan source (with bias). Data and conclusions could be biased. | ☐ |
| 4. a. **If the hypothesis test is a correlation:** Did the researchers attempt to eliminate reasonable alternative hypotheses? | Yes | ☐ | No. Correlation does not equal causation. One hypothesis test provides poor support if alternatives are not examined. | ☐ |
| b. **If the hypothesis test is an experiment:** Is the experimental treatment the only difference between the control group and the experimental group? | Yes | ☐ | No. An experiment provides poor support if alternatives are not examined. | ☐ |
| 5. Was the sample of individuals in the experiment a good cross-section of the population? | Yes | ☐ | No. Results may not be applicable to the entire population. | ☐ |
| 6. Was the data collected from a relatively large number of people? | Yes | ☐ | No. Study is prone to sampling error. | ☐ |
| 7. Were participants blind to the group they belonged to or to the "expected outcome" of the study? | Yes | ☐ | No. Research participant expectation can influence results. | ☐ |
| 8. Were data collectors or analysts blinded to the group membership of participants in the study? | Yes | ☐ | No. Observer bias can influence results. | ☐ |
| 9. Did the news reporter put the study in the context of other research on the same subject? | Yes | ☐ | No. Cannot determine if these results are unusual or fit into a broader pattern of results. | ☐ |
| 10. Did the news story contain commentary from other independent scientists? | Yes | ☐ | No. Cannot determine if results are unusual or if the study is considered questionable by others in the field. | ☐ |
| 11. Did the reporter list the limitations of the study or studies on which he or she is reporting? | Yes | ☐ | No. Reporter may not be reading study critically and could be overstating the applicability of the results. | ☐ |