Headline Decoder: 8 Bias Traps

Eight common traps that make a health headline sound stronger than the evidence. Use it whenever a study says one thing is linked to another.

THE EIGHT TRAPS

Trap	What goes wrong	Ask
Selection bias	Who joins or stays in a study makes the group unrepresentative.	Who was left out?
Healthy-user bias	Health-conscious people differ in many ways that cannot be fully adjusted for.	What else differs?
Recall bias	People remember what they ate last year poorly, especially red meat.	How was it measured?
Performance bias	People change when watched, and one group may get more attention.	Was care equal?
Confounding	Hot chocolate and ski accidents both rise in cold places.	What links both?
Reverse causation	People getting metabolically ill may switch to diet soda first.	Which came first?
Multiple looks	Ten coin flips make at least one heads almost certain.	How many outcomes?
Publication bias	Negative studies are less likely to be published.	Was it registered?

A LINK IS A REASON TO ASK

Large observational studies often report risks about 30% higher for many outcomes, but the groups also differ in smoking, exercise and sleep. A link is a reason to ask a question, not proof of cause.

QUESTIONS TO ASK

- [ ] Was this a randomized trial or only an observational link?
- [ ] What else could explain the pattern?
- [ ] How big is the change in absolute terms?
- [ ] Has anyone repeated the result?

Sources: Teaching episode on reading scientific studies, 2021. Our own checklist; the examples are simplified and do not judge any food.

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