

NUTRINDX WHITE PAPER

How to read nutrition science

Six habits for telling a strong claim from a weak one. A NutrIndx explainer.

Hazard is not risk

A hazard is something that could cause harm in principle; risk is the chance it actually does at real-world exposure. Agencies such as IARC classify the strength of evidence that something can cause cancer (a hazard judgement) — not how much it raises your risk at normal intake. “Possibly carcinogenic” describes evidence, not dose.

In a dish is not in a body

In-vitro results (cells in a dish) and animal studies are useful early signals but often do not translate to people, frequently because lab doses are far higher than any realistic human intake.

Correlation is not causation

Observational studies can only show associations; randomized controlled trials are needed to support cause and effect. A headline built on an observational study should be read as “linked to,” not “causes.”

The dose makes the poison

Almost anything is harmful at a high enough dose and harmless at a low one. Regulators find the highest no-harm dose in animals and divide by safety factors (commonly 100) to set an acceptable daily intake for humans.

Weigh the evidence, and who paid for it

A single small study is a starting point, not a conclusion; systematic reviews and meta-analyses carry more weight. Note funding and conflicts of interest — industry-sponsored trials are not automatically wrong, but they warrant extra scrutiny.

A simple checklist

Ask: human or animal? Randomized trial or observational? How many people, and for how long? Replicated elsewhere? Realistic dose? Who funded it? These six questions separate most strong claims from weak ones.

References

- 1IARC Monographs Preamble (hazard identification framework). International Agency for Research on Cancer.
- 2Ioannidis JPA. Why most published research findings are false. PLoS Medicine, 2005.
- 3Hill AB. The environment and disease: association or causation? Proc R Soc Med, 1965.