How to read a tea health study

From the teas.co.uk wiki

"Green tea burns fat." "Chamomile treats anxiety." "Black tea lowers blood pressure." Behind most of those headlines is a real piece of research that says something much narrower. Five questions will usually tell you what.

1. What was actually tested?

This is the big one. Very often it is **not a cup of tea**:

- an **extract** at a concentration you could not drink,
- an **isolated compound** such as EGCG,
- an **enteric-coated oil capsule**, designed to bypass the stomach,
- **cells in a dish**, or **mice**.

A famous example: most peppermint research concerns enteric-coated peppermint oil capsules for IBS, not peppermint tea. The two are not interchangeable, and the site's own peppermint and reflux page exists because of that gap.

Write down the form, the dose and how long it was taken for. If the study used 800mg of extract daily for eight weeks, "a cup of tea" is not the same intervention.

2. Who was it done on, and how many?

Twelve healthy young men in a lab for a week is a different thing from 2,000 people followed for ten years. Small, short studies generate interesting signals; they do not settle questions.

NCCIH's guide to reading research explains what different study designs can and cannot answer. NCCIH: types of research

Study type	Can tell you	Cannot tell you
Cells in a dish	What happens in that dish	What happens in a person
Animal study	What happens in that animal model	The human dose or effect
Observational study	That two things occur together	That one caused the other
Randomised trial	How the intervention compared with a control	That it applies to everyone

3. Association or cause?

If a study finds that people who drink more tea have healthier hearts, the careful wording is "tea drinking was associated with", because tea drinkers may differ in dozens of other ways: exercise, diet, smoking, income,

sleep. Good studies adjust for what they can, and still cannot adjust for everything.

Words worth noticing: *linked to*, *associated with*, *may*. They are doing real work.

4. What is the actual size of the effect?

"20% lower risk" sounds enormous until you see the numbers. If the risk went from 10 in 100 to 8 in 100, that is 2 people in 100, and "20% lower" is the same fact dressed up.

Always ask: 20% of what?

5. What does the whole picture say?

One study is a data point. A systematic review that pools many studies is stronger evidence, and even then the quality of the included studies matters.

Two real examples worth knowing about, both of which are more modest than their headlines:

- A 2009 randomised trial of **chamomile extract** in people with generalised anxiety disorder found a modest benefit. It tested a standardised extract in a clinical population, not a bedtime mug. Study record
- A trial of **peppermint oil** in IBS did not show a significant benefit on its primary outcomes, while some secondary measures improved. Study record

What this means for tea

Tea is a pleasant drink with a long history and a large, mixed research literature. It is not a medicine, and any page (including ours) that tells you a cup of something treats a condition is going beyond the evidence.

If you are dealing with a health problem, talk to a pharmacist or GP. Then drink the tea you enjoy.

Related: tea polyphenols: what the evidence really says and is tea actually healthy.

Common questions

Does peer review mean it is true?
It means the paper passed review by other researchers. Peer-reviewed work is still corrected, contradicted and occasionally retracted.

Is a bigger study always better?
Bigger helps, but design matters more: a large badly designed study can mislead more confidently than a small good one.

Why do studies keep contradicting each other?
Different populations, doses, forms and outcomes. That is normal science, not a scandal.

Who funded it?
Worth checking. Industry funding does not invalidate a study, but it belongs in your assessment.

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