

HowTo: Debunking Junk Internet Health Claims

A field guide to spotting bad evidence, borrowed authority, and the scams built on both.

THE CORE ANCHOR

Legitimate science is boring and transparent.

Scams are exciting and mysterious.

HOW TO USE THIS BOOK

This eBook is the reference copy of #PodSaveChocolate episode 228. The podcast walks through ten flags to be on the lookout for out loud, with examples; these pages let you keep the flags, the verification steps, and the case study within reach when you meet the next viral claim.

Part One is the checklist: ten flags, each with what it is, how the deception works, and the one question that exposes it. **Part Two** takes apart the two flags that do the most damage: borrowed authority and extraordinary claims. **Part Three** is a toolkit you can use in a browser tab in under five minutes. **Part Four** applies all of it to a single figure whose work has been rejected by the scientific community, and **Part Five** is a walk-through you can practice on.

None of it requires a science degree. It requires only the habit of asking where the evidence is, and noticing who gets paid when you believe it.

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PART ONE

The Ten Flags

Encountering one flag is a reason to slow down. ***Two or three together, on the same claim, from the same source, is a pattern***, and the pattern is almost always commercial.

01 Lack of peer review

What it is. The claim exists only on a blog, a YouTube video, a company website or a paid webinar, never in a journal where specialists can test it.

Why it works. Publication looks like publication. A slick PDF, a citation list and a lab-coated presenter reproduce the surface of research without any of the scrutiny that makes research worth trusting.

The question that exposes it. Where is this published, and who reviewed it before it went out?

02 Anecdotal evidence as proof

What it is. Personal testimony stands in for a controlled study. Thirty people say it worked; nobody counted the people it did nothing for.

Why it works. Stories are persuasive in a way that statistics are not. A single vivid recovery outweighs a table of null results, even when the table describes thousands of people.

The question that exposes it. How many people tried this, and what happened to the ones who aren't on camera?

03 Cherry-picking data

What it is. The studies that agree are cited; the studies that contradict are left out, or dismissed as compromised.

Why it works. Every citation is real, so the argument survives a spot check. Only the shape of the whole literature is missing, and that is the part a lay reader cannot see.

The question that exposes it. What does the rest of the research on this say?

04 Correlation confused with causation

What it is. Two things occur together, so one is said to cause the other. Seed-oil consumption rose and so did obesity, therefore seed oils cause obesity.

Why it works. The reasoning feels like common sense, and a chart with two rising lines is far easier to follow than the confounders that explain both.

The question that exposes it. What else changed at the same time, and has anyone tested this directly?

05 Unfalsifiable claims

What it is. The claim is built so that no result could ever count against it. If it didn't work, you didn't follow the protocol; if the studies disagree, the studies were suppressed.

Why it works. Immunity to disproof reads as strength. Conspiracy framing does the same job: it converts the absence of evidence into evidence of a cover-up.

The question that exposes it. What result would make the person making this claim admit they were wrong?

06 Overgeneralized conclusions

What it is. A result from a handful of subjects (or from cells in a dish, or from mice) is extended to everyone.

Why it works. The study is genuine, and the leap happens in the headline rather than the method. Effects in cells and animals frequently vanish in humans eating ordinary food.

The question that exposes it. How many people were studied, and were they people at all?

07 Undisclosed conflicts of interest

What it is. The person describing the problem sells the solution, and doesn't mention it, or mentions it only after the argument has landed.

Why it works. The diagnosis arrives dressed as public service. By the time the product appears, you have already accepted the premise that you need one.

The question that exposes it. Who profits if I believe this?

08 Appeal to authority without evidence

What it is. Fame or a credential is offered in place of data; often a real credential, in an unrelated field.

Why it works. Credentials are a reasonable shortcut most of the time, and we rarely check whether the expertise matches the topic. A surgeon speaking about nutrition still sounds like a doctor.

The question that exposes it. Is this person qualified in *this* subject, and where is their data?

09 Extraordinary claims without extraordinary evidence

What it is. The bigger the promise, the thinner the proof: one mechanism reverses most disease, one supplement fixes it, and the support is a poster abstract.

Why it works. Sensational claims travel further than measured ones, and the size of the promise distracts from the size of the evidence behind it.

The question that exposes it. Does the evidence match the size of the claim?

10 Missing methodology or controls

What it is. No description of how the work was done, who took part, or what the comparison group was. Sometimes there is no comparison group at all.

Why it works. Numbers without methods still look quantitative. Without a control group, though, no conclusion can be drawn from them, a point specialists make repeatedly about this kind of research.

The question that exposes it. Compared with what?

PART TWO

Anatomy of a Scam

Two flags do most of the work in a commercial scam: borrowed authority, which buys trust, and the extraordinary claim, which creates the need. *Everything else is packaging.*

Authority traps

Borrowed credibility. Vague references such as “doctors hate this”, and PhDs in unrelated fields. Stock footage of laboratories with no stated affiliation. Medical credentials used well outside the domain they were earned in.

Conflicts of interest. The authority sells the product they recommend, often as a multi-product ecosystem designed to create dependency, with the financial relationships left undisclosed.

Authority by association. A single news appearance described as an endorsement, misleading celebrity association, actors in lab coats, or real clinicians speaking outside their specialty.

Extraordinary claim tactics

The single study. One small, un-replicated result carries the whole argument, and often it is a conference poster or abstract presented as if it were a published trial.

Testimonial tsunami. Cherry-picked or paid anecdotes create the appearance of evidence, comment sections are inflated with generic praise, and complaints are hidden.

Hidden research. Data is withheld for “proprietary reasons” or because it is supposedly suppressed by industry; full methodologies never appear.

Eight manipulation signals

Artificial urgency and scarcity — Countdown timers, “limited stock”, “click before the video ends”. Inhibits critical thinking by triggering fear of missing out.

Deceptive guarantees — Money-back promises with impossible fine print or unreachable support. Builds false confidence while making refunds nearly impossible.

Manufactured authority — Actors in lab coats, clinicians outside their specialty, “research” with no stated affiliation. Credibility without substance.

Conspiracy framing — “The government and the doctors are hiding this.” Makes the claim unfalsifiable and casts the seller as the hero.

Stacked bonuses and upsells — Low-value digital freebies and post-checkout add-ons. Obscures the real price and complicates any refund.

Comment inflation — Bot accounts and repetitive praise manufacture the impression of widespread endorsement.

Multi-account marketing — One company running five or more accounts so a single voice looks like several independent ones.

The fear-and-reveal sequence — Hidden danger → conspiracy → secret solution → limited time → buy now. Emotions sequenced to bypass rational decision-making.

PART THREE

The Verification Toolkit

Most claims collapse in about five minutes of checking. These are the tabs to open.

Research databases

- **Google Scholar** (scholar.google.com): peer-reviewed research.
- **PubMed** (pubmed.ncbi.nlm.nih.gov): biomedical and health literature.
- **Web of Science or Scopus**: citation tracking.

Fact-checking

- **Snopes**: viral claims, urban legends, health misinformation.
- **FactCheck.org**: political and general claims.
- **Health-specific**: Mayo Clinic, Cleveland Clinic, or journal summaries.

Images and video

- **Reverse image search** (Google Images, TinEye): identifies stock photography, stolen images and recycled before-and-afters.
- **Video source tracking**: establishes whether that laboratory footage is a real lab or a stock library.

Authority

- **State medical board sites:** licenses, specialties, disciplinary records.
- **Search the credential itself:** does the degree exist, and is it in the field being discussed?
- **CrossRef** (crossref.org): confirms a cited publication actually exists, and who wrote it.

FIVE QUESTIONS TO ASK OF ANY CLAIM

- 1 Where is the peer-reviewed clinical trial in humans?
- 2 Who profits if I believe this?
- 3 Does this contradict what the major health organizations say?
- 4 Can the claim be proven false, or is it unfalsifiable?
- 5 Why is this being sold by the person making the claim?

PART FOUR

Case Study: Lectins, Olive Oil and Nuts

The clearest way to learn the signs is to watch them operate together. The lectin claims associated with Dr Gundry, a real cardiothoracic surgeon, have been classified as pseudoscience by the medical and nutritional communities, and the surrounding business shows nearly every sign in Part One at once.

The point is not that it's one person, it is the structure: a credential, a frightening mechanism, thin evidence, and product(s) waiting at the end.

The credibility facade

What looks legitimate. An MD from the Medical College of Georgia. A genuine career as a cardiothoracic surgeon with published research in peer-reviewed surgical journals. Former faculty at Loma Linda University.

What the flags catch. The nutrition claims sit outside that training. The lectin thesis is classified as pseudoscience by nutrition and medical specialists. The real credential is doing work it never earned. This is flag eight: authority in one domain borrowed for another.

The lectin claim

The thesis. Lectins – proteins found in beans, grains and many vegetables – are plant toxins responsible for most human disease. The solution offered is a lectin-free diet, *plus supplements sold by the person making the claim.*

The consensus. Harvard epidemiologist Qi Sun's position is that lectins "are not a particular health concern," and that Americans do not consume enough of them to cause harm.

- The studies showing lectin harm were conducted in cells, animals or plants, not in humans eating meals.
- Removing lectin-containing foods removes beans, grains and vegetables: among the healthiest foods we eat, and a route to malnutrition.
- Population data points the other way. The longest-lived populations eat legumes regularly, and whole-grain eaters show lower rates of heart disease, cancer and all-cause mortality.

How the evidence is misrepresented

1. Peer review that isn't. The work is described as published in peer-reviewed medical journals, but the primary citation is a conference poster abstract rather than a full clinical trial. Nutrition researcher T. Colin Campbell's assessment:

His "peer-reviewed" medical publication cited is an abstract published in the journal supplement for a poster presentation ... there is no detailed publication of his methods, his subjects, his results ... His glowing description of this abstract is misleading.

2. Citations that don't say what they're said to say. Research on kidney staining with lectins is cited as evidence that lectins cause kidney disease; the paper was about using lectins as a medical testing tool, not about harm.

3. No control groups. Robert Eckel, a past president of the American Heart Association, has stated that no conclusions can be drawn from this research because there are no control groups. That is flag ten, and it is fatal on its own.

The supplement empire

Product	Price	Claimed benefit
Lectin Shield	\$79.95/mo(~\$960/yr)	Blocks lectins
Total Restore	High markup	Gut health, at ineffective doses
BioComplete 3	Premium	Probiotic, unsupported claims
Firm + Sculpt skin care	\$120+	Anti-aging, no evidence

The mechanism is the whole business: invent the problem, then sell the only solution. Problem creation, solution selling, profit extraction. As one critic put it: for something like eight or nine thousand dollars a year, you can lick those lectins.

Nine accounts, one voice

At least nine social media accounts promote the products: Gundry MD, Dr. Gundry Energy and Health, Gundry MD – Nutrition, Gundry MD – Total Restore, Gundry MD – Bio Complete 3, and five more. To a viewer scrolling, that reads as several independent sources agreeing. ***It is one marketing machine: comment inflation and manufactured authority, at scale.***

Urgency as a format

Hooks like “NEVER EAT THESE THREE FOODS!” over thumbnails unrelated to the content introducing hour-long “presentations” that are extended infomercials, closing with “ACT NOW! SUPPLIES ARE LIMITED!” ***The scarcity is invented; its function is to prevent you from stopping to check.***

The vaccine abstract, November 2021

A poster abstract claimed that mRNA vaccines “dramatically increase” inflammation and are associated with heart disease. It was not peer-reviewed before publication, contained no statistical analysis, and relied on anecdotal data. The American Heart Association issued an expression of concern warning that the abstract may not be reliable, and Reuters Fact Check concluded it does not provide reliable evidence of vaccine risk.

This is flag #9 in its most consequential form: an extraordinary health claim on the thinnest possible evidence, published where fear travels fastest.

The olive oil: “30x polyphenols”

A Moroccan olive oil is marketed as containing “up to 30 times” more polyphenols than ordinary supermarket oil. “Up to” is a ceiling, not a measurement, and the comparison is against conventionally grown oils that can be very low; in effect, “better than the worst oil you could buy”.

Independent testing found the oil averaged 586 mg/kg of total polyphenols: genuinely high, but nowhere near thirty times any specific oil. Polyphenol content also varies with variety, ripeness, pressing and storage, so a fixed multiplier is a number that never has to be defended.

Then there is the oil itself. Testing published by Olive Oil Times in 2021 found:

- **Chemistry.** 561–612 mg/kg total polyphenols, elevated hydroxytyrosol, and almost no oleocanthal, the compound that gives high-polyphenol oil its bitter, peppery character.
- **Sensory panel.** Classified as *lampante*, the defective grade under International Olive Council standards, with pronounced fustiness, muddy sediment and rancid character. One assessor called it one of the worst oils they had ever assessed.
- **Regulatory concern.** The mismatch between chemistry and taste is consistent with refined oil with hydroxytyrosol added back in. Under EU Regulation 29/2012 extra virgin olive oil cannot contain additives.

No batch-level certificate of analysis published in the five years since that testing, no harvest date on the bottle, and a three-year best-before date, where the International Olive Council recommends a maximum of eighteen months and the North American Olive Oil Association calls three-year dating unscrupulous.

Polyphenol content degrades 40–60% between months eighteen and twenty-four. A buyer today cannot know when the oil was pressed or whether it resembles anything that was ever tested.

The nuts: an arbitrary line

The advice is not “avoid nuts”. It is: avoid almonds with peels, cashews, chia and pumpkin seeds; walnuts, macadamias, hazelnuts and pistachios are approved. The stated reason is lectin content.

Nuts are among the healthiest foods people eat: associated with lower cardiovascular risk, lower cancer risk, lower all-cause mortality and better metabolic health. That holds for the nuts on the avoid list too. Harvard’s nutrition research, the Mediterranean diet literature and the Blue Zone studies all find that regular nut eaters, almonds included, live longer.

The line between approved and avoided is arbitrary: macadamias are recommended and cashews are not, though both contain lectins. And the polyphenol and heart-health argument used to praise walnuts and macadamias applies equally to the almonds and cashews being discouraged. That is cherry-picking in both directions at once.

Then the circle closes. A supplement, Lectin Shield at \$79.95 a month, is sold to protect you when you do eat high-lectin foods. Claim the danger, sell the shield, and the underlying question of whether lectins harm anyone at normal doses never has to be answered.

Every flag, one case

Appeal to authority An MD credential legitimizing claims outside its field.

Extraordinary claims Lectins cause most disease; a diet reverses it.

Weak evidence Conference posters as research; misrepresented citations.

Missing controls No control groups, no published methods, no testing.

Manufactured urgency Hour-long videos, countdown timers, “limited” offers.

Conflict of interest Expensive supplements sold to cure an invented problem.

Multi-platform spam Nine-plus accounts posing as independent endorsement.

Fear-mongering Healthy foods reframed as poison, wrapped in conspiracy.

PART FIVE

Practice

The scenario. An advertisement claims that a polyphenol-rich olive oil “restores youthful vitality”. You have five minutes and a browser.

Google Scholar. Search “olive oil polyphenols health benefits”. You will find legitimate research on the Mediterranean diet and cardiovascular health, and none of it claims that polyphenol level alone determines an oil’s value. Quality, freshness, and the rest of the diet matter more.

Reverse image search. Run the before-and-after photographs and the lab certificates in the ad. Expect stock photography and claims that cannot be traced.

Follow the money. \$79.95 a month for a supplement to neutralize lectins, versus \$0 for simply not eating the foods said to contain them. If the danger is real, why is the answer a subscription?

Ask the hard question. Where is the published, peer-reviewed clinical trial showing that this oil, or this supplement, reverses aging or prevents disease in humans?

The answer is that there isn’t one. That absence is the finding, and it took five minutes.

PART SIX

Boring, Transparent, Humble

Real science is unsatisfying to watch. It hedges. It reports confidence intervals, names its limitations, and revises its conclusions when better data arrives. The caveats are not weakness; they are the signature of someone who expects to be checked.

Junk science has none of that texture. It is certain, thrilling, and always arrives with something to buy. Certainty is the tell.

So:

Use the tools.

Ask who profits.

And *don't share it before you've checked it*: the sharing is what the whole machine runs on.

Legitimate science is boring and transparent.

Scams are exciting and mysterious.