Journalist, investor or curious observer

Check what actually changed before repeating a headline. Follow announcements back to primary evidence, retain dates and qualifications, and separate scientific findings from regulatory status and commercial interpretation.



Ruth / fictional visitor

YOUR LEARNING JOURNEY

Create a headline-verification brief that separates an announcement from a measured result and from its commercial interpretation.

Separate anecdotes from comparative evidence, read the study critically, then check the original records.

Industry information is context, not investment advice. A sponsor announcement, regulatory milestone and published clinical result are different events; none alone predicts an individual outcome.

Open the current online guide

Sources and related guides remain accessible on the website. All role paths are open to every reader.

Portrait: fictional illustration, not a real patient, professional reviewer or endorsement. This handbook provides education, not individual medical or legal advice.

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Read in order for a foundation, or use the linked contents to find a specific topic. Page numbers refer to this edition.

SUGGESTED START

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Read a claim without losing its limits

Begin with one answerable question. “Does it improve wellbeing?” covers many different things. Pain, sleep, muscle strength, a blood measurement and hospital admission are separate outcomes. Write the exact substance, the people studied, the comparison and the outcome before deciding whether a finding answers your question.

An online experience is a report of what someone noticed. It can identify questions worth investigating, including possible harms. It usually cannot separate the substance from changes in training, food, other treatments, expectations or the natural course of a problem. Many similar posts still do not create a controlled comparison. Popularity and scientific certainty are different measurements.

Laboratory and animal experiments can investigate mechanisms and generate hypotheses. Human observational studies examine associations in real settings, with potential differences between groups. Randomized comparisons are designed to reduce those differences, but their usefulness still depends on execution, size, follow-up and the outcomes measured. The study design must fit the question; a small trial is not automatically a complete safety record.

Keep benefit and harm in the same notes. Record how many people were observed, how long they were followed, what events occurred and whether investigators considered them related to treatment. An event after treatment does not by itself establish causation. Conversely, an uncertain causal connection is not a reason to erase a serious event.

When reading numbers, retain the denominator. A hypothetical change from 2 in 100 to 1 in 100 is a one-percentage-point absolute reduction and a 50% relative reduction. Both descriptions concern the same comparison. Ask for uncertainty around estimates and whether the result was planned or selected from many analyses. A headline alone rarely supplies all of this.

Worked learning example

A post says a two-compound “stack” improved recovery. Studies of each ingredient separately cannot establish the effects or risks of that combination. Record the stack claim as a question, then look for research on that exact combination, outcome and population. An absent study means the question remains unanswered.

READ THE SOURCE

Testing Treatments - free evidence-literacy book

Read a study as a complete record

Begin with the primary paper and registry where available. A registry describes a planned or reported study; its presence does not prove benefit. Compare the registered population, outcomes and timing with the published account. Preserve publication date, study period and later update date as different facts.

Write the research question using population, intervention, comparator and outcome. Include species, formulation, route and duration. A comparison against placebo answers a different question from a comparison against an active medicine. A study in one population may leave other groups unrepresented.

Look at how participants entered the analysis. An estimate based on everyone assigned may differ from one describing participants who remained on treatment. Missing observations and treatment discontinuations can affect interpretation. Record the paper’s stated analysis and assumptions instead of merging estimates from different methods.

Check whether an outcome was primary, secondary or exploratory. Multiple measurements increase the opportunity for chance findings; the analysis plan and adjustments matter. A confidence interval describes uncertainty under the analysis assumptions. Statistical significance does not by itself establish a meaningful improvement in daily life.

Read withdrawals, adverse events and serious events alongside benefits. Retain reported causality assessments and comparator counts. Distinguish no event observed from evidence that an event cannot occur. Small studies and short follow-up may have limited ability to characterize uncommon or delayed harms.

Finally, separate the result from its interpretation. Note sponsor involvement, available methods and missing details. A sponsor release can report a development before full results are public; attribute it clearly and leave unresolved methods visible until the paper or registry supplies them.

Worked learning example

A headline reports one percentage while a paper supplies two estimates under different analysis assumptions. Label each estimate with its population and method; do not choose the larger number simply because it makes a stronger headline. The comparison is only meaningful when the definitions travel with the numbers.

READ THE SOURCE

Testing Treatments - evaluating treatment evidence

Know which product the evidence describes

A molecule name is a starting point, not a complete product description. Record the active ingredient, chemical form, formulation, route, manufacturer or compounder and the document date. Products using similar names may differ in ways that matter. A result for one preparation does not automatically establish the performance of another.

FDA approval concerns a particular drug product and its authorized labeling. A facility registration, product listing or National Drug Code does not mean FDA has approved the product. A company can have legitimate paperwork for one activity without every product or claim being authorized.

Compounded drugs are prepared under a different framework and are not FDA-approved. They can serve particular patient needs, but FDA does not review each compounded product for safety, effectiveness and quality before marketing in the way it reviews approved medicines.

Investigational means a product or use is being studied; it does not mean success is established. Research-use labeling concerns a claimed purpose and cannot establish suitability for human use. Keep regulatory status, analytical quality and clinical evidence as three separate entries. None can substitute for the other two.

Build a simple comparison: what the paper studied, what the official label describes, and what the current document or service names. Mark missing information rather than filling it with a brand assumption. This comparison is useful for a patient preparing questions and for a professional reviewing a brochure.

Worked learning example

Two documents use the same ingredient name. One describes an approved finished medicine; the other describes bulk powder with a laboratory report. The shared name does not make the powder an approved medicine. Ask what each document actually establishes before carrying claims between them.

READ THE SOURCE

FDA - Is It Really FDA Approved?

FDA - Compounding and FDA: Questions and Answers

Pharmacy types

Section 503A covers compounding for an identified individual patient, including by a pharmacist in a state-licensed pharmacy, subject to its conditions. Section 503B covers registered outsourcing facilities that remain subject to current good manufacturing practice (CGMP), a system of manufacturing quality requirements. These facilities can supply office stock for healthcare providers without an individual prescription, subject to applicable conditions. Neither pathway makes a compounded product FDA-approved. Registration is not approval of the facility's products. The linked Pharmacist guide explains the differences in more depth.

Sources for this addition checked October 31, 2026.

READ THE SOURCE

FDA - 503A and 503B provisions

FDA - Compounding questions and answers

Continue: Pharmacist guide

What "gray market" leaves unexplained

"Gray market" is a loose conversational label, not a quality grade or a legal conclusion. It can blur several different issues: an unapproved product promoted for human use, an authentic product outside a documented supply chain, a counterfeit identity, misleading research labeling, or a preparation that does not meet a compounding pathway's conditions. Name the actual question before deciding what a document or testimonial proves.

A research-use statement describes a claimed purpose; it does not automatically settle intended use. In a March 31, 2026 warning letter to Gram Peptides, FDA explained that website evidence established intended human use despite research-only and not-for-human-consumption disclaimers. This is an example of FDA's stated enforcement findings, not a final court judgment or a claim about the company's later status. The broader lesson is to read the surrounding claims and presentation, not a disclaimer in isolation.

Counterfeit and unapproved are also different concepts. Counterfeit identity concerns a product falsely represented as authentic. Unapproved status concerns the absence of applicable approval. Lawfully compounded medicines are themselves not FDA-approved, so "unapproved" alone does not describe every applicable legal condition. Conversely, calling something compounded does not establish that it meets those conditions. Classification requires the exact product, source, claims and regulatory context.

Chemical names require precision. On its current GLP-1 concerns page, FDA states that retatrutide and cagrilintide cannot be used in compounding under federal law. The same page distinguishes semaglutide sodium and acetate from the active ingredient in approved medicines and says the agency is unaware of a lawful basis for their compounding use. These are product-specific statements, reviewed October 31, 2026; do not generalize them to every peptide, salt or jurisdiction.

A separate FDA clarification dated April 1, 2026 discusses restrictions on preparations that are essentially copies of commercially available drugs. It explains that adding another active ingredient does not automatically avoid those restrictions. That dated statement should remain dated: it is not an independently checked live shortage-database result. An April 30, 2026 announcement proposing exclusion of three GLP-1 substances from the 503B bulks list was a proposal, not a final decision.

For an educational review, record exactly what is known: the named item, original source, date, claimed use and unresolved identity or quality questions. Distinguish a reported adverse event from proven causation and a compelling anecdote from a controlled study. Neither a disclaimer nor a dramatic personal story turns an uncertain product into a verified clinical option.

Illustrative case: "research only" beside human promises

A page says research only while its surrounding language promises personal recovery or weight loss. A reader should record the tension between those messages and examine the applicable rules. The footer alone cannot answer whether the product is being marketed for human use.

READ THE SOURCE

FDA - Gram Peptides Warning Letter, March 31, 2026

FDA - Concerns with Unapproved GLP-1 Drugs

FDA - Compounding Questions and Answers

FDA - Compounding Clarification, April 1, 2026

FDA - Proposed 503B Exclusions, April 30, 2026

Explain a claim with its evidence attached

A reader receives a message from the complete presentation: headline, image, testimonial, spoken words and qualifications. Write down the actual impression before judging the evidence. A document titled “education” can still communicate a product benefit or sales claim.

Keep a claim ledger with the exact wording, intended audience, primary source and relevant limits. Record the population, product, outcome and date. Attach a decision: supported as written, needs narrowing, or unanswered. This makes review repeatable when a sentence moves from a website to a printed handout.

Use plain language without removing uncertainty. Explain an unfamiliar term when it first appears. Put a consequential limitation beside the claim it qualifies. A small disclaimer elsewhere cannot repair an unsupported headline. Separate community reports from controlled evidence and company statements from independently established findings.

Give each document a content owner, version and review date. Preserve sources and consequential limitations when adapting it for another audience. Keep a change record so later readers can identify which claim changed and why.

Worked learning example

An illustrated handout combines a vial photograph with “clinically proven recovery” while its citation is an animal experiment. The evidence does not support that human claim. A useful revision describes the animal study and its limits directly, and removes the unsupported promise.

Changed claims about presentation checked against FTC guidance October 31, 2026.

READ THE SOURCE

FTC - Health Products Compliance Guidance

Primary-source toolkit

ClinicalTrials.gov: find a study’s registered design, eligibility, outcomes, status and posted results when available. Compare record versions with the paper. A registration entry alone does not establish a favorable result or clinical benefit.

Drugs@FDA: locate approval records, reviews and approved labeling for covered drug products. Match the application, product and date. It does not validate every similarly named preparation.

DailyMed: read company-submitted labeling currently in use. It includes approved and unapproved products, and its labeling may differ from the most recent FDA-approved version. Presence in DailyMed is not proof of approval; check Drugs@FDA for that question.

PubMed: locate biomedical citations and follow them to the actual study. An abstract is a starting point, not a replacement for methods, full results and limitations. Being indexed is not an endorsement of a conclusion.

FDA warning-letter database: find the agency’s stated concerns, letter date and any linked responses or closeouts. The database warns that later interactions may change the status of the issues. A missing letter is not a certificate of compliance.

Sources for this addition checked October 31, 2026.

READ THE SOURCE

ClinicalTrials.gov

Drugs@FDA

DailyMed - Scope and limitations

PubMed

FDA - Warning-letter database

Reading path and books

1. Find the dated research

Locate the relevant chapter and distinguish study dates from the date a story was published.

2. Check the strength of the claim

Compare the headline with the original population, endpoint and uncertainty.

3. Explore industry context

Read business context separately from clinical evidence and patient suitability.

Continue in the Church Library

Choose the level that fits your background. Book links lead to the Library, where reading options and any affiliate disclosures are shown.

Testing Treatments - Evans, Thornton, Chalmers and Glasziou

Start with fair comparisons and uncertainty. The library entry includes an official free reading option. Published in 2011; use current official sources for regulatory questions.

The Art of Statistics - David Spiegelhalter

Go deeper into denominators, uncertainty and interpreting data. Read alongside the actual study rather than using a statistical slogan as a verdict.

Browse all Library rooms

Examples in practice

These examples identify published resources and their uses; they are not evaluated services.

FTC health-claims guidance

Read the worked regulatory examples to see how the full impression of a message is assessed.

Questions and explanations

Is this new evidence, a new analysis or a repeat of an earlier announcement?

Trace the story to its earliest primary source and compare the substance of the new item with the earlier record. Publication of a full paper, a new follow-up analysis and repetition of a sponsor announcement are different events. For example, a journal article may add methods and harms to an efficacy percentage announced months earlier without representing a newly conducted trial. Describe what actually became available and retain both dates.

What does the source establish, and what has the headline added?

Separate the source’s measured outcome from causal, clinical or commercial conclusions added by the headline. Check population, comparator, follow-up and whether the account is a paper, registry entry or attributed sponsor release. For example, “marker improved in a short trial” does not justify “prevents future disease” unless that outcome was established. State the narrower finding and name what remains unknown.

Am I confusing a commercial milestone with proof of medical benefit?

A commercial milestone describes a business or development event, which may occur before evidence of patient benefit is established. Financing, manufacturing capacity and an agreement can support a company’s plans without answering a clinical question. For example, opening a new API facility is not a successful patient-outcome trial. Report business context separately from efficacy, safety and regulatory status, and do not treat one category as proof of another.

Glossary

Comparator
The reference group or intervention against which an outcome is compared, such as placebo or another treatment.

Endpoint
An outcome defined for a study. A biological measurement and a patient-important outcome are not necessarily the same thing.

Formulation
The composition and presentation of a product, including ingredients beyond the active substance.

Adverse event
An unwanted medical occurrence during observation; occurrence does not itself establish a causal connection to treatment.

Investigational
Under investigation. This describes research status, not proof of safety or benefit.

Gray market
An informal description of uncertain or unauthorized distribution channels, not a regulatory approval category.

Confidence interval
A range expressing statistical uncertainty under an analysis’s assumptions; it does not remove bias or establish applicability.

Learning worksheet

Headline verification brief

Use these prompts to record what you understand, what remains uncertain and which source could answer the question.

Learning prompt	Filled-in fictional example
Headline verification brief	Fictional example: Announcement and paper describe the same trial. New material: methods and harms in the paper. Story angle: newly available detail, not a second trial.

Record headline, publication date and original source link.

Label the source: primary paper, registry, regulator or sponsor announcement.

Write the precise new finding alongside its population, limitations and serious harms.

Separate verified facts, attributed statements and your interpretation before sharing.

Educational information, not individualized medical or legal advice.

Explore another perspective in the Community Center