

# Levels of Scientific Evidence,

## with Dr. Kat

Scientific evidence can be confusing! It's easy to mistake weak evidence for strong evidence. Sometimes people share unreliable things on social media with good intentions, but sometimes they're exploiting the public's lack of understanding of different levels of evidence. We all encounter claims online, but **all evidence is not created equal**. So, how can you tell the quality? This infographic can help you find your way.



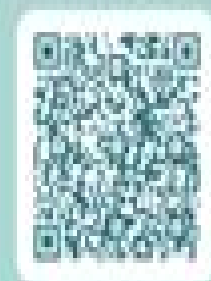
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This infographic was developed by the News Library Project and Dr. Robyn Walters, an epidemiologist and assistant professor at the University of Illinois at Chicago. Follow Dr. Kat on Twitter @epidemiologist.

A future founded on facts

### TIP Scientific evidence in the news

News reports and opinion pieces about scientific topics might cite a mix of different kinds of evidence. Be sure to examine what type is being presented & if it meets an expert's



Scan here

to watch Dr. Kat lead you through this chart

#### META-ANALYSIS

Statistical method that combines the results of multiple scientific studies

Example: Connection between intelligence test scores and education

#### SYSTEMATIC REVIEW

The gold standard for testing health claims. The reviewer does not include experiments but summarizes them. Researchers randomly assign participants to groups to make fair comparisons and test treatments & ways that evidence fits

Example: Does COVID-19 vaccine work

#### CLINICAL TRIAL

A study that compares a group of individuals with a specific condition to a group of people without that condition to find out what may have caused it

Example: A study used to determine a link between smoking and lung cancer

Don't forget: Correlation does NOT equal causation

#### CASE REPORT / CASE SERIES

A study on one person (report) or one group (series) of people with similar clinical characteristics. Because these studies don't make comparisons, they aren't as strong as the evidence in higher levels of the pyramid

Example: Reported flu cases reported with no comparison

#### OPINION PIECE

An editorial opinion presented without data. More prone to bias

### META-ANALYSIS AND SYSTEMATIC REVIEW

### RANDOMIZED TRIAL

### COHORT STUDY

### CASE-CONTROL STUDY

### CROSS-SECTIONAL STUDY

### CASE REPORT / CASE SERIES

### EXPERT OPINION

#### INTERVIEW REVIEW

Synthesis of all data summarized in a meta-analysis. Offers interpretation and context

Example: Evidence synthesized across all literature for COVID-19

#### COHORT STUDY

Often a large, long-term study that looks at what causes diseases in different groups (cohorts). It is not randomized

Example: Framingham Heart Study

#### CASE-CONTROL STUDY

A study that measures the health of a particular group of people at a particular point in time

Example: National Health and Nutrition Examination Survey

QUALITY OF EVIDENCE



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# Scientific Evidence With 2002 Supplement

**RJ Alexander**



## **Scientific Evidence With 2002 Supplement:**

## Decoding **Scientific Evidence With 2002 Supplement**: Revealing the Captivating Potential of Verbal Expression

In a period characterized by interconnectedness and an insatiable thirst for knowledge, the captivating potential of verbal expression has emerged as a formidable force. Its ability to evoke sentiments, stimulate introspection, and incite profound transformations is genuinely awe-inspiring. Within the pages of "**Scientific Evidence With 2002 Supplement**," a mesmerizing literary creation penned by a celebrated wordsmith, readers embark on an enlightening odyssey, unraveling the intricate significance of language and its enduring effect on our lives. In this appraisal, we shall explore the book's central themes, evaluate its distinctive writing style, and gauge its pervasive influence on the hearts and minds of its readership.

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