



# META *research*

The scientific literature is filled with information that is misleading, exaggerated, or flat-out wrong. Is there anything we can do to improve the credibility of medical research?

Our media is constantly churning out conflicting and misleading stories about medicine and health issues. This obviously creates confusion in the general public and in the professional medical community. But it's not just the general media that exaggerates and misinforms. The scientific literature is filled with false and exaggerated claims. Is there anything we can do to improve the credibility of medical research studies? What should we believe when it comes to medical science?

## Researching the Research

It's not that there's a dearth of information or studies. There are more than 20 million papers in the medical scientific literature published to date, and two million more added every year. There are also more than 10 million researchers working in the medical research field. But scientific literature is filled with findings that don't always stand the test of time or are flawed from the beginning. A majority of the studies are minor and show problems in their design, the way they were conducted, the way they were reported, and the way they are interpreted. It's critical to scrutinize all aspects of the research process in order to more accurately understand the credibility of each piece of medical evidence. Only by doing that, will we have a real chance to decrease cost, improve efficiency, enhance health, and save lives.

Dr. Ioannidis is recognized as the leading clinical research methodologist of his generation. As a researcher of research—or a meta-researcher—he has reshaped the scientific community's approach to clinical investigation and created new paradigms in genomic medicine, medical statistics, clinical epidemiology and evidence-based medicine. Today, Dr. Ioannidis' team continues to get to the truth of the matter—with solid data, clear reasoning, and good statistical analysis.

20  
million+

PAPERS HAVE BEEN PUBLISHED IN  
THE MEDICAL LITERATURE

50%+

OF NEW RESEARCH FINDINGS  
ABOUT HEALTH AND MEDICINE GET  
REFUTED OR ARE FOUND TO BE  
GROSSLY EXAGGERATED

80

PEOPLE IS THE AVERAGE SIZE OF  
A TRIAL FOR A DRUG THAT MAY  
BE USED BY MILLIONS, ONCE IT IS  
LICENSED

~\$1 trillion

PER YEAR IS SPENT ON LARGELY  
USELESS HEALTHCARE IN THE  
UNITED STATES