

# Only one in three biomedical studies includes data on sex, significantly restricting real-world relevance of findings

February 8 2019

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Almost three quarters (70%) of biomedical research papers do not report outcomes for men and women, according to a new analysis of over 11.5 million medical research papers published between 1980 and 2016. Additionally, female authors were more likely to report on sex-differences, highlighting that diversity in the workforce—as well as the research population—is essential to produce the most rigorous and effective research.

The study is published as part of a special issue of *The Lancet* on advancing women in science, medicine and [global health](#).

Numerous studies have shown there are sex-based differences at the genetic, cellular, biochemical, and physiological levels. Despite this, female participants are often under-represented in research, with grave consequences. One example is the failure to consider [sex differences](#) in how drugs work. Of the ten drugs withdrawn from the market between 1997 and 2001, eight posed greater health risks for women than men.

Between 1980 and 2016, sex-related reporting increased across all types of health research included in the paper—from 59% to 67% in clinical medicine and from 36% to 69% in [public health](#). However, progress in [biomedical research](#) was slower, increasing from 28% to 31%.

Papers with a female first and last author were more likely to report sex,

and journals with high impact factors were less likely to report sex.

"Exclusion of sex reporting in research can hamper policy making, service provision, and health and development outcomes, and must be taken into account throughout the lifecycle of research. Furthermore, by identifying a link between authorship and sex-reporting, our findings show that gender disparities in science have consequences for the health of the entire population. Diversification in the scientific workforce and in the research populations—from [cell lines](#), to rodents, to humans—is essential to produce the most rigorous and effective medical research," says author Dr. Vincent Larivière, Université de Montréal (Canada).

**More information:** *The Lancet* (2019).

[www.thelancet.com/journals/lan ... \(18\)32995-7/fulltext](http://www.thelancet.com/journals/lan... (18)32995-7/fulltext)

Provided by Lancet

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