

Neuroscientists says it is time to start using more female mice for testing

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(Medical Xpress)—Jeffrey Mogil a neuroscientist in the Department of Psychology at McGill University in Canada has published a *Nature*

Outlook Perspective, suggesting that it is time for the research community to start using more female mice in pain testing labs. In his paper, he points out that using only or mostly male mice skews results when testing drugs and therapies, and because of that, drugs approved for humans have not been sufficiently tested for women.

Mogil strongly emphasizes that research over the past couple of decades has shown that women experience pain differently than men, which he claims means that they are more sensitive to it and are less tolerant of it. He notes also that most patients that see a doctor for pain are women. Despite such findings, he also notes, most research done with therapies to alleviate pain are conducted initially on only male mice. He cites statistics noting that of the 71 [research articles](#) published in the journal *Pain* last year, 56 used all male mice, six were all female, and six did not mention gender at all. Only three papers used both genders. He suggests that change is required because researchers have an obligation to solve problems that are important to everyone, not just men.

Mogil continues by pointing out that there are three main reasons researchers continue to use male mice: The first is that researchers fear using both genders will increase variability in results due to changes in female hormone levels, which will result in more testing and costs. Mogil shoots down this argument by pointing out that prior research has shown that variability in data related to pain is not higher for [female mice](#) than it is for males. The second reason is that a lot of researchers think that NIH (the leading funder of pain research) will force them to use double the number of mice in their studies, which Mogil says is nonsense—all it will mean is using the same number of mice while ensuring that half of them are female. And the third reason, he says, is fear by researchers that those reviewing their work might ask for the research to be repeated for all the different phases of the mouse oestrous cycle. He acknowledges that such fears might be justified, but suggests there may also be differences in results depending on testosterone levels in males.

Mogil sums up his arguments by suggesting that researchers are failing in their duty if they continue to conduct pain research primarily with male mice in light of new findings regarding [pain](#) in female human beings.

More information: Jeffrey S. Mogil. Perspective: Equality need not be painful, *Nature* (2016). [DOI: 10.1038/535S7a](https://doi.org/10.1038/535S7a)

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