Researchers uncover key scientific and statistical errors in obesity studies

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This is an image of a weight scale. Credit: CDC/Debora Cartagena

A special statistical series in the journal *Obesity* identifies common scientific and statistical errors in obesity-relate studies, challenges assumptions about weight loss, and calls for increased application of control arms in obesity intervention studies.

In an effort to recognize and avoid statistical errors in <u>obesity</u> studies,

researchers have identified 10 oft-repeated errors in study design, analysis, interpretation, and reporting. The three most notable errors are: errors related to tests of pre-post differences between groups, inappropriate design or analysis of cluster randomized trials, and calculation errors in meta-analyses.

"Our effort to identify common statistical errors can help researchers avoid making these mistakes in the future," said Dr. Brandon George, lead author of one of the articles. "An emphasis on statistical issues from conception to publication of obesity research will improve the quality and rigor of the science, ideally translating to greater success in maintaining weight loss for people with obesity."

  More information: George, B. J., Beasley, T. M., Brown, A. W., Dawson, J., Dimova, R., Divers, J., Goldsby, T. U., Heo, M., Kaiser, K. A., Keith, S. W., Kim, M. Y., Li, P., Mehta, T., Oakes, J. M., Skinner, A., Stuart, E. and Allison, D. B. (2016), Common scientific and statistical errors in obesity research. *Obesity*, 24: 781-790. DOI: 10.1002/oby.21449

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