- P Values vs Magnitude-based Inference: All new slideshow.
- Journal Impact Factors 2017: Values from the Scopus database.

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P Values vs Magnitude-based Inference

Will G Hopkins, Institute of Sport Exercise and Active Living, Victoria University, Melbourne, Australia. **Email**. Reviewer: Alan M Batterham, School of Health and Social Care, University of Teesside, Middlesbrough, UK. Sportscience 21, i, 2017 (sportsci.org/2017/inbrief.htm#pVsMBI). Published May 2017.

Update Nov 2020. The ECSS report in the 2020 issue explains how statistical significance and non-significance represent misleading evidence for effect magnitudes. I also gave a 10-min talk at the conference on the frequentist and Bayesian theoretical bases for magnitude-based decisions. The video is available on YouTube here. A slides-only pptx version of the talk (including a description of error rates) is available here.

Update Feb 2020. The 2020 issue contains an article and slideshow on hypothesis tests underlying magnitude-based decisions, and there is an In-brief item describing the recent history of magnitude-based inference and decisions, as well as a shorter, simpler explanation of the hypothesis tests.

Update Feb 2019. The attack on magnitude-based inference (MBI) in 2018 is documented in The Vindication of Magnitude-Base Inference and in the post-publications comments, where you will also find a slideshow summarizing the attack and how MBI works. Rebranding MBI as magnitude-based decisions (MBD) is explained in an In-brief item in the 2019 issue.

A slideshow explaining p values, magnitude-based inference (MBI), and the American Statistical Association's policy statement on p values is now available. The slideshow has the title of the In-brief item in last year's Sportscience, P Values Down But Not Yet Out, and it represents an elaboration of that item. The slideshow was presented at the 8th International Conference on Kinesiology in Opatija, Croatia, May 10-14, 2017 and at various workshops subsequently.

Other resources on statistical inference

A one-hour lecture on data analysis and interpretation has an earlier summary of null-hypothesis testing and MBI.

The article describing the spreadsheet to derive MBI from a p value has a detailed explanation of clinical and non-clinical MBI. To derive MBI from a confidence interval use the spreadsheet to combine/compare effects (and read the accompanying article).

The first peer-reviewed article on MBI published here and in *International Journal of Sports Physiology and Performance* deals only with non-clinical inference.

The article on progressive statistics published here and in *Medicine and Science in Sports and Exercise* has a summary of MBI and much, much more.

Journal Impact Factors 2017

Will G Hopkins, Institute of Sport Exercise and Active Living, Victoria University, Melbourne, Australia. **Email**. Sportscience 21, i, 2017 (sportsci.org/2017/inbrief.htm#impactfactors. Published September 2017.

Download the workbook (28 KB) of impact factors.

As noted in a 2015 article, I have abandoned Thomson-Reuters' impact factors in favor of Elsevier's, which are derived from a bibliographic database (Scopus) more relevant to sport and exercise science, and which are freely available in a very large workbook (33 MB) at Journal Metrics. Elsevier refers to the impact factor as the *CiteScore*, but it is calculated in the same manner as the traditional impact factor. I have extracted the values for our journals into a user-friendly small workbook (28 KB), which has spreadsheets sorted by journal title and by 2016 impact factor. As of last year I will not be writing

a full article on the impact factors. ———