

Arthroscopic and Sports Medicine Science: Looking Beyond the Level of Evidence (for Now)

For now, arthroscopic and sports medicine scientists and clinicians may simply need to look beyond level of evidence when trying to answer clinical questions, because the truth is, studies of high levels of evidence are scant. As we said in January when celebrating the 2013 Level I Evidence prize, “Seriously?”¹ As we noted, *Arthroscopy* published only 12 Level I evidence studies during the 12 months of 2013. To us, this seems like very few.

In this issue, a fascinating systematic review by Harris, Cvetanovich, Erickson, Abrams, Chahal, Gupta, McCormick, and Bach² reiterates the paucity of Level I evidence in *Arthroscopy* and in other top sports medicine journals. In summary, Level I evidence comprises no more than 10% of contemporary sports medicine literature, and therapeutic randomized controlled trials comprise no more than 6%. Differences among the journals were small, and with regard to the statistics cited in the sentence above, insignificant. The point of the article, and of this editorial, is not to compare journals, but rather to highlight the across-the-board findings.

Thank goodness for our relationship with the medical device and pharmaceutical industries. According to Harris et al., the majority of studies reported “a financial conflict of interest.” As editors, we clarify that careful language should suggest a “potential” conflict, because as surgeon/scientist/clinicians, we manage potential conflicts in the best interests of patients and in ethical scientific reporting. As we have often emphasized, there are benefits (as well as risks) in the essential relationship between arthroscopic and related surgeons and industry.^{3,4} Here, a clear benefit of the relationship between arthroscopic and related surgeons and industry is financial support of high level of evidence research. Research is expensive,⁵ sources of funding independent of industry are difficult for the average researcher to obtain, and while our industry partners may have sales and other

financial goals, our industry partners also share a common mission of determining the correct answers to clinical questions, which is clearly in everyone’s interest.

With regard to Clinical Practice Guidelines (CPG), we have been tough on the American Academy of Orthopaedic Surgeons.^{1,6,7} As cited, we have previously outlined our arguments on the flawed methodology and potential misuse of CPG. To some, these arguments may have seemed arcane or confusing, and the study by Harris et al.² suggests a simple synopsis of our concerns regarding CPG. Quite simply, high level of evidence research is rare. In our opinion, the AAOS could best invest its considerable academic and financial resources in greater support of the development of high level of evidence research. Such research could better serve Academy members and our patients, as compared to ill-advised development of CPG absent a stronger scientific basis.

Your editors have been veritable cheerleaders for Level I evidence.^{6,8,9} And, with regard to original scientific articles of the highest levels of evidence, we said it in January and we’ll say it again: “Bring it on.”¹ However, we are realists. Case series are the most common studies in the arthroscopic and medical literature and we have emphasized that case series are of immense worth.¹⁰ We humbly re-emphasize that only 5% of what we published in the green journal in 2010 and 2011 represents Level I evidence, and we strongly suggest that the remaining 95% of our content does indeed help us to best treat our patients and to advance our field. As noted by Harris et al., research of ostensible “lower level of evidence” is of substantial importance and value. Again, according to Harris et al., “there are unique advantages and disadvantages to each level of evidence.” This statement is of great consequence, because another interesting finding reported by Harris et al. is that, of the few Level I evidence studies published in the sports medicine literature, only 15% of these few studies are surgical. *Arthroscopy* is first and foremost, and proudly, a surgical journal, and for reasons we have emphasized in the past,^{6,8,9} there are many obstacles to performing randomized controlled surgical trials.

For now, as we study the arthroscopic and related literature, reality dictates that we must balance our enthusiasm for Level I evidence, with an emphasis on the value and the importance and necessity of the other research methods.

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2014 *Arthroscopy* Journal Prize for Level I Evidence

Although level of evidence is but one measure of the quality of a scientific article, studies of the highest levels of evidence are best able to provide answers to clinical questions. The Journal Board of Trustees, the AANA Board, and the Editors are pleased to announce that the *Arthroscopy* Journal Prize of \$5,000 will again be awarded to the report of the best Level I Evidence study. The 2014 prize will be judged by the Journal's Editors and Associate Editors who will consider those Level I papers published during the year.