Instructions for Authors

The Journal of Bone and Joint Surgery welcomes articles that contribute to orthopaedic knowledge from all sources in all countries. • Articles are accepted only for exclusive publication in *The Journal of Bone and Joint Surgery*. Previously published articles are not accepted by *The Journal*. • Publication does not constitute official endorsement of opinions presented in articles. • Published articles and illustrations become the property of JBJS, Inc. • If the Editor-in-Chief of *The Journal* requests additional data forming the basis for the work, the authors will make the data available for examination in a timely fashion. • All manuscripts dealing with the study of human subjects must include a statement that the subjects gave Informed Consent to participate in the study and that the study has been approved by an institutional review board or a similar committee. All studies should be carried out in accordance with the World Medical Association Declaration of Helsinki, as presented in *The Journal* (1997;79-A:1089-98). Patient confidentiality must be protected according to the U.S. Health Insurance Portability and Accountability Act (HIPAA). • All clinical trials submitted for consideration must have been registered in a public trials registry. • All manuscripts dealing with experimental results in animals must include a statement that the study has been approved by an animal utilization study committee. The authors should also include information about the management of postoperative pain for both animal and human subjects. • In the preparation of a manuscript, authors should, in general, follow the recommendations in "Uniform Requirements for Manuscripts Submitted to Biomedical Journals: Writing and Editing for Biomedical Publication" by the International Committee of Medical Journal Editors (www.icmje.org). • On occasion, reviewers, associate editors, and/or deputy editors may have a conflict of interest or a competing interest with regard to the subject matter of a manuscript. Such conflicts are disclosed to the Editor-in-Chief, who has no known conflicts of interest or competing interests, and who makes the final decision regarding acceptance or rejection of all manuscripts submitted to *The Journal*. • Manuscripts accepted for publication may be published in print and/or online at the discretion of the Editor-in-Chief.

Submission of Manuscript

The Journal of Bone and Joint Surgery uses a web-based service, provided by Editorial Manager, requiring authors to submit and track manuscripts electronically. Corresponding authors must register via the Internet address http://www.editorialmanager.com/jbjs/ and will then receive an email containing a Username and Password that will allow access for manuscript submission.

The following submission items are required for scientific manuscripts:

1. **Title Page:** List the title of the manuscript and the authors' names in the order in which they should appear. Provide a complete mailing address for each author. Clearly designate the corresponding author and his/her mailing address, telephone number and e-mail address.
2. **Blinded Manuscript:** *The Journal* has a policy of blinded peer review. The manuscript must not contain any mention of the authors' names or initials or the institution at which the study was done. Note that, as a result of this policy, self-citation references will NOT be available to reviewers if the authors can be identified as contributors to the current study. Thus, authors should not depend on self-citation references to provide reviewers with background information.
3. **IRB Approval:** A copy of the letter granting approval from the institutional review board or the animal utilization study committee is required.
4. **Copyright Transfer and Author Agreement:** Material appearing in *The Journal* is covered by copyright. All authors must sign a Copyright Transfer and Author Agreement form upon submission of the manuscript to *The Journal*. The form must reference the manuscript title. Completed (signed) forms should be scanned and submitted online in PDF format.
5. **Potential Conflict of Interest Statement:** Authors must complete a Conflict of Interest Statement at the time of submission of each manuscript. This form must be completed electronically with use of Adobe Acrobat or Reader and uploaded with the submission online. The form must reference the manuscript title and corresponding author. This statement has no bearing on the editorial decision to publish a manuscript. That decision will continue to be based solely on the value of the article to the readers of *The Journal*. No article will be published until the completed conflict of interest form has been incorporated into the record kept on that manuscript in *The Journal* office. A summary of the statements selected by the author or authors will be printed with the published article, and each author's completed ICJME disclosure statement will be available online. Sources of funding should also be disclosed in the manuscript text at the end of the Materials and Methods section.
6. **NIH Funding:** *The Journal* signed an agreement with the National Institutes of Health that allows authors to comply with the NIH "Public Access Policy" effective April 7, 2008. NIH policy requires that NIH-funded articles be deposited in PubMed Central (PMC) in final accepted form and that they be available on PMC no later than twelve months after the manuscript has been published. As a result of participation by JBJS, Inc., in this program, *The Journal* will submit articles on the author's behalf so that they become available twelve months after publication. Please note that *The Journal* does not consider a manuscript conclusively accepted prior to publication.
7. **Permission to Use Illustrations or Tables Owned by Another Party:** *The Journal* discourages submission of illustrations that have been published elsewhere. When such illustrations are deemed essential, the author must provide a full citation for the previous publication in the figure legend. The author is required to either provide a letter from the owner of the copyright granting permission for *The Journal* to reprint the copyrighted material, or, using this form, provide *The Journal* with the date when the permission was requested and the approximate date when the permission is expected to be received.

The following submission items are optional:

1. **Cover Letter**
2. **Acknowledgment** If included, it must be attached as a separate file, not included in the text of the manuscript.
3. **Tables** must be labeled individually and submitted as separate electronic files. Tables should be submitted in their original file format (Word or Excel) and not as graphics files.
4. **Figures** must be submitted electronically. Each figure must be labeled separately and submitted as separate, sequential electronic files. The file name for each figure should correspond to the figure number in the figure legend (e.g., Fig_1.eps, Fig_2.tiff, etc.). No more than ten figures may be submitted. Refer to the section entitled Illustrations for figure format requirements.

Preparation of Manuscript

Manuscripts must be submitted as a Word file, and they should not exceed 3500 words excluding references and figure legends. Scientific articles should consist of:

1. A **structured abstract** of no more than 325 words, consisting of five paragraphs, with the headings *Background* (which states the primary research question), *Methods*, *Results*, *Conclusions*, and *Level of Evidence* (for clinical articles) or *Clinical Relevance* (for basic-science articles). For the *Level of Evidence* section, describe the study type and assign a level-of-evidence rating to the primary research question, according to the criteria in this Table.
2. The **body** should consist of:

Introduction: State the problem that led to the study, including a concise review of only the relevant literature. State your hypothesis and the purpose of the study. It is preferable that this be done in the form of a research question that describes the setting of the study, the population or sample studied, and the primary outcome measure.

Materials and Methods: Describe the study design in detail using standard methodologic terms, such as retrospective or prospective cohort study, prospective randomized trial, case-control study, cross-sectional study, etc. Reports of randomized controlled trials (RCTs) should follow the twenty-five-item checklist developed by the CONSORT Group (www.consort-statement.org), and a copy of that checklist must be included with the submission. Submissions reporting cohort, case-control and cross-sectional studies should conform to the format suggested by the STROBE panel (http://www.strobe-statement.org). Reporting of all study designs should include information about the sample including how it was assembled and how inclusions and exclusions were identified. State how the sample size was determined. If a sample of convenience was utilized, this should be stated. If sample size was estimated on the basis of assumptions about the primary outcome measure, these should also be described in detail. Reporting of meta-analyses should conform to the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) Statement criteria. These are available at http://www.prisma-statement.org/. *The Journal* reserves the designation of "meta-analysis" for reviews of three or more articles with Level I and II evidence only. Systematic reviews and meta-analyses must include a description of the sources of data used for the study. Methods used for study selection, data extraction and data synthesis must be described succinctly but with sufficient detail that the general approach used could be replicated. Statistical methods should be described in detail, with particular emphasis on the statistical strategy that was used to analyze the data. The most appropriate strategy is that which fits the data that were collected and addresses the research question or hypothesis stated in the Introduction. In most circumstances this should have been established before the study was undertaken. Justification for complex statistical strategies, including those involving any kind of modeling approach, should be described in detail. It is especially important to identify any assumptions about the data that are implicit to the statistical strategy. In the analysis of categorical data, utilize exact methods wherever possible. Where the variable of interest cannot be assumed to have a normal distribution, use non-parametric methods of analysis. Report results with only as much precision as is of value. In general the approach suggested in Bailar JC 3rd, Mosteller F. Guidelines for statistical reporting in articles for medical journals. Amplifications and explanations. Ann Intern Med. 1988;108:266-73 should be used.

For hypothesis testing scenarios the statement "no significant difference was found between two groups" must be accompanied by a value describing the power of the study to detect a Type-II error (Hulley SB, Cummings SR, Browner WS. Designing Clinical Research: an epidemiologic approach. Baltimore, Williams and Wilkins, pp 128-49).

P values are required to support any statement indicating a significant difference. Meta-analyses must include a description of how data were pooled and the details of any sensitivity analyse s that were performed. Ninety-five percent confidence intervals are required for any estimate appearing in the text or graphs. Use of the word *correlation* requires reporting of the correlation coefficient. Do not identify any statistical software unless some aspect of the analysis was uniquely dependent on a particular software package. *The Journal* encourages the use of validated outcome instruments wherever possible. Novel measurement scales should be used only if existing scales are deemed insufficient in some way to the needs of the study. References to psychometric characteristics of new scales, such as those related to reliability, must be included. If an outcome system leads to a categorical ranking (excellent, good, etc.), the aggregate score for each patient should be provided.

Source of Funding: Under the heading *Source of Funding*, explain the role of the funding source for the study. If there was no external funding source, or if the funding source did not play a role in the investigation, that should be stated.

Results: Provide a detailed report on the data obtained during the study. Results of many reconstructive procedures, such as total joint arthroplasty, obtained after less than two years of follow-up are rarely accepted. An average of two years of follow-up is generally not sufficient. All patients in these studies should have at least two years of follow-up, although shorter follow-up periods may be acceptable within an appropriate context. For example, follow-up for treatment of fractures may be much shorter if the focus of the manuscript is fracture-healing. The Editor will make a final decision on the adequacy of follow-up reported in all submissions. All measurements should be expressed using conventional terms with SI (Système International d'Unités) units in parentheses.

Discussion: Be succinct. What does your study show? Is your hypothesis affirmed or refuted? Discuss the importance of this article with regard to the relevant world literature; a complete literature review is unnecessary. Analyze your data and discuss their strengths, their weaknesses, and the limitations of the study.

3. **Illustrations** accompanying your manuscript must be submitted electronically and be in TIFF or EPS format. Do not embed images into other software programs. No more than ten images may be submitted.

   Any digital manipulation of an image—color, contrast, brightness, etc.—must be applied to the entire image and may not result in misrepresentation of the original image. Enhancement or alteration of part of an image, without clear and explicit disclosure in the legend, is unacceptable.

   Image files should be named using the number of the figure (e.g., Figure1.tif, Figure2.eps, etc.). When completing the online submission form, remember to enter the name and number of the figure (Figure 1, Figure 2, etc.) into the "description" field. This description should match the figure file name.

   Color images must be **RGB** (not CMYK). We cannot alter or vouch for the quality of color reproductions.

   In accordance with HIPAA, remove any writing that could identify the patient (e.g., names, initials, patient numbers).

   When using a **digital camera** to create your images, if possible, set the camera to save in TIFF format (not JPEG), set the resolution to a minimum of 300 ppi (pixels per inch), and set the size of the image to 5 × 7 in (127 × 178 mm).

   The **resolution** of your electronic images is critical and is directly linked to how well they will appear when printed. Color and grayscale images, such as radiographs, must have a minimum resolution of 300 ppi, and line-art drawings (black and white only, no color or shades of gray) must have a minimum resolution of 1200 ppi. An original image size of 5 × 7 in (127 × 178 mm) is preferred.

   For questions regarding electronic submission of images, contact the Production Department at dtp@jbjs.org.

4. **Video Supplements** may be also submitted in one of the following file formats: avi, mov, mp4, mpeg, mpg, or wmv.
5. A **bibliography** of references must be included with the manuscript text file. Abstracts or meeting transactions more than three years old should not be cited. The references should be numbered according to the order of citation in the text **(not alphabetically)** and should be in PubMed/Index Medicus format (for an example, go to the National Center for Biotechnology Information [NCBI] web site www.ncbi.nlm.nih.gov/entrez/query.fcgi and search for specific reference citations). All references must be cited in the text.
6. **Figure Legends** must be included for all illustrations and listed in order of citation in the text. Explain what each illustration shows. Identify machine settings for magnetic resonance images, and give the magnification of all photomicrographs. Define all arrows and other such indicators appearing on the illustration.

Style

Use *Uniform Requirements for Manuscripts Submitted to Biomedical Journals: Writing and Editing for Biomedical Publication* by the International Committee of Medical Journal Editors (www.icmje.org) for standard format. For style guidelines, use "Scientific Style and Format. The CBE Manual for Authors, Editors, and Publishers, 6th ed.," published by Cambridge University Press.

Authorship

The order of names reflects only the preference of the authors. Any change in authorship (including the order of names and the designation of the corresponding author) after the initial review process will necessitate a signed letter from all agreeing to the change. There is a general limit of six authors. It is suggested that, if you include more than six, you also include in your cover letter a table listing each author's contribution. Each author must have contributed significantly to, and be willing to take public responsibility for, one or more aspects of the study: its design, data acquisition, and analysis and interpretation of data. All authors must have been actively involved in the drafting and critical revision of the manuscript, and each must provide final approval of the version to be published. Individuals who have contributed to only one section of the manuscript or have contributed only cases should be credited in an acknowledgement footnote.

If a research group is designated as the author of an article, one or more group members who fully meet the above criteria for authorship should be listed in the article's byline, followed by "on behalf of the [name of group]." The other group members should be listed in an acknowledgment section at the end of the article. Acknowledged group members will not be cited in PubMed.

Alternatively, the byline can include only the name of the group, followed by an asterisk corresponding to a list that specifies the authors who fully meet the above criteria for authorship and that also mentions the other group members. In this case, for the purpose of citation in one's curriculum vitae, the citation can be followed by the individual's statement of the authorship role that he or she fulfilled (xx) as depicted in the following example:

Canadian Orthopaedic Trauma Society. Nonoperative treatment compared with plate fixation of displaced midshaft clavicular fractures. A multicenter, randomized clinical trial. J Bone Joint Surg Am. 2007;89:1-10. [Role: xx]

Embargo Policy for Accepted Manuscripts

The Journal of Bone and Joint Surgery is published twice a month on the first and third Wednesday of each month. Embargo dates correspond to the publication date of the issue at 1:30 p.m. ET when they are posted electronically. JBJS supplements are published along with an issue and reflect the same embargo date and time of that issue. Information concerning embargoed studies cannot be published, broadcast, posted online, or otherwise placed in the public domain until after the embargo date and time have past.

Some articles appear online only and never appear in a printed issue of *The Journal*. However, these articles are assigned to an issue and do appear in the printed table of contents. Online only articles follow the same access controls and embargoes as those that appear in print. Online, www.jbjs.org, is the version of record.

JBJS Express articles are posted online before they are published in an issue. This information is embargoed for media use until the day they are electronically posted (usually Fridays at 1:30 p.m. ET).

Review of Manuscripts

Manuscripts are evaluated by the editorial staff of *The Journal* and are sent to consultant reviewers. The time between receipt of a submitted manuscript and the initial decision regarding its publication has averaged six weeks, but it can be longer.

Levels of Evidence for Primary Research Question[1]

	Types of Studies			
	Therapeutic Studies—Investigating the Results of Treatment	**Prognostic Studies—Investigating the Effect of a Patient Characteristic on the Outcome of Disease**	**Diagnostic Studies—Investigating a Diagnostic Test**	**Economic and Decision Analyses—Developing an Economic or Decision Model**
Level I	• High-quality randomized controlled trial with statistically significant difference or no statistically significant difference but narrow confidence intervals • Systematic review[2] of Level-I randomized controlled trials (and study results were homogeneous[3])	• High-quality prospective study[4] (all patients were enrolled at the same point in their disease with ≥80% follow-up of enrolled patients) • Systematic review[2] of Level-I studies	• Testing of previously developed diagnostic criteria in series of consecutive patients (with universally applied reference "gold" standard) • Systematic review[2] of Level-I studies	• Sensible costs and alternatives; values obtained from many studies; multiway sensitivity analyses • Systematic review[2] of Level-I studies
Level II	• Lesser-quality randomized controlled trial (e.g., <80% follow-up, no blinding, or improper randomization) • Prospective[4] comparative study[5] • Systematic review[2] of Level-II studies or Level-I studies with inconsistent results	• Retrospective[6] study • Untreated controls from a randomized controlled trial • Lesser-quality prospective study (e.g., patients enrolled at different points in their disease or <80% follow-up) • Systematic review[2] of Level-II studies	• Development of diagnostic criteria on basis of consecutive patients (with universally applied reference "gold" standard) • Systematic review[2] of Level-II studies	• Sensible costs and alternatives; values obtained from limited studies; multiway sensitivity analyses • Systematic review[2] of Level-II studies
Level III	• Case-control study[7] • Retrospective[6] comparative study[5] • Systematic review[2] of Level-III studies	• Case-control study[7]	• Study of nonconsecutive patients (without consistently applied reference "gold" standard) • Systematic review[2] of Level-III studies	• Analyses based on limited alternatives and costs; poor estimates • Systematic review[2] of Level-III studies
Level IV	• Case series[8]	• Case series	• Case-control study • Poor reference standard	• No sensitivity analyses
Level V	• Expert opinion	• Expert opinion	• Expert opinion	• Expert opinion

1. A complete assessment of the quality of individual studies requires critical appraisal of all aspects of the study design.
2. A combination of results from two or more prior studies.
3. Studies provided consistent results.
4. Study was started before the first patient enrolled.
5. Patients treated one way (e.g., with cemented hip arthroplasty) compared with patients treated another way (e.g., with cementless hip arthroplasty) at the same institution.
6. Study was started after the first patient enrolled.
7. Patients identified for the study on the basis of their outcome (e.g., failed total hip arthroplasty), called "cases," are compared with those who did not have the outcome (e.g., had a successful total hip arthroplasty), called "controls."
8. Patients treated one way with no comparison group of patients treated another way.

This chart was adapted from material published by the Centre for Evidence-Based Medicine, Oxford, UK. For more information, please see www.cebm.net.

A Concise Format for Reporting the Longer-Term Follow-up Status of Patients Managed with Total Hip Arthroplasty

This format is to be used when the original full-length article was published in *The Journal of Bone and Joint Surgery*.

Length limit: Six manuscript pages, excluding references and figures.

Follow-up intervals: No less than five years since the previous publication and preferably at five or ten-year intervals, as long as no interim changes have occurred that require expedited reporting.

Abstract

State, in a maximum of 150 words, why you are reporting the results at this interval and your major findings.

Background

Briefly summarize and cite the original study published in *The Journal of Bone and Joint Surgery*. Describe the original:

- patient cohort
- type of arthroplasty and critical aspects of surgical and cementing or cementless techniques
- type of series (Was this a selected or unselected series? A consecutive series? Were the operations performed by a single surgeon? By multiple surgeons? At multiple institutions? Were data acquired prospectively or retrospectively?)

Methods

List, but do not describe, the methods used to assess clinical and radiographic results and cite the appropriate reference.

For reporting clinical results:

- you may use the same assessment scheme employed in your previous report—e.g., Harris, Hospital for Special Surgery, Iowa, Mayo Clinic, or Merle d'Aubigné-Postel rating system
- you are strongly encouraged to include the WOMAC scores for the current cohort
- you are encouraged to use the clinical and radiographic nomenclature described by Johnston et al. (J Bone Joint Surg Am. 1990;72:161-8) for other pertinent data
- you must perform survivorship analyses (with calculation of confidence limits) using end points that are appropriate to your cohort

Results

The results should include:

- the original number of patients/hips studied and the number of patients/hips studied since the last report
- the number of patients/hips who died, the number of patients/hips who were lost to follow-up, and the number of patients/hips currently being studied
- the number of patients/hips in the updated series who were examined, the number who responded to questionnaires, and the number with available radiographs
- the number of patients/hips in whom the primary joint replacement is still intact
- basic demographic characteristics of the cohort, especially any that might affect results (age, diagnosis, gender, height, weight, and level of activity)
- the number of arthroplasties revised for any reason. If the revised arthroplasties are included in the current series, report the status in this group separately
- complications since the last report, including infection, dislocation, stem breakage, osteolysis, wear, and so on

For survivorship analysis, the following end points should be used:

(1) revision for any cause—e.g., aseptic loosening, osteolysis, component breakage, or infection

(2) revision for aseptic loosening of the femoral component

(3) revision for aseptic loosening of the acetabular component

(4) definite radiographic loosening of the femoral component, according to the criteria of Harris et al. (*J Bone Joint Surg Am.* 1982;64:1063-7) for cemented stems and the criteria of Engh et al. (*J Bone Joint Surg Br.* 1987;69:45-55) for uncemented stems. If your results cannot be evaluated with these criteria, cite the appropriate reference for your rating criteria

(5) definite radiographic loosening of the acetabular component, according to the criteria of Hodgkinson et al. (*Clin Orthop.* 1998;228:105-9)—i.e., migration or >1 mm of radiolucency in all DeLee and Charnley zones. If your results cannot be evaluated with these criteria, cite the appropriate reference for your rating criteria

Conclusions

The conclusions should include:

- major factors limiting the longevity of the prosthesis at the time of this follow-up
- recommendations regarding the continued use of the prosthesis if it is still available
- if the prosthesis is not still available, lessons applicable to the current successor or to similar designs

A Concise Format for Reporting the Longer-Term Follow-up Status of Patients Managed with Total Knee Arthroplasty

This format is to be used when the original full-length article was published iin *The Journal of Bone and Joint Surgery*.

Length limit: Six manuscript pages, excluding references and figures.

Follow-up intervals: No less than five years since the previous publication and preferably at five or ten-year intervals, as long as no interim changes have occurred that require expedited reporting.

Abstract

State, in a maximum of 150 words, why you are reporting the results at this interval and your major findings.

Background

Briefly summarize and cite the original study published in *The Journal of Bone and Joint Surgery*. Describe the original:

- patient cohort
- type of arthroplasty and critical aspects of surgical and cementing or cementless techniques
- type of series (Was this a selected or unselected series? A consecutive series? Were the operations performed by a single surgeon? By multiple surgeons? At multiple institutions? Were data acquired prospectively or retrospectively?)

Methods

List, but do not describe, the methods used to assess clinical and radiographic results and cite the appropriate reference.

For reporting clinical results:

- you may use the same assessment scheme employed in your previous report—e.g., Hospital for Special Surgery or Knee Society rating system
- you are strongly encouraged to include the WOMAC scores for the current cohort
- you are encouraged to use the clinical and radiographic nomenclature described by Insall et al. (Clin Orthop. 1989;248:13-4) and Ewald (Clin Orthop. 1989;248:9-12) for other pertinent data
- you must perform survivorship analyses (with calculation of confidence limits) using end points that are appropriate to your cohort

Results

The results should include:

- the original number of patients/knees studied and the number of patients/knees studied since the last report
- the number of patients/knees who died, the number of patients/knees who were lost to follow-up, and the number of patients/knees currently being studied
- the number of patients/knees in the updated series who were examined, the number who responded to questionnaires, and the number with available radiographs
- the number of patients/knees in whom the primary joint replacement is still intact basic demographic characteristics of the cohort, especially any that might affect results (age, diagnosis, gender, height, weight, and level of activity)
- the number of arthroplasties revised for any reason. If the revised arthroplasties are included in the current series, report the status in this group separately
- complications since the last report, including infection, loosening, component breakage, osteolysis, wear, instability, and so on

For survivorship analysis, the following end points should be used:

(1) revision for any cause—e.g., aseptic loosening, osteolysis, component breakage, instability, or infection

(2) revision for aseptic loosening of the femoral component

(3) revision for aseptic loosening of the tibial component

(4) revision for aseptic loosening of the patellar component

Conclusions

The conclusions should include:

- major factors limiting the longevity of the prosthesis at the time of this follow-up
- recommendations regarding the continued use of the prosthesis if it is still available
- if the prosthesis is not still available, lessons applicable to the current successor or to similar designs