# Aviation, Space, and Environmental Medicine

## INSTRUCTIONS FOR AUTHORS

**Revised August 2011** 

Journal mission and scope Submission of manuscripts Limits on prior publication Qualifications for authorship Use of human subjects Use and care of animals Language, abbreviations, and measurement Tables, figures, and ancillary material References Manuscript requirements Requirements for submission of signed documents Peer review Publication procedures

### 1. JOURNAL MISSION AND SCOPE

Aviation, Space, and Environmental Medicine is published monthly in print and electronic formats by the Aerospace Medical Association (AsMA) for the benefit of its membership and to serve and support those who explore, travel, work, or live in hazardous environments ranging from beneath the sea to the outermost reaches of space. The journal's readership includes a diverse mix of physicians, physiologists, psychologists, nurses, engineers and others working in Aerospace Medicine and related areas. The scientific content of the journal is subject to strict peer review.

### 2. SUBMISSION OF MANUSCRIPTS

Manuscripts should be submitted electronically using the web-based system at <u>http://asem.edmgr.com</u>. Questions concerning submission should be directed to the Editorial Office, <u>asemjournal@asma.org</u>.

The journal publishes four main types of articles:

Research Articles may address basic, applied or clinical research. They should present the results of experimental or descriptive studies with suitable statistical analysis of results arranged into the following sections: Introduction, Methods, Results, and Discussion ending with a statement of conclusions. Such manuscripts may not exceed 6000 words with approximately 25 references, 4 Tables and 4 Figures. Review Articles are scholarly reviews of the literature on important subjects within the scope of the journal. It is suggested authors considering preparation of a Review Article contact the Editor to ascertain the suitability of the topic. Reviews generally may not exceed 6000 words with up to 150 references. Longer reviews of exceptional quality and relevance may be considered.

Short Communications describe new techniques or devices or interesting preliminary findings that may serve as the basis for further, definitive research. They should contain the same sections as a Research Article, but may not exceed 3000 words with approximately 12 references and a combined total of 4 Tables/Figures.

Case Reports describe interesting or unusual clinical cases or aeromedical events. They should include a short Introduction to provide perspective, details of the Case, and Discussion that includes reference to pertinent literature. Such manuscripts may not exceed 3000 words with approximately 12 references and a combined total of 4 Tables/Figures.

Other types of manuscripts may be considered at the discretion of the Editor, including:

Historical Notes: Brief presentations regarding past events of significance in the development of aviation and space medicine.

Technical Notes: A type of Short Communication that describes a new device or novel technique that may be promising for studying and working in aerospace and other extreme environments.

Commentaries: Brief essays that set forth opinion or perspective on relevant topics. Such manuscripts may not exceed 1000 words with approximately 10 references. They should contain an abstract of 150 words or less.

Letters to the Editor: Letters that discuss and/or criticize scientific papers that have appeared in the journal within the past year are limited to 500 words. The author of the original paper will be invited to provide a response.

There are also a number of special features published in the journal. If you are interested in contributing to any of these features, please contact the journal office.

#### 3. LIMITS ON PRIOR PUBLICATION

ASEM will not ordinarily review for publication work under consideration, accepted or published by another journal. However, an author may submit a paper that expands on material that has appeared as an abstract or brief

preprint or that was rejected by another journal. When submitting a paper, the Cover Letter should contain a full statement regarding any previous reports that might be regarded as prior or duplicate publication. Copies of such material should be sent to the Editorial Office via separate e-mail, attaching any document(s) that may aid the editor's decision in handling the matter.

### 4. QUALIFICATIONS FOR AUTHORSHIP

This journal adheres to the criteria for authorship developed by the International Council of Editors of Biomedical Journals (icmje.org). Accordingly, authorship credit should be granted only to persons who meet <u>all three</u> of the following criteria:

1) substantial contributions to conception and design of the study, or acquisition of data, or analysis and interpretation of results;

2) drafting the article or revising it critically for important intellectual content; and

3) final approval of the version to be published.

All persons who meet these criteria should be listed as authors. The order of authorship on the byline should be a joint decision of the co-authors and the Corresponding Author should be prepared to explain that order.

Acquisition of funding, collection of data, or general supervision of the research group without meeting the other criteria does not justify authorship. Persons in those roles should be credited in the Acknowledgments. Examples might include a person who provided purely technical help or a department chair who provided only general support.

# 5. USE OF HUMAN SUBJECTS

Ethics:

The AsMA endorses the World Medical Association's Declaration of Helsinki (www.wma.net/e/policy/b3.htm). Experimental protocols must be approved by the appropriate committee for ethical review of human experimentation and voluntary consent must be obtained from subjects after they have been fully informed of the nature of the experiment, any hazards involved, and their right to withdraw from the experiment at any time without prejudice or penalty. Inclusion of the following statement at the beginning of Methods will be understood by the Editor as the author's affirmation of compliance: "The study protocol was approved in advance by [name of committee and/or its institutional sponsor]. Each subject provided written informed consent before participating."

A study may be exempt from the above requirements if: a) the data were collected non-invasively during work or training that the subjects would have undertaken had no experiment existed; or b) the data were collected using anonymous questionnaires. In either case, the reason for exemption must be described under Methods.

Authors reporting on human experimentation that does not include both male and female subjects must explain under Methods the reason for not doing so.

### Confidentiality:

Reporting of individual data is not appropriate in Research Articles. Human subjects or patients in Case Reports must never be identified by name, initials, photographs or other information that can be used to single out the individual unless the author has obtained written permission for the use of such material and provides a copy to the journal.

# 6. USE AND CARE OF ANIMALS

The AsMA endorses research of high scientific quality that involves the responsible use of experimental animals. Each scientist who performs such research must assume responsibility for the general welfare and humane handling of the animals, which must also be maintained under the surveillance of a veterinarian. Adherence to policies and procedures from the Guide for the Care and Use of Laboratory Animals of the U.S. Department of Health and Human Services or comparable standards is required and the experimental protocol must be approved in advance by the appropriate Institutional Animal Care and Use Committee or a comparable body. The standard of care, the name of the approving committee, and the fact the animals were maintained under the surveillance of a veterinarian must be stated at the beginning of the Methods in the manuscript.

# 7. LANGUAGE, ABBREVIATIONS, AND MEASUREMENTS

The language of the journal is standard American English in the style specified by the U.S. Government Printing Office

(<u>http://www.gpoaccess.gov/stylemanual/index.html</u>). The journal cannot provide translation or rewriting services; authors who are not perfectly fluent in English should have the manuscript edited by a native speaker of the language before submission. The journal will decline to review manuscripts not sufficiently clear for reviewers to follow the argument of the paper.

Abbreviations and acronyms should be used only if they improve the readability of the text. The full term for which an abbreviation stands must precede its first use in the abstract and again in the text. Abbreviations should be used a

minimum of three times within the text. Standard units of measurement do not need explanation.

Measurements of length, weight, volume, and pressure should be reported in metric units and temperatures should be given in degrees Celsius (customary English units such as altitude in feet or temperature in degrees Fahrenheit may be added in parentheses). Hematological and clinical chemistries should generally be reported in the metric system in accordance with the International System of Units (SI). However, ASEM allows reporting of clinical values in the terms used by the examining laboratory. Blood pressures should be given in millimeters of mercury.

### 8. TABLES, FIGURES, AND AUXILIARY MATERIAL

Tables and Figures should be used strictly to advance the argument of the paper and to assess its support. Lists and simple quantitative information (e.g., characteristics of a group of subjects) should be incorporated into the text.

In general, tables are best used when readers need to be able to compare exact numbers, while graphs should be used to show patterns of change or trends, or as an alternative to large tables.

Authors should plan their tables and figures to fit either one journal column (8.5 cm) or the full width of the printed page (18 cm).

In the rare situation where an accepted manuscript contains a Table or Figure that has been published elsewhere, the original source must be acknowledged in the caption and the Corresponding Author must provide written permission from the copyright holder to reproduce the material. Such permission is required irrespective of authorship or publisher unless the document is in the public domain.

Although there is no page charge for articles, a charge will be made for Tables or Figures in excess of the numbers specified under Submission of Manuscripts or totaling more than 20% of the area of the article in print. Upon payment of the required fees, such material may appear in print or solely in the electronic edition of the journal at the discretion of the editor.

### Tables

All tables should be created using the Table function in Microsoft Word or WordPerfect. Tables should be assigned consecutive <u>Roman</u> numerals in the order of their first citation in the text. *Do not use internal horizontal or vertical lines or shading.* Each column should have a short or abbreviated heading. Explanation of details and any nonstandard abbreviations should be presented in footnotes designated by the symbols \*, +,  $\ddagger$ , \$,  $\P$ , \*\*, ++, and so on in that sequence.

Tables should not ordinarily occupy more than 20% of the space in a journal article. Data too extensive to print in the journal may be considered for publication as auxiliary material (see below).

# Figures

Figures include graphs, photographs, and drawings and should be assigned consecutive <u>Arabic</u> numerals in the order of their first citation in the text. The journal does not ordinarily publish photographs of experimental equipment; if the paper discusses details of the setup, the author should provide a line drawing with appropriate markings.

Each axis on a graph must be labeled with "Variable (units)" and numbered appropriately. A key to symbols is allowed provided it fits within the rectangle of the graph. *There should be no other text in the graphic file*. Graphs must be submitted in black and white; grayscale may only be used if the grays are distinct; bars or other filled areas should use bold patterns (e.g., thick diagonal stripes) such that the differences between them are clear at publication scale. Three-dimensional graphs may be used only for three-dimensional data. *It is important to visualize graphics at the reduced size at which they will be published to be sure that legends, lines, and symbols remain clear.* 

Each Figure should be submitted as a separate electronic file using PDF, EPS, TIFF, JPEG, or other common electronic format.

# **Auxiliary Tables or Figures**

Material that contributes to the paper but is not well suited to the print journal may, at the discretion of the editor, be designated "auxiliary material" to be published in the Electronic Edition only; a charge will be made for such publication. Examples include the full text of questionnaires, large tables, color illustrations, derivation of mathematical equations, and material that will be used only by a small subset of readers. Such material should be submitted with the manuscript as a separate file that can be considered during peer review and will be accepted at the discretion of the Editor following peer review.

# **Graphics Guidelines**

In order to meet the AsMA's quality standards for publication it is important authors submit digital art that conforms to the appropriate resolution, color mode, and file format. Doing so will help to avoid delays in publication and maximize the quality of images in both the online and print journals. [See Documents to Download on the journal's home page for a printable digital art guide.] **Color Mode:** All Color image files are required to be submitted in their original RGB color. Whenever possible, ensure the submitted RGB image is tagged with the originating ICC profile to ensure the best possible conversion to CMYK for the printed journal.

**Labeling and Font Usage:** Please use the same font for all figures in your manuscript; use standard fonts such as Arial, Helvetica, Times, Symbol, Mathematical Pi, and European Pi. For vector application files, it is recommend to convert fonts to outlines (Adobe Illustrator) or embed fonts (MS Office). See the next page for instructions on embedding fonts in Microsoft Office applications.

**Sizing:** Prepare figures at the final publication size; less than the length of the page (57.25 picas / 9.5" / 24.25cm), and one of the following widths:

1 column wide (20.5 picas / 3.4" / 8.7cm)

1.5 columns wide (31.5 picas / 5.25" / 13.33cm)

2 columns wide (42.5 picas / 7.1" / 18cm)

**Resolution and Raster Images:** Low-resolution images are one of the leading causes of art resubmission and schedule delays. It is important that submitted raster images meet the minimum resolution requirements. Raster images can be classified as monochrome, halftone, or combination halftone.

• **Monochrome (1-bit) images\*:** Common examples are graphs and charts made of solid black and white, with no gray values. The preferred resolution for this type of image is between 1000 and 1200 dpi at publication size. The preferred file format is TIFF. PDF and EPS are also accepted.

• **Halftones\*:** Common examples are color or grayscale figures containing pictures only, with no text or thin lines. The suggested minimum resolution for this type of image is 300 dpi at publication size. The preferred file format is TIFF. EPS and PDF are also accepted.

• **Combination Halftones\*:** Common examples are color or grayscale figures containing halftone and line art elements. The preferred resolution for this type of image is between 600 and 900 dpi at publication size. The preferred file format is TIFF. EPS and PDF are also accepted.

\*When saving these files, use only LZW compression.

Monochrome	Combination Halftones (grayscale or color images and type)	Halftones (grayscale or color with no type or lettering)
8 9 9 9 9 9 9 9 9 9 9 9 9 9		
900-1200 dpi	600-900 dpi	300 dpi

**Vector Graphics:** Vector images typically are generated using drawing or illustration programs (e.g., Adobe Illustrator) and are composed of mathematically defined geometric shapes—lines, objects, and fills. Vector graphics are resolution independent and can be sized up or down without quality loss.

• Vector line art: Common examples are graphs and charts created in illustration programs. Preferred when saved as an EPS file, with all fonts converted to outlines, and graph lines at least 0.25 point wide.

• **Combination line/halftone:** Common examples are color or grayscale figures containing halftone and line art elements. The halftone elements (which must comply with the requirements listed under "Resolution and Raster Images") should be processed in Photoshop and the line elements in Illustrator, and the two elements from the two applications should be combined in Illustrator. Preferred when saved as an EPS file, with all fonts converted to outlines, and graph lines at least 0.25 point wide.

• Fonts: If fonts have not been converted to outlines always choose to embed fonts when saving files from your application.

**Microsoft Office:** PowerPoint slides, Excel graphs, or images embedded in Word are acceptable formats. When creating the original file in a Microsoft Office application, please follow these general rules to ensure the initial file is properly prepared:

1. Do not use pattern or textured fills in graphics. Instead, use solid fills or percentage screens that will be effectively converted to vector images during file conversion. **Note:** A 20% difference in percent screens is most effective for differentiation.

2. Artwork placed within any MS Office application should be of acceptable minimum resolution for print production: 300 dpi for tones, 600-900 dpi for combinations, and 1000 - 1200 dpi for line art.

3. When inserting pictures/images into files, be sure to select "insert" and not "insert link", which will not properly embed the hi-resolution image into the MS Office file.

4. Always embed fonts in your documents. See guidelines for embedding fonts in MS Office documents.

### **Embedding Fonts in MS Office:**

- From the file menu, select Save As

- On the toolbar, select Save Options, select the Embed TrueType Fonts check box, and select Embed all characters (best for editing by others).

Authors who do not comply with these guidelines will be asked to resubmit their figures in a print-quality format, which may delay publication.

### 9. REFERENCES

The Corresponding Author is responsible for providing complete, accurate references so that a reader can locate the original material. Only references directly relevant to the argument of the paper should be cited. Preferred sources include peer-reviewed journals and books with ISBN designations. Technical reports and theses may be cited if the original report is accessible to the public. Abstracts and web sites should be cited only if no other source is available. References should ordinarily be in English or at least contain an English abstract; titles in another language should be followed by an English translation in parentheses along with an indication of the original language at the end of the citation. [See Documents to Download on the journal's home page for a printable reference-formatting guide.]

The journal uses a modified Vancouver style for references (the references must be listed alphabetically and the month and number can be omitted in journals that continuously paginate throughout the year).

The alphabetically listed references should be numbered, and then cited by number in the text or the tables and figure legends. The titles of cited journals should be abbreviated as in the U.S. National Library of Medicine's Medline, (www.ncbi.nlm.nih.gov/entrez/). Electronic sources should be cited in the same style using the guidelines of the American Psychological Association (www.apastyle.org/elecref.html). Examples of correct format for many different types of references can be downloaded from the journal's web site.

Reference to papers for which authors have received a letter of acceptance but which have not yet been published must include the journal name and the words "in press." Information from manuscripts in preparation or submitted but not yet accepted should be cited in the text as (unpublished observations).

Unpublished communications may not be included in the list of references. Written communications may instead be inserted in the text provided the author has obtained written permission from the person quoted; the editor will understand citation as "person's name (written communication, date)" as the Corresponding Author's assurance that such permission was obtained. Oral communications may not be cited.

### **10. MANUSCRIPT REQUIREMENTS**

The electronic submission process requires entry of the following information in a sequence of separate screens:

### Article Type

Select from the options provided considering the explanation given under Submission of Manuscripts (item #2 above).

Title

Paste here an exact copy of the Title that appears on the Title Page of the manuscript. (Note: titles should not exceed 100 characters and spaces)

#### Authors

Given name, middle initial, family name, highest academic degree(s), institutional affiliation, and e-mail address of each author.

#### Abstract

Paste into the box an exact copy of the Abstract that appears as part of the manuscript.

#### Key Words

List 3-4 key words at the bottom of the abstract page. These will be used for indexing.

#### Classifications

The Corresponding Author should review the entire list of Classifications and select several to indicate the areas of interest and expertise appropriate for reviewers of the manuscript. The editor may modify this list before instituting review.

#### **Attached Files**

THE FOLLOWING ITEMS MUST BE UPLOADED AS SEPARATE FILES:

A. Cover Letter containing the following:

1. A statement the work is original, has not been published elsewhere, and is not currently under consideration by another journal. Otherwise, provide detailed information on those issues.

2. A statement there is no financial or other relationship that might be perceived as leading to a conflict of interest (i.e., affecting author objectivity). If such relationships do exist, provide detailed information.

3. A statement the manuscript has been read and approved by all authors and all named authors meet the criteria stated in Section 4 above. If there are seven or more authors, explain the specific contributions of each that justifies the individual's inclusion as an author (see QUALIFICATIONS FOR AUTHORSHIP, above). 4. Authors of papers based on statistical inference must inform the Editor whether one of the authors is a trained statistician (has had some graduate training in statistics) or whether such a person was used as a consultant and has agreed to be named in the Acknowledgments. Absent such expertise, the Editorin-Chief may submit the paper to one of the journal's statistical consultants for review.

5. Authors are requested to suggest the names of two or more scientists whom they regard as appropriate reviewers for their paper; the current e-mail and institutional affiliation of the candidates must be included. Authors may also name an individual to whom the paper should not be sent where bias or conflict of interest is known to exist.

B. Manuscript consisting of the following components.

#### Note: Each numbered item should start on a new page and the entire manuscript should be double-spaced. Page numbers should appear in the upper right corner of each page.

1. Title Page

- Title that indicates the subject matter and nature of the study. It may contain no more than 100 characters and spaces. It should not use abbreviations except those already widely understood (e.g., MRI). Animal studies should include the common name of the species (e.g., "rats"). We discourage the inclusion of geographic or organizational names. We encourage titles that start with important words rather than phrases such as "The effect of..." or "A study of..."

- Author names (given name, initial, and family name for each) in the order they should appear for publication.

- The name of the department(s) and institution(s) to which the work should be attributed.

- The current affiliations of the authors.

- The name and address of the author to whom requests for reprints should be addressed or a statement that reprints will not be available from the authors.

- Suggested short title to go at top of journal page; limit is 30 characters and spaces.

- Manuscript metrics (word count for abstract, word count for main text, number of references, number of tables, and number of figures).

### 2. Abstract Page

The abstract should be a one-paragraph "mini-paper" of no more than 250 words (150 words for Commentaries) with the same major headings as the paper (for example: background, methods, results, discussion). Results should include important descriptive numerical data without specific *P*-values. Because abstracts are the only substantive portion of the article many readers see, abstracts must accurately reflect the content of the article.

At the bottom of the abstract page, the author should list 3 to 5 key words or short phrases that do not appear in the title. Key words are used for indexing and should include terms that would occur to a knowledgeable reader conducting a literature search.

#### 3. Main Text

Introduction: Briefly summarize the rationale for the study and clearly state the hypothesis or research question. The Introduction should contain only strictly pertinent references and is not the place for an extensive review of the literature. We discourage use of strings of four or more citations in the text because they are of limited use to readers; additional information should be given about the importance of each reference or smaller groups of them. Or perhaps a review article could be cited instead.

Methods: Describe methods in sufficient detail to allow other workers to repeat the study. Clearly describe criteria for selection of the subjects or patients, including controls. As much as possible standard subheading should be used. For example, for an experimental study, appropriate subheadings might include: subjects, equipment, procedure, design, and statistical analysis. For established methods, give references without going into detail; for methods published but not well known, provide references and brief descriptions; for new or substantially modified methods give details along with reasons for using them and their limitations. If an unusual apparatus was used, name it and give in parentheses the manufacturer's name and location (city, state and country). Authors submitting systematic review articles or meta-analyses should include the methods used for locating, selecting, extracting, and synthesizing data.

Results: Results should be presented in logical sequence using text, tables, and figures. Data should appear in only one format (text, table, or graph) depending on which is best for clear, concise presentation (see Section 8 "TABLES, FIGURES, AND AUXILIARY MATERIAL"). Noncontributory results should be omitted. Subheadings should be avoided as much as possible. Statistical results should contain the calculated statistic, degrees of freedom, in addition to *p*-value. When statistical significance is revealed, exact *p*-values are preferred.

Discussion: Emphasize the new and important aspects of the study and the conclusions that follow from them. Do not repeat in detail data or other material given in the Introduction or the Results section. For experimental studies it is useful to begin the discussion by summarizing briefly the main findings, then explore possible mechanisms or explanations for these findings, compare and contrast the results with other relevant studies, state the limitations of the study, and explore the implications of the findings for future research and for clinical practice.

The final paragraph should be a statement of conclusions linked to the goals of the study as stated in the Introduction and directly supported by the data. Avoid claiming priority or alluding to work that has not been completed. State new hypotheses when warranted, but clearly label them as such.

4. Acknowledgments (Endnotes):

This section may include any or all of the following:

- Acknowledgment of professional contributions other than authorship (see above). Such professionals must give their written permission to be named because readers will infer their endorsement of the data and conclusions.

- Acknowledgment of technical assistance.

- Acknowledgments of financial and material support, specifying its nature (e.g., equipment or drugs).

- Statement of financial or other relationships that could be viewed as causing bias or conflict of interest for any of the authors.

- Institutional disclaimers and other required statements.

5. References: See Section 9 above for format.

6. Tables: Each table must appear double-spaced on a separate page complete with a brief descriptive caption and footnotes. Assign Roman Numerals to the tables. Do not use internal lines to separate rows and columns, and do not use shading in the tables.

7. Captions for figures: Each figure must have a caption that names the variables and explains abbreviations, symbols, or marks on the graphic, and value of error bars; the caption should not include comments about results. Captions should not appear with the figures, but should be placed in numerical order on the last page of the manuscript file.

C. Figures

Each graphic file should be loaded as a separate file named "Fig. #." See above for details.

### 11. REQUIREMENTS FOR SUBMISSION OF SIGNED DOCUMENTS

The following items must be signed and submitted to the editorial office by scanned document or fax.

### Copyright release

This form is available under Documents to Download on the journal's web site. Every manuscript must be accompanied by this document either releasing the copyright or stating the work cannot be copyrighted because it was done in a government facility.

### Agreement to pay extra charges

This form is available under Documents to Download on the journal's web site. It is required to affirm the authors will pay the required fees for papers that contain more than the allowed number of Figures and Tables, require color printing, or require preparation of auxiliary material for the Electronic Edition only.

### Permissions

Copies of permission to reproduce published materials, to use illustrations or report sensitive personal information of identifiable persons, use an identifiable person in a photograph, or to acknowledge professional colleagues for their contributions, must be e-mailed or faxed to the journal office.

### 12. PEER REVIEW

Unbiased, independent, critical assessment is an intrinsic part of all scholarly work, including the scientific process. Experts who are not part of the editorial staff conduct peer review at the request of the Editor-in-Chief. Peer review is an important extension of the scientific process, helps editors decide which manuscripts are suitable for their journals, and helps authors and editors in their efforts to improve the quality of reporting. Reviewers for this journal are asked to excuse themselves if there is any possible conflict of interest. Reviewers, who volunteer their time, provide comments for the authors and may also make confidential comments to the editor. Although reviewers may recommend the disposition of an article, the final decision to accept or reject is the responsibility of the Editor-in-Chief.

# 13. PUBLICATION PROCEDURES

Once the Editor has accepted a manuscript, the electronic source files for text and figures are forwarded to the publisher, the AsMA, for conversion to printable format and final copy-editing. Correspondence related to publication should then be directed to the Managing Editor at the AsMA Home Office.