

Respiratory Physiology & Neurobiology

Guide for Authors

Aims and Scope

Respiratory Physiology & Neurobiology (Respir. Physiol. Neurobiol.) publishes original articles and invited reviews concerning physiology and pathophysiology of respiration in its broadest sense. Although a special focus is on topics in neurobiology, high quality papers in respiratory molecular and cellular biology are also welcome, as are high quality papers in traditional areas, such as mechanics of breathing; gas exchange in lungs, gills, skin, and tissues; acid-base balance; respiration at rest and exercise; respiration in normal and unusual conditions, like high or low pressure or changes of temperature, low ambient oxygen; embryonic and adult respiration; comparative respiratory physiology. Papers on clinical aspects, articles on original methods, as well as theoretical papers are also considered as long as they foster the understanding of respiratory physiology and pathophysiology. Submission of a manuscript for publication implies the transfer of copyright from the author(s) to the publishers.

Types of Contribution

1. Original Research Article
2. Short communication
3. Frontiers Review
4. Book review
5. Letter to the Editor
6. Commentary

1. Original Research Articles submitted to Respir. Physiol. Neurobiol. should deal with original research which has not been published previously, nor is being considered for publication elsewhere.

2. Short communication provides a rapid publication for short, concise papers dealing with original material within the scope of the journal. Short communications should not exceed 4 printed pages (about 8 manuscript pages), including up to 2 Figures, 1 Table and up to 10 References. Style of the manuscripts must otherwise conform with that of Original Research Articles (see below) and must, in particular, have an Abstract. The e-mail, telephone and fax number of the corresponding author must be given on the title page.

3. State-of-the-art reviews, prepared on invitation, will regularly appear under the title of Frontiers

Review.

4. Book reviews, prepared by invitation.

5. Contact the Editor before submitting a Letter to the Editor.

6. Reviewers are encouraged to propose any accepted manuscript for a formal Commentary which will be invited by the Editor.

Furthermore, Special Issues are regularly published with the help of invited Guest Editors. These issues combine reviews on topics of particular scientific interest and can arise from scientific conferences. Suggestions for topics for Special Issues as well as for Guest Editors are invited by the Editor.

Authorship

Each author should have participated sufficiently in the work to justify authorship. This participation must include: (a) critically important intellectual contribution to the conception, design, and/or analysis and interpretation; (b) drafting the manuscript or critically reading it; and (c) thorough reading and final approval of the version to be published. Participation solely in the collection of data or provision of funds, space or equipment does not justify authorship. All authors take public responsibility for the paper as a whole, i.e., conception and design, data, analysis, and interpretation.

The acknowledgement section (see below) should list (a) other contributors for whom authorship is not justified, e.g. technical help; (b) financial and material support.

Previously published material

Results submitted for publication must not repeat findings that have already been, or are intended to be, published by the authors elsewhere. They should refer to their previous findings in the same way as they would refer to results from a different group. This applies not only to figures or tables, or parts of them, but has to be understood in a wider sense.

Ethics

The research described in papers submitted to *Respir. Physiol. Neurobiol.* which involve the use of human beings, including healthy volunteers, must adhere to the principles of the Declaration of Helsinki as well

as to the latest version of Title 45, U.S. Code of Federal Regulations, Part 46, Protection of Human Subjects. (<http://www.hhs.gov/ohrp/humansubjects/guidance/45cfr46.htm>). Research involving animals must adhere to the American Physiological Society's Guiding Principles in the Care and Use of Animals (http://www.the-aps.org/pa/humane/pa_aps_guiding.htm). All investigations involving humans or animals which are reported in the journal must be conducted in conformity with these principles, and a statement of protocol approval from IACUC (<http://www.iacuc.org>) or equivalent must be included in the methods section of the paper. In describing surgical procedures, the type and dosage of the anesthetic agent should be specified. Curarizing agents are not anesthetics; if these were used, evidence must be provided that anesthesia of suitable grade and duration was employed. Manuscripts reporting the results of experiments on human subjects, including healthy volunteers, must include a statement that informed consent was obtained.

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Preparation of manuscripts

The text must be clear and concise, conforming to accepted standards of English style and usage. Non-native English speakers may be advised to seek professional help with the language (see Language Polishing, below). Manuscripts must be double spaced throughout with wide margins. Pages should be numbered in the following order:

-Title page (separate page): Full title, not to exceed 100 characters and spaces; list of authors, marking corresponding author; laboratory of origin with full postal address (if more than one, indicate each author's affiliation by superscript a,b...); phone, fax numbers and e-mail of corresponding author; present address of authors and e-mail address, if applicable.

-Abstract page (separate page): Abstract not exceeding 160 words stating what was done, what was found, and what was concluded. References in the Abstract should give authors, year, journal, volume, and inclusive pages, e.g. Parisian et. al., *Respir. Physiol. Neurobiol.* 142: 127-143, 2004.

-Text pages (starting on a new page). The Introduction should introduce the problem and should present a brief yet comprehensive account of its history, quoting the relevant and important papers in the area. The Methods should be complete, but should resort to earlier publications if possible.

The Results should clearly document the main findings, which should be critically discussed in the Discussion. Repetition among these sections should be avoided. All headings/subheadings must be numbered, like 1., 2. etc/1.1, 1.2 etc.

-Acknowledgements. If present, should list (a) other contributors for whom authorship is not justified, e.g. technical help; (b) financial and material support.

-References (starting on a new page) must be typed double spaced (for style, see below).

-Figure legends

- Figures and Tables (on separate pages; for style, see below).

Nomenclature

Standard nomenclature should be used throughout; unfamiliar or new terms, arbitrary abbreviations and trade names should be defined when first used, independently in the Abstract and in the main text. Unnecessary abbreviations and symbols are to be avoided.

Symbols and Units

The meaning of the symbols should be clearly understood from the context, and all symbols which are not commonly used should be defined on their first appearance in the Abstract and in the main text. The symbols should conform to the glossary of terms and symbols in respiratory physiology proposed by the International Union of Physiological Sciences (IUPS). The following are examples of main symbols and their modifiers. A more complete description of units, symbols and abbreviations is given in the Combined Index to Volumes 51-75 of *Respiration Physiology* (now *Respiratory Physiology & Neurobiology*).

Main Symbols:

F	Fractional concentration in dry gas phase	\dot{V}	Volume per unit time, e.g., flow, ventilation
P	Gas pressure in general	C	Concentration
D	Diffusing capacity	S	Saturation
f	Frequency	R	Respiratory exchange ration
V	Volume		

Modifiers (small capitals and ordinary small letters, on the same line as main symbol):

I	inspired	L	lung, pulmonary
E	expired	R	respiratory
ET	end-expired, end-tidal	b	blood in general
A	alveolar	a	arterial
T	tidal	c	capillary
D	dead space	c'	end capillary
B	barometric	v	venous
H	heart, cardiac	\bar{v}	mixed venous blood

STPD Standard temperature and pressure, dry (0°C, 760 mmHg)

BTPS Body temperature and pressure, saturated with water vapor

ATPS Ambient temperature and pressure, saturated with water

All symbols referring to gas species are in subscript, e.g. P_{CO_2}

Dash above a symbol designates a mean value, e.g. $P_{\bar{v}}$

Examples of Combinations:

FE_{N_2} Fractional concentration of nitrogen in dry expired gas

PET_{CO_2} Partial pressure of CO_2 in end-tidal gas

Pc_{O_2} Partial pressure of oxygen in capillary blood (distinct from P_{CO_2})

$PA_{O_2}-Pa_{O_2}$ Oxygen partial pressure difference between alveolar gas and arterial blood

PB Barometric pressure

Cv_{CO_2} Concentration of carbon dioxide in venous blood

$S_{\bar{v}O_2}$ Saturation of oxygen in mixed venous blood

\dot{V}_E Expired ventilation or ventilation (not minute ventilation or minute volume)

V _T	Tidal volume
f _R	Respiratory frequency
f _H	Cardiac frequency

The basic quantities and units of the *Système International d'Unités* (SI) are recommended; abbreviations may be modified for clarity, e.g. sec instead of s, L instead of l (but ml). Amount of gases should be expressed as mole rather than gas volume (see Piiper et al., *Respir. Physiol.* 13: 292-204, 1971). For pressure, mmHg (= Torr), cmH₂O and atm may be used as well as the SI unit kPa (= 7.5 mmHg . 10 cm H₂O).

Typing these symbols and any others is simple with the Equation Editor, built into Microsoft Word. To access this tool, click on *Insert* → *Object* and select *Equation Editor* from the drop-down menu. This allows you to compose nearly every symbol. An even more advanced software for composing symbols and equations is MathType, which can be downloaded from the following site <http://www.dessci.com/en/products/mathtype/>. It inserts itself into Word (and other text editing software) and replaces (in Word) the Equation Editor.

References

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Fencel, V., (1986). Acid-base balance in cerebral fluids. In: Cherniack, N.S., Widdicombe, J.G. (Eds.). *Handbook of Physiology, Section 3: The Respiratory System, Vol. II: Control of Breathing, part 1*. American Physiological Society, Washington, DC, pp. 115-140.

Dejours, P., 1988. *Respiration in Water and Air. Adaptations - regulation - evolution*. Elsevier, Amsterdam, New York, Oxford.

Kindig, C.A., Sexton, W.L., Fedde, M.R., Poole, D.C., 1998. Skeletal muscle microcirculatory structure and hemodynamics in diabetes. *Respir. Physiol.* 111, 163-175.

Respiratory Physiology & Neurobiology should be referred to as *Respir. Physiol. Neurobiol.*

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