

**PUBLISHED BY**  
**THE MEDICAL RESEARCH SOCIETY AND THE BIOCHEMICAL SOCIETY**

**© The Medical Research Society and the Biochemical Society 1982**  
**ISSN 0143-5221**

**Printed in Great Britain by Spottiswoode Ballantyne Ltd.**  
**Colchester and London**

# CLINICAL SCIENCE

## Guidance for Authors

### CONTENTS

	<i>page</i>
1. Policy of the Journal	
1.1. Scope . . . . .	i
1.2. The Editorial Board . . . . .	i
1.3. The editorial process . . . . .	i
1.4. Ethics of investigations on human subjects . . . . .	ii
1.5. Originality of papers . . . . .	ii
2. Submission of Manuscripts: General Information and Format	
2.1. General . . . . .	ii
2.2. Full papers . . . . .	ii
2.3. Short Communications . . . . .	iii
2.4. Correspondence . . . . .	iii
2.5. Arrangements for large amounts of information . . . . .	iii
2.6. Proof corrections . . . . .	iii
2.7. Offprints. . . . .	iii
2.8. Availability on MEDLINE . . . . .	iii
3. Miscellaneous Notes	
3.1. Abbreviations . . . . .	iv
3.2. Anatomical nomenclature . . . . .	iv
3.3. Animals, plants and micro-organisms . . . . .	iv
3.4. Buffers and salts . . . . .	iv
3.5. Computer modelling . . . . .	vi
3.6. Doses . . . . .	iv
3.7. Enzymes . . . . .	iv
3.8. Evaluation of measurement procedures . . . . .	iv
3.9. Figures and Tables . . . . .	iv
3.10. Footnotes . . . . .	v
3.11. Isotope measurements . . . . .	v
3.12. Radionuclide applications in man . . . . .	v
3.13. Methods . . . . .	v
3.14. Nomenclature of disease . . . . .	v
3.15. Powers in Tables and Figures . . . . .	v
3.16. References . . . . .	v
3.17. Solutions . . . . .	vi
3.18. Spectrophotometric data . . . . .	vi
3.19. Spelling . . . . .	vi
3.20. Statistics . . . . .	vi
3.21. Trade names . . . . .	vi
4. Units: The SI System . . . . .	vi
5. Abbreviations, Conventions etc. . . . .	vii

### 1. POLICY OF THE JOURNAL

#### 1.1. *Scope*

*Clinical Science* publishes papers in the field of clinical investigation, provided they are of a suitable standard and contribute to the advancement of knowledge in this field. The term 'clinical investigation' is used in its broad sense to include studies in animals and the whole range of biochemical, physiological, immunological and other approaches that may have relevance to disease in man. Studies which are confined to normal subjects, or animals, or are purely methodological in nature may be acceptable. The material presented should permit conclusions to be drawn and should not be only of a preliminary nature. The journal publishes four types of manuscript, namely invited Editorial Reviews, Full Papers, Short Communications and Correspondence. In addition, *Clinical Science* publishes abstracts of the proceedings of the Medical Research Society and also that Society's Annual Guest Lecture.

#### 1.2. *The Editorial Board*

The Board comprises Editors for the Medical Research Society and the Biochemical Society and a Chairman and Deputy Chairman who are drawn alternately from the two Societies. Members of the Board retire after a maximum of 5 years; the Chairman serves in his capacity for 2 years. The membership of the Board is designed to cover as wide a range of interests as possible.

The main function of the Board is to decide on the acceptability of submitted papers, but it also deals with general matters of editorial policy. Financial policy is dealt with separately by the Committee of Management.

#### 1.3. *The editorial process*

A submitted paper is first read by the Chairman of the Editorial Board who then sends it to an Editor. The latter considers the paper in detail and sends it to one or more referees (who remain anonymous) from outside the membership of the Board. The Editor returns it with his recommendation to the Chairman who then writes formally to the authors. The ultimate responsibility of acceptance for publication lies with the Chairman. If the

Chairman is for any reason unavailable, the Deputy Chairman assumes this function.

#### 1.4. *Ethics of investigations on human subjects*

Authors must state in the text of their paper the manner in which they have complied, where necessary, with the recommendations on human investigations published in the Medical Research Council report of 1962/63 [*British Medical Journal* (1964) ii, 178–180]. Consent **must** be obtained from each patient or subject after full explanation of the purpose, nature and risks of all procedures used and the fact that such consent has been given should be recorded in the paper. Papers should also state that the Ethical Committee of the Institution in which the work was performed has given approval to the protocol. The Editorial Board will not accept papers the ethical aspects of which are, in the Board's opinion, open to doubt.

#### 1.5. *Originality of papers*

Submission of a paper to the Editorial Board is taken to imply that it reports work that has not been published in either the same or a substantially similar form, that it is not under consideration for publication elsewhere and that, if accepted for publication by *Clinical Science*, it will not be published elsewhere in the same form, either in English or in any other language, without the consent of the Editorial Board. This does not usually apply to previous publication of oral communications in brief abstract form. In such cases authors should enclose copies of the abstracts. The author, or in the case of multiple authorship the authors, will be asked to sign a statement vesting the copyright in the publishers. Requests for consent for reproduction of material published in *Clinical Science* should be addressed to the Editorial Manager.

## 2. SUBMISSION OF MANUSCRIPTS: GENERAL INFORMATION AND FORMAT

### 2.1. *General*

Papers submitted for publication should be sent to the Editorial Manager, *Clinical Science*, 7 Warwick Court, London WC1R 5DP.

The submission should contain four copies (of which three may be photocopies) of the typescript, Tables, Figures etc. The authors should retain one copy of the paper. The Editorial Board does not accept responsibility for damage or loss of papers submitted, although great care is taken to ensure safety and confidentiality of the typescript during

the editorial process. In the case of multiple authorship, the covering letter should indicate that the approval of all co-authors has been obtained.

Papers should be presented so that they are intelligible to the non-specialist reader of the journal. This is particularly important in highly specialized fields and a very brief résumé of the current state of knowledge is usually helpful. Certain types of material, e.g. mathematical formulations requiring more than trivial derivations, should be given in a separate Appendix.

Where the reader is referred to previous works by the same author(s) for important details relevant to the present work, copies or reprints of the publication should be sent with the typescript. This is of particular importance in relation to methodology.

The dates of receipt and acceptance of the paper will be published. If the paper has to be returned to the authors for revision and is not resubmitted within 1 month, the date of receipt will be revised accordingly. Papers returned by authors later than 12 months after the original submission date will be treated as new papers. For Short Communications the published date will always be that of receipt of the final version. It is emphasized that badly presented or unduly long papers will be returned for revision and delays in publication will be inevitable. Similar delays will be incurred if the typescript is not prepared strictly in accordance with the instructions detailed below.

### 2.2. *Full papers*

The authors should refer to a current issue of *Clinical Science* to make themselves familiar with the general layout. Concise presentation is very important for rising costs are a severe constraint on space. **The length of manuscript and the number of Figures and Tables must be kept to a minimum.** Extensive Tables of data can be deposited with the Royal Society of Medicine (see 2.5). *Guidance for Authors* is usually published in the January issue of the journal, and revised periodically.

Typescripts should be, in general, arranged as follows:

(a) *Title page.* Title: this should be as informative as possible, since titles of papers are being increasingly used in indexing and coding for information storage and retrieval. The title should indicate the species in which the observations reported have been made. The numbering of parts in a series of papers is not permitted.

List of authors' names (degrees and appointments are not required).

Laboratory or Institute of origin.

**Key words:** for indexing the subject of the paper; they should, if possible, be selected from the current issues of 'Medical Subject Headings' (MeSH), produced by the *Index Medicus*.

**Short title:** for use as a running heading in the printed text; it should not exceed forty-five characters and spaces.

**Author for correspondence:** the name and address of the author to whom queries and requests for reprints should be sent.

(b) *Summary.* This should be a brief statement arranged in **numbered paragraphs** of what was done, what was found and what was concluded and should rarely exceed 250 words. Contributors from non-English speaking countries are invited to include a translation of the summary in their own language. Abbreviations should be avoided as far as possible and must be defined. Statistical and methodological details including exact doses should also be avoided unless they are essential to the understanding of the summary.

(c) *Introduction.* This should contain a clear statement of the reason for doing the work, but should not include either the findings or the conclusions.

(d) *Methods.* The aim should be to give sufficient information in the text or by reference to permit the work to be repeated without the need to communicate with the author.

(e) *Results.* This section should not include material appropriate to the Discussion section.

(f) *Discussion.* This should not contain results and should be pertinent to the data presented.

(g) *Acknowledgments.* These should be as brief as possible.

(h) *References.* See p. v for the correct format.

(i) *Figures and Tables.* See p. iv.

### 2.3. Short Communications

The Short Communication should describe completed work, and should not be merely a preliminary communication. The format of Short Communications should be similar to that of Full Papers, but should not exceed 1200 words of text. **One Figure or Table** is allowed, but if neither is included the text may be expanded to 1400 words. The passage of Short Communications through the editorial process can frequently be expedited and contributors are encouraged to take advantage of these facilities when rapid publication is of importance and the material can be presented concisely. The paper should appear in print within 3 months of acceptance. When submitting Short Communi-

cations, authors should make it quite clear that the work is intended to be treated as a Short Communication.

### 2.4. Correspondence

Letters containing critical assessments of material published in *Clinical Science*, including Editorial Reviews, will be considered for the Correspondence section of the journal. Letters should be no longer than 750 words, with one Figure or Table and up to six references, or 1000 words maximum without a Figure or Table. Such letters should be sent to the Editorial Manager, *Clinical Science*, within 6 months of the appearance of the article concerned. They will be sent to the authors for comment and both the letter and any reply by the author will be published together. Further correspondence arising therefrom will also be considered for publication. Consideration will also be given to publication of letters on ethical matters.

Work submitted as a full paper or Short Communication that is assessed by the Editorial Board as unacceptable in that form might be acceptable for publication as a letter.

### 2.5. Arrangements for large amounts of information

It is impracticable to publish very large sets of individual values or very large numbers of diagrams, and under these circumstances a summary of the information only should be included in the paper. The information from which the summary was derived should be submitted with the typescript and, if the latter is accepted, the Editors may ask for a copy of the full information and diagrams to be deposited with the Librarian, the Royal Society of Medicine, 1 Wimpole Street, London W1M 8AE, who will issue copies on request. Experience has shown that such requests are frequently received.

### 2.6. Proof corrections

These are expensive and corrections of other than printers' errors may have to be charged to the author.

### 2.7. Offprints

Fifty offprints are supplied free and additional copies may be obtained at terms, based upon the cost of production, that will be given with the proofs. All offprints should be ordered when the proofs are returned.

### 2.8. Availability on MEDLINE

Summaries of papers in *Clinical Science* are available on-line on teleprinters participating in the

MEDLINE system run by the National Library of Medicine, National Institutes of Health, Bethesda, Maryland, U.S.A.

### 3. MISCELLANEOUS NOTES

#### 3.1. Abbreviations

Abbreviations should be avoided; if used they must be defined at the first mention; new abbreviations should be coined only for unwieldy names which occur frequently. Abbreviations should not appear in the title nor, if possible, in the Summary. A list of accepted abbreviations is on p. vi. Numbers, not initials, should be used for patients and subjects.

#### 3.2. Anatomical nomenclature

This should follow the recommendations of the International Anatomical Nomenclature Committee (1966) *Nomina Anatomica*, 3rd edn, Excerpta Medica Foundation, Amsterdam.

#### 3.3. Animals, plants and micro-organisms

The full binomial specific names should be given at first mention for all experimental animals other than common laboratory animals. The strain and, if possible, the source of laboratory animals should be stated. Thereafter in the text, single letter abbreviations may be given for the genus; if two genera with the same initial letter are studied, abbreviations such as *Staph.* and *Strep.* should be used.

#### 3.4. Buffers and salts

The acidic and basic components should be given, together with the pH. Alternatively, a reference to the composition of the buffer should be given. Further details are provided in the *Biochemical Journal* (1978) 169, 9.

When describing solutions containing organic anions and their parent acids, the salt designator (e.g. lactate, urate, oxalate) should be used in preference to the name of the acid (lactic, uric, oxalic) unless it is certain that virtually all of the acid is in the undissociated form.

The composition of incubation media should be described, or a reference to the composition should be given.

#### 3.5. Computer modelling

Papers concerned primarily with computer modelling techniques are acceptable provided that use of such techniques leads to a clear choice between two or more alternative hypotheses, or to the formulation of a new hypothesis amenable to experimental challenge or verification, or provides some new insight into the behaviour of a particular

physiological system. Extensive technical details of hardware and software should not be given.

#### 3.6. Doses

Doses of drugs should be expressed in mass terms, e.g. milligrams (mg) or grams (g), and also (in parentheses) in molar terms, e.g. mmol, mol, where this appears to be relevant. Molecular weights of many drugs may be found in *The Merck Index*, 8th edn, Merck and Co. Inc., N.J., U.S.A.

#### 3.7. Enzymes

Nomenclature should follow that given in *Enzyme Nomenclature* (1978), Academic Press, London and New York, and Enzyme Commission (EC) number should be quoted at the first mention. Where an enzyme has a commonly used informal name, this may be employed after the first formal identification. A unit of enzyme activity should preferably be expressed as that amount of material which will catalyse transformation of 1  $\mu$ mol of the substrate/min under defined conditions, including temperature and pH. Alternatively, or when the natural substrate has not been fully defined, activity should be expressed in terms of units of activity relative to that of a recognized reference preparation, assayed under identical conditions. Activities of enzymes should normally be expressed as units/ml or units/mg of protein.

#### 3.8. Evaluation of measurement procedures

When a new measuring procedure has been used, or when an established procedure has been applied in a novel fashion, an estimate of the precision of the procedure should be given. This should, as far as possible, indicate what sources of variation have been included in this estimate, e.g. variation of immediate replication, variation within different times of day, or from day to day etc.

If the precision of measurement varies in proportion to the magnitude of the values obtained, it can best be expressed as the coefficient of variation; otherwise it should be expressed by an estimate of the (constant) standard error of a single observation, or by estimates at several points within the range of observed values.

When recovery experiments are described the approximate ratio of the amount added to the amount already present and the stage of the procedure at which the addition was made should be stated.

#### 3.9. Figures and Tables

These are expensive to print and their number should be kept to a minimum. Their appropriate

position in the paper should be indicated in the margin of the text. References to Figures and Tables should be in Arabic numerals, e.g. Fig. 3, and they should be numbered in order of appearance. In general, the same data should not be presented in both a Figure and a Table.

Figures, with captions attached, should be supplied as original drawings or matt photographs together with photocopies. All Figures should have their number and the authors' names written in pencil on the back; the top of the Figure should be indicated with a pencilled arrow. Acceptable symbols for experimental points are ●, ▲, ■, ○, △, □. The symbols × or + must be avoided. The same symbols must not be used for two curves where the points might be confused. For scatter diagrams, solid symbols are preferred. When a particular variable appears in more than one Figure, the same symbol should be used for it throughout, if possible.

Curves should not be drawn beyond the experimental points, nor should axes extend appreciably beyond the data. Only essential information that cannot readily be included in the legend should be written within the Figure.

Figures for half-tone reproduction should be submitted as glossy prints. They are particularly expensive to print and their use should be avoided as far as possible.

Tables should be typed separately from the text. They should have an underlined title followed by any legend.

Captions for the Figures, and titles and legends for the Tables, should make them **readily understandable** without reference to the text. Adequate statistical information, including that on regression lines, should be included in Figure captions where appropriate.

### 3.10. Footnotes

These should be avoided as far as possible but where they are used in Tables they should be identified by the symbols \* † ‡ § || ¶, in that order.

### 3.11. Isotope measurements

The information given should include (a) conditions of radioactivity counting, e.g. infinitely thick, infinitely thin; (b) the nature of the phosphor used in liquid-scintillation counting; (c) details of corrections made to the observed count rate, e.g. for 'quenching' or 'cross-over'; (d) standard deviation of the results or a statement of the minimum total counts above background collected and the background value.

In general the specific radioactivity of the starting materials should be given, preferably in terms of radioactivity per unit weight or, for stable isotopes, as atoms % excess.

Pending the general introduction of SI units radioactivity should continue to be expressed in terms of the curie (Ci) followed by the corresponding figure in terms of the becquerel (Bq: disintegrations/s), in parentheses, and suitably rounded.

### 3.12. Radionuclide applications in man

If new or modified radionuclide applications in man are described, an estimate of the maximal possible radiation dose to the body and critical organs should be given.

For the time being this can continue to be expressed in rems, but with the corresponding figure in sieverts (Sv) given in parentheses after it.

### 3.13. Methods

In describing certain techniques, namely centrifugation (when the conditions are critical), chromatography and electrophoresis, authors should follow the recommendations published by the Biochemical Society (currently, *Biochemical Journal* (1981) 193, 1-21).

### 3.14. Nomenclature of disease

This should follow the *International Classification of Disease* (8th revision, World Health Organization, Geneva, 1969) as far as possible.

### 3.15. Powers in Tables and Figures

Care is needed where powers are used in Table headings and in Figures to avoid numbers with an inconvenient number of digits. For example: (i) an entry '2' under the heading  $10^3k$  means that the value of  $k$  is 0.002; an entry '2' under the heading  $10^{-3}k$  means that the value of  $k$  is 2000. (ii) A concentration 0.00015 mol/l may be expressed as 0.15 under the heading 'concn. (mmol/l)' or as 150 under the heading 'concn. ( $\mu$ mol/l)' or as 15 under the heading ' $10^5 \times$  concn. (mol/l)', but not as 15 under the heading 'concn. (mol/l  $\times 10^{-5}$ )'.

### 3.16. References

The numerical citation system is now used: references in the text are numbered consecutively in the order in which they are first mentioned, the numerals being given in brackets, e.g. [22]. References cited in Figure legends or Tables only should be numbered in a sequence determined by the position of the first mention in the text of the Figure or Table. References should be listed in

numerical order and the names of all authors of a paper should be given, with the full title of the paper and the source details in full including the first and last page numbers, e.g.

- [2] CLARK, T.J.H., FREEDMAN, S., CAMPBELL, E.J.M. & WINN, B.R. (1969) The ventilatory capacity of patients with chronic airways obstruction. *Clinical Science*, **36**, 307–316.

When the quotation is from a book, the following format should be used, giving the relevant page or chapter number:

- [20] MOLLISON, P.L. (1967) *Blood Transfusion in Clinical Medicine*, 4th edn, p. 50. Blackwell Scientific Publications, Oxford.
- [22] REID, L. (1968) In: *The Lung*, p. 87. Ed. Liebow, A.A. & Smith, D.E. Williams and Wilkins, Baltimore.

References to 'personal communications' and 'unpublished work' should appear in the text only and not in the list of references. The name and initials of the source of information should be given. When the reference is to material that has been accepted for publication but has not yet been published, this should be indicated in the list of references by 'In press' together with the name of the relevant journal and, if possible, the expected date of publication. If such a citation is of major relevance to the manuscript submitted for publication authors are advised that the editorial process might be expedited by the inclusion of a copy of such work. In the case of quotations from personal communications the authors should state in the covering letter that permission for quotation has been obtained.

### 3.17. Solutions

Concentration of solutions should be described where possible in molar terms (mol/l and subunits thereof), stating the molecular particle weight if necessary. Values should not be expressed in terms of normality or equivalents. Mass concentration should be expressed as g/l or subunits thereof, for example mg/l or  $\mu\text{g/l}$ . For solutions of salts, molar concentration is always preferred to avoid ambiguity as to whether anhydrous or hydrated compounds are used. Concentrations of aqueous solutions should be given as mol/l or mol/kg (g/l or g/kg if not expressed in molar terms) rather than % (w/v) or % (w/w). It should always be made clear whether concentrations of components in a reaction mixture are final concentrations or the concentrations in solutions added.

### 3.18. Spectrophotometric data

The term 'absorbance' [ $\log(I_0/I)$ ] should be used rather than 'optical density' or 'extinction'. The

solvent, if other than water, should be specified. Symbols used are:  $A$ , absorbance;  $a$ , specific absorption coefficient ( $\text{litre g}^{-1} \text{cm}^{-1}$ ) (alternatively use  $A_{1\text{cm}}^{1\%}$ );  $\epsilon$ , molar absorption coefficient (the absorbance of a molar solution in a 1 cm light-path) ( $\text{litre mol}^{-1} \text{cm}^{-1}$ , not  $\text{cm}^2 \text{mol}^{-1}$ ).

### 3.19. Spelling

*Clinical Science* uses as standards for spelling the *Concise or Shorter Oxford Dictionary of Current English* (Clarendon Press, Oxford) and *Butterworth's Medical Dictionary* (Butterworths, London).

### 3.20. Statistics

Papers are frequently returned for revision (and their publication consequently delayed) because the authors use inappropriate statistical methods. Two common errors are the use of means, standard deviations and standard errors in the description and interpretation of grossly non-normally distributed data and the application of  $t$ -tests for the significance of difference between means in similar circumstances, or when the variances of the two groups are non-homogeneous. In some circumstances it may be more appropriate to provide a 'scattergram' than a statistical summary.

A reference should be given for all methods used to assess the probability of a result being due to chance. The format for expressing mean values and standard deviations or standard errors of the mean is, for example: mean cardiac output 10.4 l/min (SD 1.2;  $n = 11$ ). Degrees of freedom should be indicated where appropriate. Levels of significance are expressed in the form  $P < 0.01$ .

### 3.21. Trade names

The name and address of the supplier of special apparatus and of biochemicals should be given. In the case of drugs, approved names should always be given with trade names and manufacturers in parentheses.

## 4. UNITS: THE SI SYSTEM

The recommended *Système International* (SI) units [see *Quantities, Units and Symbols*, 2nd edn (1975) The Royal Society, London] are used by *Clinical Science*. All papers submitted should use these units except for blood pressure values, which should be expressed in mmHg, or gas tensions, where values at the author's discretion may be given as mmHg (with kPa in parentheses) or as kPa (with mmHg in parentheses) in the text and either as mmHg or as kPa in Figures, which (if practicable) should have scales in both units. Airways pressure should be expressed in kPa. Where molecular weight is known, the amount of a chemical or drug should be expressed in mol or in

an appropriate subunit, e.g. mmol. Energy should be expressed in joules (J).

The basic SI units and their symbols are as follows:

Physical quantity	Name	Symbol
length	metre	m
mass	kilogram	kg
time	second	s
electric current	ampere	A
thermodynamic temperature	kelvin	K
luminous intensity	candela	cd
amounts of substance	mole	mol

The following are examples of derived SI units:

Physical quantity	Name	Symbol	Definition
energy	joule	J	$\text{kg m}^2 \text{s}^{-2}$
force	newton	N	$\text{kg m s}^{-2} = \text{J m}^{-1}$
power	watt	W	$\text{kg m}^2 \text{s}^{-3} = \text{J s}^{-1}$
pressure	pascal	Pa	$\text{kg m}^{-1} \text{s}^{-2} = \text{N m}^{-2}$
electric charge	coulomb	C	A s
electric potential difference	volt	V	$\text{kg m}^2 \text{s}^{-2} \text{A}^{-1} = \text{J A}^{-1} \text{s}^{-1}$
electric resistance	ohm	$\Omega$	$\text{kg m}^2 \text{s}^{-3} \text{A}^{-2} = \text{V A}^{-1}$
electric conductance	siemens	S	$\text{kg}^{-1} \text{m}^{-2} \text{s}^3 \text{A}^2 = \Omega^{-1}$
electric capacitance	farad	F	$\text{A}^2 \text{s}^3 \text{kg}^{-1} \text{m}^{-2} = \text{A s V}^{-1}$
frequency	hertz	Hz	$\text{s}^{-1}$
volume	litre	l	$10^{-3} \text{m}^3$

The word 'litre' has been accepted as a special name for cubic decimetre (1 litre = 1 dm<sup>3</sup>).

Both the basic and derived SI units, including the symbols of derived units that have special names, may be preceded by prefixes to indicate multiples and submultiples. The prefixes should be as follows:

	Prefix	Symbol	Multiple	Prefix	Symbol
10 <sup>6</sup>	mega	M	10 <sup>3</sup>	milli	m
10 <sup>3</sup>	kilo	k	10 <sup>-6</sup>	micro	$\mu$
10 <sup>2</sup>	hecto	h*	10 <sup>-9</sup>	nano	n
10	deka	da	10 <sup>-12</sup>	pico	p
10 <sup>-1</sup>	deci	d*	10 <sup>-15</sup>	femto	f
10 <sup>-2</sup>	centi	c*			

\* To be avoided where possible (except for cm).

Compound prefixes should not be used, e.g. 10<sup>-9</sup> m should be represented by 1 nm, not 1 m $\mu$ m.

#### Notes:

(i) Full stops are not used after symbols.

(ii) Minutes (min), hours (h), days and years will continue to be used in addition to the SI unit of time [the second (s)].

(iii) The solidus may be used in a unit as long as it does not have to be employed more than once,

e.g. mmol/l is acceptable, but ml/min/kg is not, and should be replaced by ml min<sup>-1</sup> kg<sup>-1</sup>.

## 5. ABBREVIATIONS, CONVENTIONS, DEFINITIONS, SYMBOLS AND SPECIAL COMMENTS

As well as standard symbols and abbreviations that have been accepted by international bodies, and which can be used without definition, this list shows selected abbreviations in the form of groups of capital letters (e.g. ALA, ECF, MCHC) which when used must be defined in the text as indicated on p. iv. The standard abbreviations for amino acids are only for use in Figures and Tables or for peptide sequences.

absorbance	A
acceleration due to gravity	g
adenosine 3':5'-cyclic monophosphate	cyclic AMP
adenosine 5'-phosphate	AMP
adenosine 5'-pyrophosphate	ADP
adenosine 5'-triphosphate	ATP
adenosine triphosphatase	ATPase
adrenocorticotrophic hormone	ACTH
adrenoceptor (see also blocking agents)	
alanine	Ala
alternating current	a.c.
alveolar minute ventilation	$\dot{V}_A$
alveolar to arterial oxygen tension difference	( $P_{A,O_2} - P_{a,O_2}$ )
ampere	A
aminolaevulinic acid	ALA
angiotensin	ANG; reference amino acid abbreviations are used as prefix within brackets: e.g. [Sar <sup>1</sup> , Val <sup>2</sup> , Ala <sup>8</sup> ]ANG
Ångstrom (Å)	not used; express in nm (1 Ångstrom = 10 <sup>-1</sup> nm)
antidiuretic hormone	ADH (when referring to the physiological secretion)
arginine	Arg
arteriovenous	a-v: permitted in Figures and Tables
asparagine	Asn
aspartic acid	Asp
atmosphere (unit of pressure)	not used; express in kPa (1 atmosphere = 101.325 kPa)
atomic weight	at. wt.
becquerel	Bq (1 d.p.s.)
blocking agents	e.g. $\beta$ -adrenoceptor antagonists preferred
blood pressure	express in mmHg
blood urea nitrogen	not used; recalculate as urea, express in mmol/l
blood volume	BV
body temperature and pressure, saturated	BTPS



British Pharmacopoeia	write in full and give edition	electromotive force	e.m.f.
calculated	calc. (in Tables only)	electron spin resonance	e.s.r.
'Calorie' (= 1000 cal)	<i>not used</i> ; recalculate as kilojoules (1 'Calorie' = 4.184 kJ)	electronvolt	eV (for radiation energies)
carbon dioxide output (in respiratory physiology)	$\dot{V}_{\text{CO}_2}$ ; express in ml STP/min	equation	eqn.
cardiac frequency	$f_c$ ; in beats/min	equivalents (amount of a chemical)	<i>not used</i> ; recalculate in molar terms
cardiac output	express in l/min	erythrocyte count	express as $10^{12}$ cells/l
centimetre	cm	erythrocyte sedimentation rate	ESR
clearance of x	$C_x$	ethanol, ethanolic	not ethyl alcohol or alcoholic
coenzyme A and its acyl derivatives	CoA and acyl-CoA	ethylenediaminetetra-acetate	EDTA
compare	cf.	exchangeable	$\text{Na}_x$ , $\text{K}_x$ etc., for total exchangeable sodium, potassium etc.
complement fractions	C1–C9	Experiment (with reference numeral)	Expt.; plural, Expts.
compliance (respiratory physiology)	C; express in $1 \text{ kPa}^{-1}$	expired minute ventilation	$\dot{V}_E$
concentrated	conc.	extinction	<i>use</i> absorbance
concentration	concn.; may be denoted [ ]; e.g. plasma $[\text{HCO}_3^-]$	extracellular fluid	ECF
conductance (respiratory physiology)	G; express in $1 \text{ s}^{-1} \text{ kPa}^{-1}$	extracellular fluid volume	ECFV
correlation coefficient	r; may be used without definition	extraction ratio of x (renal)	$E_x$
counts/min, counts/s	c.p.m., c.p.s.	Figure (with reference numeral)	Fig.; plural, Figs.
cubic centimetres	<i>use</i> ml	filtered load of x (renal)	$F_x$
curie	$\text{Ci}$ ( $1 \text{ Ci} = 3.7 \times 10^{10}$ d.p.s.)	follicle-stimulating hormone	F $\dot{\text{S}}\text{H}$
cycle/s	Hz	forced expiratory volume in 1.0 s	FEV <sub>1.0</sub>
cysteine	Cys	fractional concentration in dry gas	F
dates	e.g. 11 August 1970	fractional disappearance rate	k (as in $A = A_0 e^{-kt}$ )
dead-space minute ventilation	$\dot{V}_D$	frequency of respiration	$f_R$ ; in breaths/min
dead-space volume	$V_D$	functional residual capacity	FRC
degrees, Celsius or centigrade	$^\circ\text{C}$	gas-liquid chromatography	g.l.c.
deoxy (prefix)	<i>not</i> desoxy	gas transfer factor	T; in $\text{mmol min}^{-1} \text{ kPa}^{-1}$
deoxycorticosterone	DOC	glomerular filtration rate	GFR
deoxycorticosterone acetate	DOCA	glutamic acid	Glu
deoxyribonucleic acid	DNA	glutamine	Gln
dialysate	diffusate preferred; 'dialysate' should be clearly defined	glutathione	GSH (reduced); GSSG (oxidized)
diethylaminoethylcellulose	DEAE-cellulose	glycine	Gly
differential of x with respect to time	$\dot{x}$ (= $dx/dt$ )	gram(me)	g
1,25-dihydroxycholecalciferol	1,25-(OH) <sub>2</sub> D <sub>3</sub>	gravitational field, unit of ( $9.81 \text{ m s}^{-2}$ )	g
dilute	dil.	growth hormone	GH; if human, HGH
2,3-diphosphoglycerate	2,3-DPG	guery	Gy (100 rads)
direct current	d.c.	haematocrit	<i>not allowed</i> ; <i>use</i> packed cell volume (PCV)
disintegrations/min	d.p.m.	haemoglobin	Hb; express in g/dl
disintegrations/s	d.p.s.	half-life	$t_{1/2}$
dissociation constant		hertz ( $\text{s}^{-1}$ )	Hz
acidic	$K_a$	histidine	His
basic	$K_b$	hour	h
apparent	e.g. $K'_a$	human chorionic gonadotropin	HCG
minus log of	pK	human placental lactogen	HPL
doses	avoid Latin designations such as b.d. and t.i.d.	hydrocortisone	<i>use</i> cortisol
dyne	dyn; used for vascular resistance	hydrogen ion activity minus log of	aH; express in nmol/l
elastance	E; express in $\text{Pa m}^{-3}$	25-hydroxycholecalciferol	pH
electrocardiogram	ECG	hydroxyproline	25-(OH)D <sub>3</sub>
electroencephalogram	EEG	immunoglobulins	Hyp
			IgA, IgD, IgE, IgG, IgM

injection routes:	use abbreviations only in Figures	millimetre of mercury	mmHg; for blood pressure and, at authors' discretion, for gas tensions: see p. vi (1 mmHg = 0.133 kPa)
intra-arterial	i.a.		
intramuscular	i.m.		
intraperitoneal	i.p.		
intravenous	i.v.	millimolar (concentration)	mmol/l; <i>not</i> mM
subcutaneous	s.c.	millimole	mmol
international unit	i.u. (definition and reference should be given for uncommon or ambiguous applications, e.g. enzymes)	minimum	min.
		minute (60 s)	min
		molal	mol/kg
		molar (concentration)	mol/l; <i>not</i> M
		molar absorption coefficient	$\epsilon$ (the absorbance of a molar solution in a 1 cm light-path)
intracellular fluid	ICF		mol
intracellular fluid volume	ICFV	mole	mol. wt.
ionic strength	<i>I</i>	molecular weight	NAD if oxidation state not indicated
isoleucine	Ile	nicotinamide-adenine dinucleotide	NAD <sup>+</sup> if oxidized
isotonic	<i>not used</i> ; specify composition of fluid, e.g. NaCl, 150 mmol/l		NADH if reduced
			NADP if oxidation state not indicated
isotopically labelled compounds	e.g. [U- <sup>14</sup> C]glucose, [ <sup>1-<sup>14</sup>C</sup> ]glucose, sodium [1- <sup>14</sup> C]-acetate; use <sup>133</sup> I-labelled albumin, <i>not</i> [ <sup>133</sup> I]albumin for simple molecules: <sup>14</sup> CO <sub>2</sub> , <sup>3</sup> H <sub>2</sub> O	nicotinamide-adenine dinucleotide phosphate	NADP <sup>+</sup> if oxidized
			NADPH if reduced
		normal	should not be used to denote the concentration or osmolarity of a solution
joule	J	normal temperature and pressure	<i>use</i> standard temperature and pressure (STP)
kilogram(me)	kg		
kilopond	<i>not used</i> ; 1 kilopond = 9.8067 N	nuclear magnetic resonance number (in enumerations)	n.m.r.
lactate dehydrogenase	LDH	observed	no. (in Tables only)
leucine	Leu	ohm	obs. (in Tables only)
leucocyte count	express as 10 <sup>9</sup> cells/l	ornithine	$\Omega$
lipoproteins (serum)		ortho-	Orn
high density	HDL	orthophosphate (inorganic)	<i>o-</i>
low density	LDL	osmolarity	<i>P</i> <sub>1</sub>
very low density	VLDL		express in osmol (or mosmol)/l
litre	l (write in full if confusion with the numeral 1 is possible)	oxygen uptake per minute (in respiratory physiology)	$\dot{V}O_2$ ; express in ml STP/min
logarithm (base 10)	log	packed cell volume	PCV
logarithm (base e)	ln	page, pages	p., pp.
luteinizing hormone	LH	para-	<i>p-</i>
lysine	Lys	para-aminohippurate	PAH
maximum	max.	partial pressure	<i>P</i> ; express in either kPa or mmHg (see p. vi)
mean corpuscular haemoglobin	MCH; express in pg		<i>P</i> AO <sub>2</sub>
mean corpuscular haemoglobin concentration	MCHC; express in g/dl	e.g. alveolar, of O <sub>2</sub>	<i>P</i> aCO <sub>2</sub>
mean corpuscular volume	MCV; express in fl (1 $\mu\text{m}^3 = 1 \text{ fl}$ )	arterial, of CO <sub>2</sub>	<i>P</i> capO <sub>2</sub>
		capillary, of O <sub>2</sub>	<i>P</i> vCO <sub>2</sub>
		mixed venous, of CO <sub>2</sub>	<i>P</i> a
median lethal dose	LD <sub>50</sub>	pascal	/
meta-	<i>m-</i>	per	%
melting point	m.p.	per cent	<i>not used</i> ; <i>use</i> light petroleum and give boiling range
methanol, methanolic	<i>not</i> methyl alcohol	petroleum ether	
methionine	Met		Phe
metre	m	phenylalanine	express as pmol of angiotensin I h <sup>-1</sup> ml <sup>-1</sup>
Michaelis constant	<i>K</i> <sub>m</sub>	plasma renin activity	
micromole	$\mu\text{mol}$		
micron (10 <sup>-6</sup> m)	$\mu\text{m}$ ; <i>not</i> $\mu$	plasma volume	PV
milliequivalent	<i>not used</i> ; give amount in mmol	poise	1 poise = 10 <sup>-1</sup> N s m <sup>-2</sup>
millilitre	ml		

potential difference	p.d.	specific conductance of airways	sGaw; express in $s^{-1} \text{ kPa}^{-1}$
power output	W ( $1 \text{ W} = 0.1635 \text{ kpm/min}$ )	standard deviation	SD } may be used SEM } without definition
precipitate	ppt.	standard error of the mean	
pressure	P; express in kPa (except for blood pressures and gas tensions: see p. 6); $1 \text{ kPa} = 7.5 \text{ mm Hg}$	standard temperature and pressure	STP
probability of an event being due to chance alone	P	steroid nomenclature	see <i>Biochemical Journal</i> (1969) 113, 5–28; (1972) 127, 613–617
proline	Pro	sulphydryl	use thiol or SH
protein-bound iodine (plasma)	PBI	sum	$\Sigma$
pulmonary capillary blood flow	$\dot{Q}_c$	Svedberg unit	S
pyrophosphate (inorganic)	PPi	temperature (absolute)	T
rad (radiation dose; $10^{-5} \text{ J absorbed/g of material}$ )	not abbreviated ( $100 \text{ rads} = 1 \text{ Gy}$ )	(empirical)	t
red blood cell	use erythrocyte; express counts as $10^{12} \text{ cells/l}$	temperature, thermodynamic	$^{\circ}\text{K}$
red cell mass	RCM	thin-layer chromatography	t.l.c.
relative band speed (partition chromatography)	$R_F$	threonine	Thr
rem	$100 \text{ ergs/g} \times \text{quality factor}$	thyrotrophic hormone	TSH
renin	see plasma renin activity	thyrotrophin-releasing hormone	TRH
residual volume	RV	tidal volume	$V_T$
resistance (rheological)	R; express in $\text{kPa l}^{-1} \text{ s}$	time (symbol)	t
respiratory exchange ratio (pulmonary)	R	time of day	e.g. 18.15 hours
respiratory quotient (metabolic)	RQ	torr	not used; use kPa ( $1 \text{ torr} = 0.133 \text{ kPa}$ )
revolutions	rev.	total lung capacity	TLC
rev./min	not r.p.m.; use g if possible (see p. viii)	tryptophan	Trp
ribonucleic acid	RNA	tubular maximal reabsorptive capacity for x	$T_{m,x}$
röntgen	R	tyrosine	Tyr
saline	define at first mention [e.g. NaCl solution ( $154 \text{ mmol/l}$ )]	ultraviolet	u.v.
saturation	S, e.g. $S_{a,O_2}$ for arterial oxygen saturation (see partial pressure for other analogous abbreviations)	urinary concentration of x	$U_x$
second (time)	s	valency	e.g. $\text{Fe}^{2+}$ , not $\text{Fe}^{++}$
serine	Ser	valine	Val
sievert	Sv ( $1 \text{ J/kg} \times \text{quality factor}$ )	variance ratio	F
solvent systems	e.g. butanol/acetic acid/water (4:1:1, by vol.), butanol/acetic acid (4:1, v/v)	vascular resistance	express in $\text{kPa l}^{-1} \text{ s}$ (with value in $\text{dyn s cm}^{-5}$ in parentheses); primary values of differential vascular pressure (mmHg) and flow (l/min) should always also be given in Tables or text as appropriate
species	sp., plural spp.	velocity	v; express as $\text{m s}^{-1}$
specific activity	sp. act. Confusion must be avoided between e.g. specific radioactivity and the specific activity of an enzyme	venous admixture	$\dot{Q}_{va}$
		veronal	used only for buffer mixtures; otherwise use 5,5'-diethylbarbituric acid
		viscosity, dynamic	$\eta$
		viscosity, kinematic	$\nu$
		vital capacity	VC
		volt	V
		volume of blood (in cardio-respiratory physiology)	Q; use $\dot{Q}$ for blood flow rate
		watt	W
		wavelength	$\lambda$
		weight	wt.
		white blood cell	use leucocyte; express counts as $10^9 \text{ cells/l}$

# Volume 62

## AUTHOR INDEX

- ADIGUN, S.A. 51-56  
ALON, U. 65-70, 431-433  
ANDRÉN, L. 137-141  
ARISTIMUNO, G. 307-309  
AUG, F. 13-16
- BACKMAN, U. 509-514  
BANKS, R.A. 169-176  
BARANOWSKI, R.L. 667-676  
BARNES, P.J. 349-354, 661-665  
BARTTER, F.C. 209-213  
BAUER, J.H. 43-49  
BEEVERS, D.G. 1-6  
BEILIN, L.J. 169-176  
BELLAVERE, F. 57-64  
BELLINGHAM, A.J. 479-488  
BENHAMOU, J.-P. 273-277  
BERANT, M. 431-433  
BERNAU, J. 273-277  
BERTRAND, A. 13-16  
BETTER, O.S. 65-70, 431-433  
BEUERS, U. 341-342  
BIANCHI, G.P. 683-686  
BING, R.F. 361-366  
BJÖRKMANN, M. 137-141  
BJÖRNSSON, Ó.G. 651-659  
BLOOM, S.R. 651-659  
BONJOUR, J.-P. 389-396, 503-508  
BORG, K.O. 137-141  
BOUHNİK, J. 355-360  
BRADLEY, G.W. 311-319  
BREWER, D.B. 495-502  
BROOKS, C.S. 43-49  
BROWN, M.J. 661-665  
BRYSON, E.I. 595-604  
BURKE, J.F. 553-556  
BURSTON, D. 617-626
- CAGLIERO, E. 239-242  
CAMPBELL, I.L. 449-455  
CATLEY, D.M. 595-604  
CHADWICK, V.S. 651-659  
CHAIMOVITZ, C. 65-70  
CHARLESWORTH, J.A. 561-562  
CHONG, C.K. 457-464  
CHRISTOFIDES, N.D. 651-659
- CLAUSER, E. 355-360  
CLEGG, G. 489-494  
CLEMENS, T.L. 427-429  
CLOUGH, D.P. 51-56  
COHEN, R.D. 411-420  
CONDORELLI, M. 581-588  
CONWAY, J. 51-56  
CORTESE, C. 397-401  
CORVOL, P. 355-360  
CRAWFORD, P.A. 667-676  
CREMONINI, C. 643-649  
CROCKSON, A.P. 71-76  
CRUICKSHANK, J.K. 1-6  
CUMBERBATCH, M. 489-494  
CUMMING, G. 541-547, 549-551
- DANDONA, P. 177-181  
DANIELSON, B.G. 509-514  
DAVIDSON, L. 169-176  
DE KEIJZER, M.H. 435-437  
DE LUCA, N. 581-588  
DERKX, F.H.M. 435-437  
DOLLERY, C.T. 349-354  
DONDI, C. 683-686  
DOWLING, R.H. 515-519  
DRESLINSKI, G.R. 307-309
- EDWARDS, R.H.T. 227-234  
ENDRE, Z.H. 561-562  
ERIKSON, L.S. 285-293  
ESLER, M. 247-254  
EVENWEL, R.T. 589-594  
EWING, D.J. 57-64
- FARR, M. 71-76  
FELLSTRÖM, B. 509-514  
FEVERY, J. 521-528  
FISHER, R. 279-283  
FITZGERALD, G.A. 349-354  
FLEISCH, H. 389-396, 503-508  
FLETCHER, D.R. 651-659  
FORBES, A.M. 479-488  
FRAHER, L.J. 427-429  
FRASER, R. 373-380  
FRASER, T.R. 221-226  
FROHLICH, E.D. 307-309
- GALTON, D.J. 93-100  
GARCIA DEL RIO, C. 143-149
- GARDES, J. 355-360  
GAUTHIER, C. 403-410  
GLEASON, S.D. 471-477  
GOLDBERG, A. 183-191  
GOLDEN, M.H.N. 299-305  
GOLDMAN, M.D. 7-11  
GOLDSMITH, H.J. 479-488  
GORDON, J.A. 235-238  
GOZZI, C. 643-649  
GREEN, J.R. 557-560  
GRIFFITHS, J.R. 113-115  
GÜLLNER, H.-G. 209-213  
GUTTERIDGE, D.H. 221-226  
GUYATT, A.R. 541-547
- HAGENFELDT, L. 285-293  
HALE, T. 311-319  
HALLSON, P.C. 17-19, 421-425  
HAM, J.M. 279-283  
HAMBURGER, R.K. 667-676  
HANSSON, L. 137-141  
HATTON, R. 51-56  
HEATH, D.F. 83-91  
HEFTI, E. 389-396  
HELLQUIST, L.N.B. 449-455  
HENDERSON, A.R. 337-339  
HENDY, G.N. 381-387  
HENRIKSEN, O. 605-609  
HERITTING, G. 341-342  
HESP, R. 595-604  
HEYMA, P. 215-220  
HILTON, P.J. 563-564  
HIRSCH, F. 611-615  
HOLBROOK, I.B. 83-91  
HOLDSWORTH, G. 93-100, 125-129  
HOLMGREN, K. 509-514  
HOOD, B. 151-155  
HOPWOOD, J.J. 193-201  
HORSFIELD, K. 549-551  
HOWARD, P. 255-259  
HOWELL, J.B.L. 367-372  
HUANG, W.-C. 573-579  
HUGHES, I. 227-234  
HUGHES, M.J. 143-149
- IKEMOTO, F. 157-162  
ILES, R.A. 411-420  
IND, P.W. 661-665  
IRVING, M.H. 83-91

- ISAACS, P.E.T. 203–207  
 IWAO, H. 157–162
- JACKSON, A.A. 299–305  
 JACKSON, P.A. 101–107  
 JACOBS, A. 529–540  
 JAHOR, P. 299–305  
 JENSEN, K. 605–609  
 JONES, R.B. 563–564  
 JOPLIN, G.F. 221–226
- KARLBERG, B.E. 35–41  
 KAWASHIMA, S. 295–297  
 KEELING, P.W.N. 109–111  
 KIM, Y.S. 203–207  
 KNEPEL, W. 341–342  
 KNUDSEN, L. 605–609  
 KOHNER, E.M. 239–242  
 KONDO, K. 565–566  
 KOX, W. 549–551  
 KRAEGEN, E.W. 561–562  
 KRØLNER, B. 329–336  
 KURTSMAN, N.A. 667–676
- LACHER, J.W. 235–238  
 LAGER, I. 131–136  
 LAKATUA, D.J. 209–213  
 LAMBIE, A.T. 27–33  
 LANGLEY, F. 549–551  
 LARKINS, R.G. 215–220  
 LASSEN, N.A. 567–572  
 LAWRENCE, G.M. 495–502  
 LEE, M.R. 439–448  
 LENTZE, M.J. 557–560  
 LEUNG, F.Y. 337–339  
 LEWIN, I.G. 381–387  
 LEWIS, B. 397–401  
 LIEBAU, G. 465–469  
 LINDSTEDT, G. 137–141  
 LIVESSEY, J.H. 373–380  
 LJUNGHALL, S. 509–514  
 LUCK, P. 677–682  
 LUFF, N. 595–604  
 LYNN, K.L. 21–26
- MACDONALD, G.J. 561–562  
 MANLOVE, L. 479–488  
 MARCER, D. 367–372  
 MARCHESINI, G. 683–686  
 MARSHALL, R.D. 21–26  
 MASERI, A. 119–123  
 MATON, P.N. 515–519  
 MATTHEWS, D.M. 617–626  
 MATTIASSON, I. 151–155  
 MCCOLL, K.E.L. 183–191  
 McEVOY, M. 279–283  
 MCKENNA, F. 489–494
- MEANOCK, C.I. 163–167  
 MENARD, J. 355–360  
 MESSERLI, F.H. 307–309  
 MIKHAILIDIS, A.M. 177–181  
 MIKHAILIDIS, D.P. 177–181  
 MILEWSKI, P.J. 83–91  
 MILLEDGE, J.S. 595–604  
 MILLER, N.E. 397–401  
 MILLER, P.D. 235–238  
 MINTY, B.D. 595–604  
 MOLNAR, J.A. 553–556  
 MONSON, J.P. 411–420  
 MOORE, M.R. 183–191  
 MORDECHOVITZ, D. 431–433  
 MORGAN, D.B. 77–81, 101–107  
 MORTON, J.J. 143–149, 373–380  
 MÜHLBAUER, R.C. 503–508  
 MULLER, V. 193–201  
 MYANT, N.B. 261–271
- NAKATANI, T. 295–297  
 NARBED, P.G. 367–372  
 NAVAR, L.G. 573–579  
 NGUYEN-SIMONNET, H. 403–410  
 NICHOLLS, M.G. 373–380  
 NIELSEN, S.P. 329–336  
 NOBLE, M.I.M. 311–319  
 NUTTO, D. 341–342
- O'DAY, J. 109–111  
 OLDER, M.W.J. 595–604  
 O'RIORDAN, J.L.H. 381–387, 427–429  
 OZAWA, K. 295–297
- PAPAPOULOS, S.E. 381–387, 427–429  
 PARFREY, P.S. 117  
 PAYNE, N.N. 595–604  
 PEIGNOUX, M. 273–277  
 PELLET, M.V. 403–410  
 PERL, S.I. 561–562  
 PIAGGI, V. 643–649  
 PIMPLE, J. 311–319  
 PISI, E. 683–686  
 PLOTH, D.W. 573–579  
 PORTA, M. 239–242  
 POSTON, L. 563–564  
 PROVOOST, A.P. 435–437  
 PUCHELLE, E. 13–16
- RAMMER, L. 35–41  
 RECKLESS, J.P.D. 93–100, 125–129
- REES, W.D.W. 343–348  
 RENGO, F. 581–588  
 REUBEN, A. 515–519  
 REVILLARD, J.P. 403–410  
 RICCIARDELLI, B. 581–588  
 RICHENS, J.M. 255–259  
 RIEGGER, A.J.G. 465–469  
 ROBERTSON, J.I.S. 373–380  
 ROSE, G.A. 17–19, 421–425  
 ROSE, M. 279–283  
 ROUND, J.M. 227–234  
 ROWLANDSON, R. 311–319  
 ROYLE, G.T. 553–556  
 RUSE, W. 109–111  
 RUSSELL, G.I. 361–366
- SANDLER, L.M. 427–429  
 SARUTA, T. 565–566  
 SCOTT, D.L. 71–76  
 SCHENK, R. 389–396  
 SCHERER, B. 611–615  
 SCHNEIDER, E.G. 471–477  
 SCHRIER, R.W. 235–238  
 SHENKIN, A. 21–26  
 SHI, E.C.P. 279–283  
 SHUTTLEWOOD, R.J. 113–115  
 SKAGEN, K. 243–245, 605–609  
 SMITH, J.A. 411–420  
 SMITH, U. 131–136  
 SMITS, J.F.M. 589–594  
 SOLTYS, J. 169–176  
 SONNENBERG, H. 457–464  
 STÄHL, E. 35–41  
 STERCHI, E.E. 557–560  
 STOCKS, J. 93–100, 125–129  
 STRUYKER-BOUDIER, H.A.J. 589–594  
 SUAREZ, D.H. 307–309  
 SUGGETT, A.J. 93–100  
 SULAIMAN, S. 17–19, 421–425  
 SULE, U. 397–401  
 SUMI, J. 321–328  
 SUMMERFIELD, G.P. 479–488  
 SWALES, J.D. 361–366  
 SWAMINATHAN, R. 77–81, 489–494  
 SZATALOWICZ, V.L. 235–238
- TAKAORI, K. 157–162  
 TAKASUGI, S. 321–328  
 TAKESHITA, K. 627–642  
 TAKITA, M. 627–642  
 TANAKA, K. 627–642  
 TAYLOR, E. 617–626  
 TAYLOR, K.W. 449–455

- THALASSINOS, N.C. 221-226  
 THOM, A. 27-33  
 THOMPSON, G.G. 183-191  
 THOMPSON, R.P.H. 109-111  
 THRELFALL, C.J. 83-91  
 THURSTON, H. 361-366  
 TOBE, T. 295-297  
 TOKI, N. 321-328  
 TOMLINSON, S. 381-387  
 TRECHSEL, U. 389-396  
 TREE, M. 373-380  
 TRIMARCO, B. 581-588  
 TURNBERG, L.A. 343-348  
  
 UNGAR, A. 27-33  
  
 VAN ESSEN, H. 589-594  
 VAN STEENBERGEN, W. 521-528  
 VANTOL, R. 279-283  
  
 VENTURA, E. 643-649  
 VENTURA, H.O. 307-309  
 VERESS, A.T. 457-464  
 VIGORITO, C. 581-588  
 VINCENT, C. 403-410  
 VOLPE, M. 581-588  
  
 WAGSTAFF, M. 529-540  
 WAHREN, J. 285-293  
 WAKELING, A. 677-682  
 WALES, J.K. 77-81  
 WALLACE, A.M. 183-191  
 WALTON, K.W. 71-76, 93-100  
 WAPNIR, R.A. 617-626  
 WARD, M.P. 595-604  
 WATSON, M.L. 27-33  
 WEBER, P.C. 611-615  
 WEIGHT, M. 397-401  
 WESTENFELDER, C. 667-676  
  
 WHITEHEAD, J.S. 203-207  
 WIKSTRÖM, B. 509-514  
 WILFORD, K. 83-91  
 WINER, J. 427-429  
 WITHEY, W.R. 595-604  
 WITZGALL, H. 611-615  
 WOLFE, M.H. 553-556  
 WOLFE, R.R. 553-556  
 WOOLLARD, M.L. 177-181  
 WORWOOD, M. 529-540  
  
 YAMAMOTO, K. 157-162  
 YASUDA, K. 295-297  
 YOUNG, A. 227-234  
  
 ZAHM, J.M. 13-16  
 ZAREIAN, Z. 489-494  
 ZENEROLI, M.L. 643-649  
 ZOLL, M. 683-686  
 ZUCKER, A. 471-477

# Volume 62

## SUBJECT INDEX

First and last page numbers of papers to which entries refer are given.  
Page numbers marked with an asterisk refer to Editorial Reviews.

- Absorption kinetics 617-626  
Adenine nucleotides, dystrophic muscle 113-115  
Adenosine 3':5'-cyclic monophosphate, vitamin D deficiency 381-387  
Adenosine triphosphatase, Na<sup>+</sup>,K<sup>+</sup>-activated, erythrocyte sodium transport 489-494  
Adrenalectomy, angiotensinogen 355-360  
Adrenaline  
  airway responses 349-354  
  congestive heart failure 465-469  
  noise stimulation 137-141  
 $\beta$ -Adrenoceptor blockade, diabetic subjects 131-136  
 $\beta$ -Adrenoceptors, asthma 349-354  
Aerosol deposition, bronchial 13-16  
Alanine  
  kinetics and glucose 553-556  
  obesity 77-81  
Albuminuria, experimental 495-502  
Alcohol, hypertension 1-6\*  
Aldosterone  
  captopril 611-615  
  congestive heart failure 465-469  
  exercise 595-604  
  potassium 373-380  
  salt retention in bile-duct ligation 65-70  
  sodium balance 373-380  
Alkali secretion, gastric mucosa 343-348\*  
Alveolar gas, mixing efficiency 541-547, 549-551  
Amino acids  
  metabolism and  $\alpha$ -oxoisocaproate 285-293  
  undernutrition and sepsis 83-91  
 $\delta$ -[3,5-<sup>3</sup>H]Aminolaevulinic acid, bile pigment production 643-649  
 $\delta$ -Aminolaevulinic acid synthase, leucocyte 183-191  
Ammonia  
  glutamine 299-305  
  hepatectomy 273-277  
   $\alpha$ -oxoisocaproate 285-293  
  urinary excretion 299-305  
Ammoniogenesis, glutamine metabolism 299-305  
Angina pectoris 119-123\*  
Angiotensin I  
  angiotensinogen 355-360  
  captopril and vasopressin release 341-342  
Angiotensin II  
  aldosterone 373-380  
  blood flow regulation 169-176  
  captopril 341-342  
  congestive heart failure 465-469  
  intravascular coagulation 35-41  
  kidney 35-41  
  sympathetic reflexes 51-56  
  vasopressin 143-149, 341-342  
Angiotensin antagonist ([Sar<sup>1</sup>,Ala<sup>8</sup>]angiotensin II) 51-56  
Angiotensinogen, direct radioimmunoassay 355-360  
Anorexia nervosa, behavioural thermoregulation 677-682  
Antidiuretic hormone, experimental congestive heart failure 465-469  
Apnoea, sleep and heart rate 163-167  
Apolipoprotein C-II, acquired deficiency 93-100  
Apolipoproteins 125-129\*  
Aprotinin, Goldblatt hypertension 361-366  
Aspartate aminotransferase, heart isoenzymes 337-339  
Asphyxia, apnoeic, heart rate 163-167  
Asthma  
  nocturnal 349-354  
  plasma histamine and catecholamines 661-665  
Atherosclerosis, coronary 119-123\*  
Atrophy, number of muscle fibres 227-234  
Atropine, alveolar gas mixing 549-551  
Autonomic nervous system  
  blockade 57-64  
  hypertension 581-588  
Autonomic neuropathy 561-562  
Baroreceptors  
  borderline hypertension 307-309  
  sensitivity 581-588  
Baroreflex sensitivity 581-588, 589-594  
Behaviour, thermoregulation 677-682  
*N*-Benzoyl-*L*-tyrosyl-*p*-aminobenzoic acid, intestinal non-pancreatic hydrolysis 557-560  
Bicarbonate secretion, duodenal taurocholate 651-659  
Bicarbonate, tubular absorption 667-676

- Bile acids**  
 duodenal perfusion 651–659  
 3 $\beta$ -hydroxylated 627–642  
 kidney function 431–433  
 muscular dystrophy 627–642  
 secretion 515–519
- Bile-duct ligation, salt retention** 65–70
- Bile, intrarenal infusion** 431–433
- Bile salts, secretion** 515–519
- Bilirubin**  
 conjugation and secretion 521–528  
 Gilbert's syndrome 643–649  
 duodenal taurocholate 651–659
- Blood coagulation factors** 239–242
- Blood flow**  
 captopril 169–176  
 cerebral 567–572\*  
 haemorrhage 169–176  
 hypervolaemia 457–464  
 kidney 35–41, 169–176, 255–259\*, 457–464, 573–579  
 meclofenamate 169–176  
 prostaglandins 169–176  
 spleen 169–176  
 subcutaneous 605–609
- Blood pressure**  
 captopril 611–615  
 indomethacin 611–615  
 noise stimulation 137–141  
 sympathetic reflexes 51–56  
 vasopressin 143–149
- Blood vessels**  
 intravascular coagulation 35–41  
 renal vascular resistance 573–579  
 veno-arteriolar reflex 605–609
- Blood volume**  
 central 51–56  
 expansion 457–464
- Body fluid**  
 composition in hypertension 43–49  
 homeostasis in exercise 595–604
- Body temperature**  
 anorexia nervosa 677–682  
 hepatectomy 273–277
- Bone**  
 mass, parathyroid hormone 389–396  
 mineral content 329–336
- Brain, blood flow and metabolism** 567–572\*
- Branched-chain amino acids, metabolism and  $\alpha$ -oxoisocaproate** 285–293
- Breathing**  
 pulmonary inflation reflex 163–167  
 resistive load detection 367–372  
 thoracoabdominal movements 7–11\*
- Bronchi, mucociliary clearance** 13–16
- Bronchodilatation, nocturnal asthma** 349–354
- Bronchomotor tone, atropine** 549–551
- Caerulin, bilirubin secretion** 651–659
- Calcaemia, renal tubular absorption** 503–508
- Calcium**  
 neutron activation analysis 389–396  
 tubular absorption 503–508
- Calcium balance, osteoporosis and sex hormones** 221–226
- Calcium oxalate, urinary, 17–19, 421–425, 509–514**
- C-apoproteins** 125–129\*
- Captopril**  
 adrenergic vasoconstriction 565–566  
 blood flow regulation 169–176  
 vasopressin release 341–342
- Carbohydrate, insulin biosynthesis** 449–455\*
- Catecholamines, asthma** 661–665
- Cell membrane permeability** 101–107
- Cerebral blood flow** 567–572\*
- Chemoreceptors, sleep apnoea and heart rate** 163–167
- Chlorthiazide, urine osmolality in oedema** 235–238
- Cholelithiasis** 515–519
- Cholestasis, erythrocyte membrane permeability** 101–107
- Cholesterol**  
 biliary secretion 515–519  
 liver 515–519  
 plasma transport 261–271\*
- Cirrhosis of liver**  
 alcoholic 109–111  
 myofibrillar protein 683–686  
 $\alpha$ -oxoisocaproate infusion 285–293
- Cold, anorexia nervosa** 677–682
- Converting-enzyme inhibitor** 51–56
- Cor pulmonale, oedema** 255–259\*
- Cortisol, noise stimulation** 137–141
- Creatinine, liver cirrhosis** 683–686
- Crystals, urinary** 17–19, 421–425, 509–514
- Cyclic AMP see Adenosine 3':5'-cyclic monophosphate**
- Cytoprotection, gastric mucosa** 343–348\*
- Dark adaptation, chronic liver disease** 109–111
- Dead space, atropine** 549–551
- Deoxycholic acid, myotonic muscular dystrophy** 627–642
- Deoxycorticosterone acetate-salt hypertension, vasopressin** 143–149
- Deoxyribonucleic acid**  
 liver synthesis 295–297  
 muscle 83–91
- Diabetes mellitus**  
 $\beta$ -adrenoceptor blockade 131–136  
 insulin biosynthesis 449–455\*
- Dialysis, peritoneal continuous ambulatory** 479–488



- 1,25-Dihydroxycholecalciferol, renal function 427-429, 503-508
- 2,3-Diphosphoglycerate, erythrocyte metabolism 479-488
- Diuresis  
glycoprotein excretion 21-26  
saralasin 573-579
- Diuretics, urine osmolality in oedema 235-238
- DOCA-salt hypertension, vasopressin 143-149
- Dopamine  
excretion in women 209-213  
kidney 439-448\*
- Dual-photon absorptiometry, bone mineral content 329-336
- Dyspnoea, breathing resistance 367-372
- Elastase, pancreatic 321-328
- Emphysema, vagotomy 311-319
- Enzyme induction 521-528
- Erythrocyte  
membrane cholesterol 101-107  
metabolism 479-488  
sodium efflux 101-107  
sodium transport 489-494
- Essential hypertension, inheritance 151-155
- Exercise  
aldosterone 595-604  
electrolyte balance 595-604  
fluid homeostasis 595-604  
isometric, hypertension 307-309  
vagotomy in emphysema 311-319
- Extracellular fluid volume 43-49, 595-604
- Ferritin, iron overload 529-540
- Fibrin, renal blood flow 35-41
- Fibroblast, skin,  $\alpha$ -L-iduronidase 193-201
- Fibronectin, plasma and synovial fluid 71-76
- Fruzemide  
erythrocyte sodium efflux 101-107  
urine osmolality in oedema 235-238
- Gastric inhibitory peptide, bile salt 651-659
- Gastric mucosa, protection 343-348\*
- Gastrin, bile salt 651-659
- Genetic marker, essential hypertension 151-155
- Gilbert's syndrome, bile pigments 643-649
- $\beta$ -Globulins, platelet function 239-242
- Glomerular filtration rate, saralasin 573-579
- Glucocorticoids, renal conversion of thyroxine 215-220
- Glucose  
 $\beta$ -adrenoceptor blockade 131-136  
insulin biosynthesis 449-455\*  
kinetics 553-556  
renal tubular absorption 667-676
- Glucuronosyltransferase activity, biliary bilirubin 521-528
- Glutamine, metabolism 299-305
- Glutathione, liver concentration 279-283
- Glycerol infusion,  $\beta$ -adrenoceptor blockade 131-136
- [2-<sup>14</sup>C]Glycine, bile pigment production 643-649
- Glycoprotein, urinary excretion 21-26
- Goldblatt hypertension 573-579
- Goldblatt hypertension, indomethacin and aprotinin 361-366
- Growth hormone, noise stimulation 137-141
- Guanine nucleotides, dystrophic muscle 113-115
- Gunn rats, heterozygous, UDP-glucuronosyltransferase 521-528
- Haem biosynthesis, menstrual cycle 183-191
- Haemodialysis, erythrocyte metabolism 479-488
- Haemodynamics  
baroreceptor stimulation 307-309  
captopril 611-615  
noise stimulation 137-141
- Haemoglobin, oxygen affinity 479-488
- Haemorrhage, prostaglandins and angiotensin II 169-176
- Head-up tilt, subcutaneous blood flow 605-609
- Heart  
aspartate aminotransferase 337-339  
beat-to-beat variation 561-562  
experimental congestive failure 465-469
- Heart rate  
autonomic control 57-64  
sleep apnoea 163-167
- Hepatectomy, body temperature 273-277
- Hepatitis, zinc deficiency and photoreceptor dysfunction 109-111
- Hepatocytes, lactate uptake 411-420
- Hill walking, electrolyte balance 595-604
- Histamine, asthma 661-665
- 3-Hydroxybutyrate, obesity 77-81
- 18-Hydroxycorticosterone, captopril 611-615
- Hypernatraemia, dietary sodium intake 471-477
- Hyperparathyroidism (secondary)  
vitamin D deficiency 381-387  
X-linked hypophosphataemia 503-508
- Hypertension  
baroreceptors 307-309, 581-588, 589-594  
blacks and whites 1-6\*  
body fluid 43-49  
borderline 307-309  
DOCA-salt 143-149  
dopamine 439-448\*  
epidemiology 1-6\*

- Hypertension (continued)**  
 essential 151–155, 307–309  
 ethnic differences 1–6\*  
 experimental 361–366, 573–579  
 Goldblatt 361–366, 573–579  
 isometric exercise 307–309  
 mortality 1–6\*  
 platelet noradrenaline 151–155  
 potassium 1–6\*, 117  
 sodium 1–6\*, 117  
 vasopressin 143–149  
 whites and blacks 1–6\*
- Hyperthermia, anorexia nervosa** 677–682
- Hypertriglyceridaemia, C-apoproteins** 125–129\*
- Hypertriglyceridaemia, very-low-density lipoprotein** 93–100
- Hypoglycaemia,  $\beta$ -adrenoceptor blockade** 131–136
- Hyponatraemia, frusemide and renal water excretion** 235–238
- $\alpha$ -L-Iduronidase, leucocytes and fibroblasts** 193–201
- Indomethacin**  
 captopril 611–615  
 dopamine excretion 209–213  
 sodium chloride excretion 27–33, 209–213  
 Goldblatt hypertension 361–366
- Inflation reflex, pulmonary, heart rate** 163–167
- Inheritance**  
 essential hypertension 151–155  
 lipoprotein receptor activity 397–401
- Insulin**  
 biosynthesis 449–455\*
- Interstitial fluid volume** 43–49
- Intestine, small**  
 absorption 617–626  
 hydrolysis of PABA-peptide 557–560  
 muscarinic cholinergic receptors 203–207
- Intracellular fluid volume** 43–49
- Iron**  
 overload 529–540  
 uptake 529–540
- Ischaemic heart disease** 119–123\*
- Isoenzyme subforms, aspartate aminotransferase** 337–339
- Isoferritins, iron overload** 529–540
- Isometric exercise, hypertension** 307–309
- Jaundice**  
 erythrocyte membrane permeability 101–107  
 renal function 431–433
- Kallikrein, Goldblatt hypertension** 361–366
- Ketones, obesity** 77–81
- 6-Keto-prostaglandin  $E_1$  and  $F_{1\alpha}$ , platelet aggregation** 177–181
- Kidney**  
 acute failure 35–41  
 albuminuria 495–502  
 bile acids 431–433  
 blood flow 169–176, 255–259\*, 573–579  
 chronic failure 479–488, 489–494, 561–562  
 denervation 457–464  
 1,25-dihydroxycholecalciferol 427–429  
 dopamine 439–448\*  
 haemodynamics 457–464  
 indomethacin 27–33  
 $\beta_2$ -microglobulin catabolism 403–410  
 renin 157–162  
 thyroxine deiodination 215–220  
 vascular resistance 573–579
- Kidney, parathyroid hormone in vitamin D deficiency** 381–387
- Kidney, tubular absorption**  
 bicarbonate 667–676  
 calcium 503–508  
 glucose 667–676
- Kinetics, urea, glucose and alanine** 553–556
- Lactate, hepatocyte uptake** 411–420
- Lactate infusion,  $\beta$ -adrenoceptor blockade** 131–136
- Leucine, metabolism in cirrhosis** 285–293
- Leucocyte**  
 $\delta$ -aminolaevulinic acid synthase 183–191  
 $\alpha$ -L-iduronidase 193–201  
 sodium transport 563–564
- Lipids, membrane** 101–107
- Lipoprotein lipase, 93–100**
- Lipoproteins**  
 cholesterol transport 261–271\*  
 high density 125–129\*  
 hypertriglyceridaemia 93–100  
 low-density 397–401  
 receptor activity 397–401  
 very-low density 93–100, 125–129\*
- Liver**  
 body temperature and vascular exclusion 273–277  
 glutathione 279–283
- Liver damage**  
 experimental 65–70  
 regeneration 295–297
- Liver disease**  
 alcoholic cirrhosis 109–111  
 cirrhosis 109–111, 285–293, 683–686  
 experimental 65–70  
 photoreceptor dysfunction 109–111  
 zinc deficiency 109–111
- Load detection, breathing** 367–372
- Lumbar spine, osteoporosis bone mineral** 329–336
- Lung, alveolar gas mixing efficiency** 541–547

- $\alpha_2$ -Macroglobulin, combination with elastase 321-328  
 Magnesium, urinary 17-19  
 Mast cell mediators 661-665  
 Meclofenamate, blood flow regulation 169-176  
 Menstrual cycle, haem biosynthesis 183-191  
 Metabolism, brain 567-572\*  
 3-Methylhistidine, liver cirrhosis 683-686  
 $\beta_2$ -Microglobulin, plasma protein binding 403-410  
 Microspheres, renal blood flow 35-41  
 Mineralocorticoids, salt retention in bile-duct ligation 65-70  
 Mononuclear cells, low-density lipoprotein receptor activity 397-401  
 Motilin, bile salt 651-659  
 Mucociliary transport 13-16  
 Mucus-bicarbonate barrier 343-348\*  
 Muscarinic cholinergic receptors, intestinal and pancreatic 203-207  
 Muscle chemistry, undernutrition and sepsis 83-91  
 Muscle fibres, knee injury 227-234  
 Muscle protein, liver cirrhosis 683-686  
 Muscular dystrophy, purine nucleotide profile 113-115  
 Myeloma, apolipoprotein C-II deficiency 93-100  
 Myocardial infarction 119-123\*, 243-245  
 Myotonic dystrophy, abnormal bile acids 627-642  
  
 Nasal mucosa, mucociliary transport 13-16  
 Natriuresis, saralasin 573-579  
 Neck chamber 581-588  
 Needle biopsy, muscle 83-91  
 Negative pressure, lower body 51-56  
 Neostigmine, baroreflex responsiveness 581-588  
 Nephrotoxicity, bile acids 431-433  
 Neuromuscular disease, thoracoabdominal movements 7-11\*  
 Neutron activation analysis, calcium 389-396  
 Nitrogen metabolism  
   glutamine 299-305  
    $\alpha$ -oxoisocaproate 285-293  
 Nitrogen washout, alveolar gas mixing 541-547, 549-551  
 Noise, blood pressure and stress hormones 137-141  
 Noradrenaline  
   congestive heart failure 465-469  
   noise stimulation 137-141  
   plasma kinetics 247-254\*  
   platelet release 151-155  
 Nutrition, muscle intracellular amino acids 85-91  
  
 Obesity, fasting and alanine and 3-hydroxybutyrate 77-81  
 (+)-Octanoylcarnitine, hepatic deoxyribonucleic acid synthesis 295-297  
 Oedema  
   congestive heart failure 465-469  
   cor pulmonale 255-259\*  
   diuretics and renal water excretion 235-238  
   exercise 595-604  
 Osteomalacia, secondary hyperparathyroidism 381-387  
 Osteoporosis  
   bone mineral content 329-336  
   calcium balance and sex hormones 221-226  
   parathyroid hormone 389-396  
 $\alpha$ -Oxoisocaproate, amino acid and nitrogen metabolism 285-293  
  
 PABA-peptide, intestinal non-pancreatic hydrolysis 557-560  
 Pancreas, muscarinic cholinergic receptors 203-207  
 Pancreatic elastase, acute pancreatitis 321-328  
 Pancreatic function  
   duodenal bile salt 651-659  
   PABA-peptide hydrolase 557-560  
 Pancreatic polypeptide, bile salt 651-659  
 Pancreatitis, plasma elastase 321-328  
 Parasympathetic nervous system, small intestine and pancreas 203-207  
 Parathyroid hormone  
   kidney and vitamin D deficiency 381-387  
   osteoporosis 389-396  
 Peptides, intestinal absorption 617-626  
 pH  
   distal tubule 667-676  
   hepatocyte lactate uptake 411-420  
 Phenylephrine, baroreceptor sensitivity 581-588  
 Phosphataemia, renal tubular absorption 503-508  
 Phosphate, X-linked hypophosphataemia 503-508  
 Photoreceptor dysfunction, chronic liver disease 109-111  
 Plasma membrane, lactate uptake 411-420  
 Plasma renin activity  
   active renin 435-437  
   hypertension 1-6\*, 43-49  
   intravascular coagulation 35-41  
   renal failure 667-676  
 Plasma volume 43-49, 595-604  
 Platelets  
   adhesiveness 239-242  
   aggregation 177-181, 239-242  
   noradrenaline in hypertension 151-155

- Porphyria, haem biosynthesis and menstrual cycle 183–191  
 Posture  
   heart rate 57–64  
   subcutaneous blood flow 605–609  
 Potassium  
   aldosterone 373–380  
   excretion 471–477  
   hypertension 1–6\*, 117  
 Prolactin, noise stimulation 137–141  
 Propranolol  
   baroreflex responsiveness 581–588  
   diabetic subjects 131–136  
 Prostacyclin, platelet anti-aggregatory activity 177–181  
 Prostaglandin E, urinary excretion 27–33  
 Prostaglandins  
   blood flow regulation 169–176  
   captopril 611–615  
   cytoprotection 343–348\*  
   dopamine excretion 209–213  
   gastric mucosa 343–348\*  
   Goldblatt hypertension 361–366  
   platelet aggregation 239–242  
 Proteins  
   plasma 403–410  
   muscle 683–686  
   turnover 299–305, 403–410  
 Proteinuria, experimental 495–502  
 Pulmonary vascular resistance, cor pulmonale 255–259\*  
 Purine nucleotides, muscular dystrophy 113–115  
  
 Radioimmunoassay  
   angiotensinogen 355–360  
   1,25-dihydroxycholecalciferol 427–429  
 Receptors, lipoprotein, blood mononuclear cells 397–401  
 Renal failure  
   acute 35–41  
   chronic 479–488, 489–494  
 Renal tubules  
   absorption 503–508, 667–676  
   deiodination of thyroxine 215–220  
 Renin  
   congestive heart failure 465–469  
   dopamine 439–448\*  
   exercise 595–604  
   inactive 435–437  
   low-renin hypertension 1–6\*  
   renal molecular-weight conversion 157–162  
   thrombin 35–41  
 Renin-angiotensin system  
   intravascular coagulation 35–41  
   sympathetic reflexes 51–56  
 Renin-binding substance, kidney 157–162  
  
 Rheumatoid arthritis, fibronectin 71–76  
 R-R interval, posture 57–64  
  
 Saralasin, renal function 573–579  
 Secretin, bile salt 651–659  
 Sepsis, muscle intracellular amino acids 83–91  
 Sex hormones, calcium balance in osteoporosis 221–226  
 Signal Detection Theory, breathing 367–372  
 Single breath test, alveolar gas mixing 541–547  
 Skin blood flow  
   subatmospheric pressure 243–245  
   tetraplegia 605–609  
 Sleep apnoea, heart rate 163–167  
 Sodium  
   aldosterone 373–380  
   balance 595–604  
   bile-duct ligation 65–70  
   dopamine 439–448\*  
   erythrocyte permeability 101–107  
   hypertension 1–6\*, 117  
   hyponatraemia 235–238  
   prostaglandins 27–33  
   transport 489–494  
 Sodium chloride excretion  
   blood volume expansion 457–464  
   dietary sodium 471–477  
   indomethacin 209–213  
   prostaglandins 27–33  
 Sodium chloride loading  
   hypernatraemia 471–477  
   renal blood flow 35–41  
   tubular function 667–676  
 Sodium taurocholate, duodenal perfusion 651–659  
 Sodium urate, calcium oxalate crystal growth 509–515  
 Spine, osteoporosis bone mineral 329–336  
 Spleen, blood flow 169–176  
 Stomach, mucosal protection 343–348\*  
 Stress  
   hypertension 1–6\*  
   noise 137–141  
 Stress hormones, noise stimulation 137–141  
 Subatmospheric pressure  
   lower body 51–56  
   skin blood flow 243–245  
 Substrate specificity,  $\alpha$ -L-iduronidase 193–201  
 Sulphydryl groups, molecular-weight conversion of renin 157–162  
 Sympathetic nervous system  
   angiotensin 51–56  
   assessment of function 247–254\*  
   noradrenaline plasma kinetics 247–254\*  
   vascular reflexes 51–56, 605–609  
 Synovial fluid, fibronectin 71–76

- Tamm-Horsfall glycoprotein, urinary excretion 21-26
- Tetraplegia, subcutaneous blood flow 605-609
- Thermoregulation, anorexia nervosa 677-682
- Thiol groups, molecular-weight conversion of renin 157-162
- Thoracoabdominal movements, breathing 7-11\*
- Thyroxine, glucocorticoids and renal deiodination 215-220
- Tidal volume, thoracoabdominal movements 7-11\*
- Tomography, cerebral blood flow 567-572\*
- Transport  
  erythrocyte sodium 489-494  
  hepatocyte lactate uptake 411-420  
  plasma cholesterol 261-271\*  
  polymorphonuclear leucocytes 563-564  
  renal 503-508  
  sodium 563-564
- Transporters, hepatocyte lactate uptake 411-420
- Triglyceride-rich lipoproteins, metabolism 125-129\*
- 3,5,3'-Tri-iodothyronine, glucocorticoids and renal formation 215-220
- Trypsin, bile salt 651-659
- Twins, heritability of lipoprotein receptor activity 397-401
- Ultrasonography, quadriceps femoris 227-234
- Uraemia, oral 1,25-dihydroxycholecalciferol 427-429
- Urate, urinary calcium oxalate 421-425, 509-514
- Urea, kinetics and glucose 553-556
- Uric acid, calcium oxalate crystal growth 509-514
- Urine  
  albumin 495-502  
  calcium oxalate 17-19, 421-425, 509-514  
  crystal formation 17-19, 421-425  
  glycoprotein 21-26  
  macromolecules 509-514  
  oxalate 17-19, 421-425
- Ursodeoxycholic acid, myotonic dystrophy 627-642
- Vagotomy  
  breathing and exercise ability 311-319  
  muscarinic cholinergic receptors of intestine and pancreas 203-207
- Vagus nerve, sleep apnoea and heart rate 163-167
- Vascular resistance, renal 573-579
- Vasoconstriction  
  captopril inhibition 565-566  
  posture in tetraplegia 605-609  
  sympathetic reflex 51-56
- Vasopressin, angiotensin 143-149, 341-342
- Veno-arteriolar reflex  
  myocardial infarction 243-245  
  posture in tetraplegia 605-609
- Ventilation, distribution 549-551
- Vitamin D deficiency, secondary hyperparathyroidism 381-387
- Volume expansion, renal denervation 457-464
- von Willebrand factor, physiological inhibition 239-242
- Water, total body 43-49
- Zinc deficiency, chronic liver disease 109-111