Blackwell House Style Guide

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INTRODUCTION

The *Blackwell Publishing House Style Guide* and its online version have been produced for the use of editors, production editors, freelances, copy-editors, authors and typesetters. The level of consistency that this guide promotes is intended to assist all those involved in the production of BPL publications. The BPL definition of copy-editing is best described as technical or mechanical editing, which involves language editing, mechanical style (style related to content) and format (visual style). Technical or mechanical editing includes applying house style, technical style, formatting, consistency and correcting grammar. Creative or substantive editing is not usually within the remit of the Blackwell copy-editor and is not commented upon. This guide is not intended to be a comprehensive account of all that is necessary for the presentation of research material, and should be used in conjunction with texts that have greater scope (see recommended references). Some journals and subject areas employ their own systems and conventions and the intention is not to impose upon them a rigid style, but rather to establish a framework within which they can operate.

The online version of this guide will be updated on a regular and on-going basis and should be regarded as the definitive version. A separate guide is available for US journals.

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PART 1: GENERAL EDITING STYLE

1.1 Copy-editing

Journals and articles vary in the amount of editing required, depending on the thoroughness of the Editor and the standard of the text supplied. Copy-editing usually involves:

- · applying journal style
- applying Blackwell house style where no specific journal convention exists
- formatting text
- making text consistent
- correcting English to ensure the article is readable

STYLE AND FORMATTING

Check your **journal style sheet** for the styles of authors' names, addresses and affiliations, correspondence details, keywords, table and figure captions, etc., and for the formatting of text (e.g. use of small text in some sections).

CONSISTENCY

The following should all be used **consistently**: UK/US spellings, alternative spellings, grammar, punctuation, italics, Greek letters, diacritics, hyphenation, capitalization, abbreviations and contractions. References and their citations should be consistent and complete. Make sure that all figures and tables are present and match their legends, and that they are cited in order.

CORRECTION OF ENGLISH

You may need to **correct** spelling, punctuation, grammar and syntax, and to edit for sense. If text is ambiguous, add a query to the author asking for clarification. Do not rewrite or delete large sections of text.

1.2 English Usage and Grammar

VOICE

The tendency to present scientific text in the passive voice is fading. Most Blackwell journals and readers now accept use of the active voice. Unless the journal has a strict requirement for the active or passive voice, **follow the authors' preference**, as long as this is consistent within the manuscript.

Be wary of the passive voice in the **Discussion**, as it can sometimes be unclear whether the authors are talking about their own work or that of other people. You may need to use phrases such as 'in the present study, it was found that ...' to clarify this.

TENSE

Methods used and results obtained by the authors should be referred to in the past tense:

- mice were given two types of grain
- mice in group A ate 50 mg of grain

The past tense will therefore generally be employed in the Abstract, Methods and Results sections. The past tense should also be used to talk about **specific findings** of previous work:

• Smith (1990) found that yield decreased by 50%

Interpretation of results should be in the present tense:

• the results for groups A and B are significantly different

The present tense will therefore generally be employed in the Introduction (except, for example, when the authors are stating what their hypothesis and aims were before the study commenced). The present tense should also be used in the Discussion when the results are being interpreted:

• Our study *shows* that a significant number of Finnish people speak Finnish

Findings of previous studies should also be referred to in the present tense if they have become generally accepted 'facts':

- treatment X results in Y, as demonstrated by Jones (1978)
- the expression of class I genes varies amongst haplotypes

Watch for mistakes in the use of tenses in manuscripts from non-native English speaking authors (native English speakers tend to use the correct tense instinctively).

SUBJECT AND VERB AGREEMENT

Verbs must agree in **number** with the sense and form of the subject. Check whether a noun is plural or singular and make sure that the verb agrees.

- Collective nouns, e.g. school, number, family and committee, usually take singular verbs but can take plural verbs if the emphasis is on the individual rather than on the unit itself, e.g. the committee has agreed to extend the deadline; the committee have been at odds from the beginning.
- Note the difference between mass nouns (which do not have countable elements) and count nouns (which identify things that can be counted), when used with pronouns (all, any, none, some), e.g. some of the sky was visible; some of the stars were visible.
- Units usually take singular verbs, e.g. 150 mL of blood was sampled.
- Take care with Latin and Greek nouns such as data, media, errata, criteria and phenomena, which are plurals; singulars are datum, medium, erratum, criterion and phenomenon (an exception is data processing): data are presented; dual-medium filters were used; two phenomena were classified using one criterion.

USE OF THAT AND WHICH

That is used for defining or restrictive clauses:

• The patient made a list of the symptoms *that* were most troublesome

A defining clause is specific (limiting) to a particular person or thing; i.e. the patient had to list *only* those particular symptoms that were most troublesome.

Which is used in nondefining or nonrestrictive clauses:

• The patient made a list of the symptoms, which were most troublesome

A nondefining clause is general (nonlimiting); it provides additional information, and the use of commas is often important. In this example, *all* the symptoms were very troublesome.

DANGLING PARTICIPLES

These frequently occur where the passive voice is used, and they can link an action to an agent that is **incapable** of performing it. The clause 'the ribosomes could be observed using a microscope' should be reworded: 'the ribosomes were observed by using a microscope' or 'using a microscope, the ribosomes were observed'.

REDUNDANCY

Avoid using a modifying word when the intended meaning is **inherent** in a word already used. Redundancy is obvious in examples such as *the results were plotted graphically, past history, bright blue in colour, inactivates its activity* and *completely filled*. Does the term *careful monitoring* suggest that the alternative is *careless monitoring*?

DEFINITE AND INDEFINITE ARTICLES

Many non-native English speaking authors have some confusion about when to use the definite (*the*) and indefinite (*a* and *an*) articles.

- X ... to determine effect of the salinity on grain yield of wheat
- ✓ ... to determine the effect of salinity on the grain yield of wheat

Also be aware that use of definite and indefinite articles in titles can differ from that in ordinary text:

✓ Effect of Salinity on Grain Yield of Wheat

See the recommended usage guides for guidance on the use of the indefinite article with words beginning with 'h' (e.g. *a hotel; an hour*).

INACCURATE PHRASES

Be accurate in your word choice. For example, *dose* is the amount of drug given at one time; *dosage* is the regulation or determination of doses.

USE OF 'ONLY'

The **position** of the word 'only' can lead to ambiguity, e.g. 'the doctor *only* sees patients in the morning' could mean '*only the doctor* sees patients in the morning'; 'the doctor sees patients *in the morning only*', or 'the doctor *sees only patients* in the morning'.

BALANCING A SENTENCE

It is important to ensure that a sentence balances on either side of certain words (correlatives) that emphasize similarity or contrast and that are used in **parallel**: both and and; either and or; neither and nor; not only and but; between and and; whether and or. For example, 'I swam both in the morning and afternoon' should be 'I swam both in the morning and in the afternoon' or 'I swam in both the morning and the afternoon'. Note the position of the preposition in. (See also the section 'Editing for Sense'.)

COMPARATIVES AND SUPERLATIVES

- If you are comparing two things, or two groups of things, or **one thing with a group of things**, you should use a comparative, not a superlative.
- X Jim is tallest compared with David, John and Mike
- ✓ Jim is the tallest of the four men
- ✓ Jim is taller than David, John and Mike
- Do not use 'relatively' with a comparative, e.g. *relatively less*. This is tautology; 'relatively' should be deleted.
- Make sure that it is **clear** what is being compared with what (e.g. 'in patient 3, there was greater reactivity for *P. gingivalis* in dental plaque from the first molar'... Is 'greater' being used to compare patients, bacteria or sites in mouth?).

MISCELLANEOUS POINTS

'Male' and 'female' are adjectives, so be careful to use them as such (i.e. *a male patient* and *a female frog*, but *a 35-year-old man*, *a French woman* and *a group of 25 men and 35 women*). Many authors get this wrong.

EXPRESSIONS TO AVOID

- Since should be used only with reference to time, and not for because.
- *Although* is preferred to *though*.
- *Done*, as in the experiment was done, should be replaced with *performed* or *carried out*.
- *Parameter* should only be used to describe a defining limit, and is not interchangeable with *variable*.
- *A lot of* should be replaced with *many* or, preferably, should be defined more precisely.
- Avoid get and got.
- As a result of or because of are preferred to due to.
- *Hopefully* should be avoided.
- Try to avoid references in the text to *see below* or *in the Results section*.
- Use *dependency* only for foreign territories; otherwise use *dependence*.

USE WITH CAUTION

Be aware of potentially **litigious** content, for example the naming of patients or criticism of the actions of individuals, organizations or companies.

POLITICALLY SENSITIVE TERMS

Race and ethnicity

Try to avoid the terms *Blacks* and *Whites*; use instead *Black people*, *White people*, etc. *Caucasian*, *Mongoloid*, *Negroid*, etc. are generally to be avoided, except in human population studies. *Mixed race* is preferable to *half-caste* or *coloured*.

Disabilities

- People with disabilities not the disabled
- People with learning difficulties not mentally handicapped

Gender

Use **neutral** nouns: avoid the use of man if not specifically referring to *men*; for example, for *man* use *humans*; for *mankind* use *the human race*; for *manpower* use *workforce*; for *manmade fibre* use *synthetic fibre*. Use inclusive pronouns: use *he* or *she*, or rephrase the sentence (rephrasing to the plural form often works):

- * Any observer of changes in publishing technology will perceive that he has need of...
- ✓ Observers of... will perceive that they have...

Beware of referring to people with stereotypical pronouns (e.g. 'the doctor treated *his* patient'; 'the secretary tidied *her* desk'). Social classes and age groups should also not be stereotyped.

Disease

Avoid health-determined categorization. Use *people with diabetes* not *diabetics*; *people with cancer* not *cancer sufferers*, etc. **Avoid** phrasing that dehumanizes a patient: many authors use *case* (instance of a disease) when they mean *patient* (person who is ill with the disease).

AIDS

- Ensure that AIDS is used for the disease and HIV for the virus, e.g. do not use AIDS carrier, AIDS positive, AIDS virus or catching AIDS.
- *AIDS sufferer/victim* is inappropriate; use *people with AIDS*.
- People who practise high-risk activities not high-risk groups.
- The expression *full-blown AIDS* is unnecessary if the correct distinction has been made between HIV and AIDS.

Sexuality

Avoid the terms *homosexual activities* (specify which activity is being referred to) and *homosexuals* (specify homosexual men or lesbians).

Geography

The terms *Third World*, *poor countries* and *underdeveloped countries* should be **avoided**. *Developing* or *nondeveloped country/society* is better, but it is best to specify countries or regions instead. *Western society* and *Western World* should only be used in relation to geography; otherwise, use *developed world/society* or, even better, specify the countries themselves or the region.

Key points

- It is now acceptable to use the active or the passive voice.
- Use the past tense for the author's methods and results, and the present tense for interpretation and generally accepted 'facts'.
- The subject and verb must agree in number.
- 'That' is defining; 'which' is not.
- Check that articles ('a', 'an' and 'the') are used correctly.
- Sentences must balance (e.g. with 'both... and...').
- In **comparisons** (e.g. with lower/higher/less/more), make sure it is clear what is being compared with what.
- Avoid sexist, dehumanizing and stereotypical language.

1.3 Editing for Sense

You do not need knowledge of the subject matter to be able to edit for sense. Often it will be obvious what the author is trying to say, in which case you do not need to add a specific query (e.g. 'with this investigation the effects of antibiotic treatment were inquired' can safely be changed to 'in this investigation, the effects of antibiotic treatment were investigated'). However, if you are having to make a lot of changes, add a query to the beginning of the article telling the authors that text has been reworded throughout and asking them to check carefully.

Be very careful **not to change the meaning**. It should always be your goal to make **only** the changes that are **necessary**. If in doubt, leave unchanged and ask the author for clarification.

AMBIGUOUS TEXT

When text is ambiguous, the intended meaning is sometimes obvious from the **context** and rewording is straightforward. If this is not the case, you must **query** the authors. It is best, if you can, to give them two (or more) choices rather than just asking what they mean.

Phosphorylated hexoses: glucose-6-P and fructose-1-P, repress the expression of many resistance genes.

Query Do you mean 'Phosphorylated hexoses, such as glucose-6-P and fructose-1-P, repress the expression of many resistance genes' or 'The phosphorylated hexoses glucose-6-P and fructose-1-P repress the expression of many resistance genes' or something else?

Misplaced **modifiers** (words or phrases that limit or qualify the sense of text) can create ambiguity about what they are modifying.

- X She continued editing after the meeting finished early *because she had to send the issue to the typesetter*
- ✓ Because she had to send the issue to the typesetter, the meeting finished early and she continued editing
- ✓ After the meeting finished early, she continued editing *because she had to send the issue to the typesetter*

NON SEQUITURS

Look out for text that **does not logically follow** what goes before (e.g. 'humans and mammals...' should be changed to 'mammals, including humans, ...' because humans **are** mammals).

- **X** Forage turnip is widely grown in northern Europe, *but* it is distributed over much of northern Asia, northern North America and southern Oceania.
- ✓ Forage turnip is widely grown in northern Europe *and is also* distributed...

Sometimes it is **not clear** what the author means to say.

The sensitivity of barley seedlings changed after 4 weeks of cold treatment, but decreased after 6 weeks.

Query Do you mean 'The sensitivity of barley seedlings began to decrease after 4 weeks... and decreased further after 6 weeks' or 'The sensitivity of barley seedlings increased after 4 weeks.... but decreased after 6 weeks'?

These results are in conformity with the results of Smith *et al.* (1984). This provides acid production *in vitro* observed over a period of time by Jones (1980) also.

Change These results are consistent with those of Smith *et al.* (1984). They also provide an explanation for the acid production *in vitro* observed over a period of time by Jones (1980).

Query 'These results...' Rewording of two sentences OK?

BALANCING SENTENCES

Use parallel grammatical constructions with conjunctions (and, but, etc.) and in comparisons.

- X the titre in week 2 increased by 50% for patient 1, and by 60% for patient 3 in week 4
- ✓ the titre increased by 50% for patient 1 *in week 2*, and by 60% for patient 3 in week 4
- X ... to evaluate the relationships between clinical (e.g. stroke impairment, functional status, depression, and side of stroke lesion) and sociodemographic (e.g. age, gender, marital status and emotional support) factors
- ✓ ... to evaluate the relationships between clinical (*degree of* stroke impairment, functional status, *presence/absence of* depression and side of stroke lesion) and sociodemographic (age, gender, marital status and *extent of* emotional support) factors
- X Detection of immunostained proteins by light microscopy is not as clear as electron microscopy
- ✓ Detection of immunostained proteins by light microscopy is not as clear as *that by* electron microscopy

PRONOUNS

Watch out for pronouns that refer back to the wrong noun.

The pellet was dissolved in 100 mL of distilled water. *It* was then filtered through Whatman no. 41 paper.

Change 'It' to e.g. 'This solution' ('the pellet' can't be filtered!).

FEWER/LESS

Although more can be used for both countable (e.g. *more stars*) and uncountable (e.g. *more rain*) nouns, fewer must be used for countable nouns (e.g. *fewer stars*, *fewer cups of tea*, *fewer examples*) and less for uncountable nouns (e.g. *less rain*, *less tea*, *less information*).

- X Less people
- ✓ Fewer people

STRONG/WEAK, HIGH/LOW AND LARGE/SMALL

Authors sometimes make the wrong choices here.

- **X** the values of *r* were strong
- \checkmark the values of r were high
- X there was a low correlation
- ✓ there was a weak correlation

MISCELLANEOUS PROBLEMS

Words missing

The sorbitol and xylitol interaction on sugar metabolism was greater at higher pH. Change *The effect of* the sorbitol and xylitol interaction on sugar metabolism was greater at higher pH.

In this study the relationship between plant resistance to fungi and some physiological processes.

Change In this study, the relationship... was investigated.

Words wrong

Barley companion crop reduced weed content of herbage by 39–94% *related in* sowing rate and cutting stage.

Change The barley companion crop reduced the weed content of herbage by 39–94 % *depending on* the seeding rate and cutting stage.

Strange wording

All patients were examined and interviewed on a hospital basis.

Change (and query) All patients were examined and interviewed in hospital.

• Wrong subject and verb

Harvest date in barley gave different effects depending on seeding rates.

Change (and query) In barley, the effect of harvest date depended on the seeding rate.

• Adjective with wrong noun

the *highest* patient for recovery score

Change (and query) the patient with the highest recovery score

Typos

The weed forms its own pure colonies at the expanse of native gasses

Change (and query) ... at the expense of native grasses

Key points

- If text does not make sense or is likely to cause the reader problems, change it and, if necessary, add a query to the author.
- Look out for ambiguous text and non sequiturs.
- Make sure **parallel** grammatical constructions are used with conjunctions and in comparisons.
- Pronouns must refer back to the correct noun.
- Fewer/less, strong/high/low and weak/low/small are often used incorrectly.
- Check that **subject/verb** and **noun/adjective** pairs make sense (e.g. in 'the highest patient for recovery score', the adjective has been attached to the wrong noun).

1.4 Spelling

Spelling should be **consistent** within an article. When two or more spellings of a word are given in a **dictionary**, the first listed is generally the one preferred.

UK/US ENGLISH

In the following examples, the UK spellings are shown to the left of the double arrows and the US spellings to the right.

```
ae- ↔ e-
aetiology ↔ etiology
caesium ↔ cesium
haemoglobin ↔ hemoglobin
leukaemia ↔ leukemia
palaeoenvironment ↔ paleoenvironment
```

```
oe- ↔ e-
diarrhoea ↔ diarrhea
dyspnoea ↔ dyspnea
manoeuvre ↔ maneuver
oedema ↔ edema
oesophagus ↔ esophagus
oestrogen ↔ estrogen
```

```
-lled ↔ -led, -lling ↔ -ling
labelling ↔ labeling
modelled ↔ modeled
```

```
-our ↔ -or
behaviour ↔ behavior
colour (but coloration) ↔ color
neighbour ↔ neighbor
tumour ↔ tumor
```

```
adrenaline ↔ epinephrine (Adrenalin = US trade name)
ageing ↔ aging
alternative ↔ alternate
aluminium ↔ aluminum
amongst ↔ among
cyclosporin ↔ cyclosporine
despatch ↔ dispatch
```

```
disc ↔ disk (NB always disk for computers)
dysrhythmias ↔ arrhythmias
fulfil ↔ fulfill
```

leucocyte ↔ leukocyte

```
-ical ↔ -ic

anatomical ↔ anatomic

biological ↔ biologic

geographical ↔ geographic

immunological ↔ immunologic
```

```
-logue ↔ -log
analogue ↔ analog
(except 'analog–digital conversion')
catalogue ↔ catalog
```

```
-re ↔ -er

centre ↔ center

fibre ↔ fiber

litre ↔ liter

metre (the unit) ↔ meter

titre ↔ titer
```

```
-yse ↔ -yze
analyse ↔ analyze
catalyse ↔ catalyze
dialyse ↔ dialyze
```

```
licence (noun) ↔ license
mould ↔ mold
neurone ↔ neuron
noradrenaline ↔ norepinephrine
orientate ↔ orient
practise (verb) ↔ practice
programme ↔ program (and UK for computers)
quantify ↔ quantitate
quantification ↔ quantitation
skilful ↔ skillful
```

S VERSUS Z SPELLING

S spellings	exercise
advise	expertise
arise	franchise
chastise	improvise
circumcise	incise
comprise	revise
compromise	supervise
concise	surmise
despise	surprise
devise	televise
excise	treatise

Z spellings	hypothesize
agonize	metabolize
civilize	minimize
colonize	pasteurize
criticize	realize
emphasize	recognize
equalize	stabilize
familiarize	standardize
finalize	summarize
generalize	temporize
globalize	vaporize

FOREIGN LANGUAGES

Accents and diacritical marks

These are marks attached to **letters** of the alphabet that show (i) how the pronunciation differs from that of the unmarked letter, (ii) where the stress falls in a polysyllabic word or (iii) what tone or pitch goes with a particular word.

- German Use ß (eszett) for ss, but only in lower case (and note that not all ss are ß); in caps (and small caps), SS is always used. Use umlauts over ä, ö and ü rather than using the respective diphthongs ae, oe and ue. Remember that, in German, all nouns have initial caps (e.g. ein Haus, das Sein) and they should retain these when italicized.
- French Upper-case letters carry accents, e.g. *RÉSUMÉ*. The exception is the preposition à, e.g. *A la porte*.
- Scandinavian characters should be alphabetized as follows:
 - ...Z,Æ,Ø,Å (Danish, Norwegian)
 - ...Z, Þ, Æ, Ö (Icelandic)
 - ...Z, Å, Ä, Ö (Finnish, Swedish)

Foreign names

Take care with the capitalization of particles in foreign names (e.g. Philippe Du Puy de Clinchamps, Vasco da Gama, Vincent van Gogh). These appear in lower case except at the start of a sentence or when the name is anglicized. Generally, just use what the author provides. In reference lists, lower case particles are listed under the letter of the name proper but upper case particles under the letter of the particle (e.g. da Silva under 'S' but Von Trapp under 'V'). Do not abbreviate 'Saint' and 'Sainte' in French surnames. Some Japanese and Chinese names are presented with the surname first, so be careful when filing these in a reference list. Spanish and Portuguese names are sometimes composed of two family names (mother's and father's) and should be listed under the penultimate element (e.g. Federico Gutierrez Granier should be listed under Gutierrez). Hyphenated Asian names do not take a full point after the first initial (e.g. Jen-Yi Hwang is J-Y. Hwang not J.-Y. Hwang; cf. Jean-Marc Lafayette, which is J.-M. Lafayette).

RECOMMENDED SPELLING GUIDES

- UK spelling: Concise Oxford Dictionary
- US spelling: Merriam-Webster's Collegiate Dictionary
- Australian spelling: Macquarie Dictionary
- See *The Chicago Manual of Style* for information on capitalization, punctuation and word division in foreign languages.

1.5 Punctuation

Punctuation should be used to help the reader understand the text.

COMMAS

Context	Examples
Not essential where a conjunction is used between two clauses unless there is a change of subject	We tried to resuscitate the patient but to no avail.
two clauses unless there is a change of subject	Resuscitation is possible, but brain damage is likely.
Used to isolate a word, phrase or subordinate	Resuscitation, although dangerous, is possible.
clause	On revival, the patient was monitored regularly.
	days 3, 4 and 10, respectively. Therefore, the experiment was
	Therefore, the experiment was
Used to isolate nondefining clauses	The cells, which were infected, were excised.
	The commas help to isolate the nondefining clause (see differences between 'that' and 'which' above).
Not used to separate sentences	X The cells produced more lactate, however they did not produce acetate.
	✓ The cells produced more lactate; however, they did not produce acetate.
Used in lists	The solution contained 200 mg of glucose, 100 g of ascorbic acid and 500 mL of distilled water.
	UK English: a comma before 'and' (known as the Oxford comma or serial comma) is unnecessary in the above example, but it may be used in lengthy lists or to avoid ambiguity.
	US English: authors prefer to place a comma before the 'and' here.
'Therefore' should not be enclosed within commas when used as an adverb	These samples were therefore discounted.
Used to clarify a sentence	The precipitate formed after shaking on the bottom
	makes more sense with the addition of commas, thus:
	The precipitate formed, after shaking, on the bottom.

APOSTROPHES AND PRIMES

Apostrophes should be used to identify possessive nouns, e.g. the body's defence system, the girls' hats. Such words ending in 's' should still be followed with an apostrophe 's', e.g. Claudius's reign. An apostrophe should not be used where an acronym, abbreviation, date or number is pluralized: ANOVAs, 1980s, etc. Where apostrophes are used to indicate missing letters in informal English (e.g. I'm, we're, he's; it's not clear; there're many patients; it's been found), it is usually preferable to write the words out in full (e.g. it is not clear; there are many patients; it has been found).

Look out for its (possessive; e.g. its tail) and it's ('it is' or 'it has'; e.g. it's got a tail).

St Thomas' Hospital Queens' College, Cambridge The Queen's College, Oxford

Primes (') are used to denote derivatives of mathematical variables (e.g. *a* and *a*') and for minutes of angle (e.g. 12°14′N). They should **not** be used instead of the standard abbreviation 'min' for minutes of time.

HYPHENS

Journals will often have a specific hyphenation style, for which you should refer to your journal style sheet. Also check the relevant dictionary if necessary. Make a decision about hyphenation and apply it throughout the typescript, taking into account the author's style, the likely readership, and the meaning of individual words and phrases. Minimal hyphenation is generally preferred.

Prefixes

DO hyphenate... prefixes that stand as words in their own right (e.g. cross, half, all); these are usually hyphenated when used as adjectives (e.g. cross-section, half-life, all-inclusive). There are, however, more than a few exceptions (e.g. outpatient, crosshatched, overexposed). Hyphens are also needed when a prefix is attached to a word or phrase starting with a capital letter (e.g. anti-HLA, non-Euclidean, sub-Alpine).

DO NOT hyphenate... prefixes that cannot stand as words in their own right (e.g. anti, bi, co, hyper, hypo, infra, inter, intra, micro, multi, palaeo, peri, pre, pseudo, re, sub, supra, ultra, uni); these are usually closed up when used as adjectives, unless two vowels or the same consonants abutt (e.g. hyper-reactive, pre-operative, anti-inflammatory, co-opted, re-election; NB US authors are less inclined to use hyphens in such cases). Note, however, that this rule may need to be broken (e.g. ultra-high-vacuum environment, pseudo-first-order distribution, re-create). If in doubt, follow the author's style.

Compound terms

DO hyphenate... many compound terms and adjectives (e.g. iron-rich sediments; salt-leached water; 19-year-old boy but boy aged 19 years; T-cell receptor but T cell), particularly where the meaning would otherwise be ambiguous. In more complex examples, the second hyphen normally has priority over the first (e.g., 'T cell-receptor expression' would often be preferred to 'T-cell-receptor expression'; but '10-cm-diameter pots', not '10 cm-diameter pots'). The second part of a compound term used in a book case heading should not be capitalized (e.g. Subject-specific Conventions).

DO NOT hyphenate... compound adjectives consisting of a past participle preceded by an adverb ending in '-ly' (e.g. dermatologically tested soap). It is not necessary to use hyphens for well-established compound terms whose meaning is clear (e.g. amino acid residues, freezing point determination). Avoid floating hyphens (e.g. phosphorus- or sulphur-containing compounds). Try to reword the sentence to eliminate the need for the floating hyphen, but be careful not to change the sense (e.g. if the hyphen is removed after 'phosphorus' in the sentence above, the sense changes).

Chemical names

Hyphens are often used in chemical names (e.g. 2-mercaptoethanol, a1-antitrypsin).

Miscellaneous

- Avoid bad word breaks at the ends of lines (e.g. *pseud-obedding*; *the-rapist*)
- 10-fold but twofold
- Two-thirds, thirty-seven
- North-west
- Inpatient and outpatient (not hyphenated)

EN/EM RULES

Authors often confuse en/em rules and hyphens.

For	You should use	Example
A number or value range	En rule	5–10 (but 'from 5 to 10', not 'from 5–10')
Chemical mixtures/bonds that have retained their individual properties and have not become a new compound	En rule	DEAE–cellulose
Long chemical names, by convention	Hyphen	2-isopropyl-(3,4)-dihydro(carbodiimide)purine
Two names associated with a process, invention, syndrome or company	En rule	Epstein–Barr virus Hardy–Weinberg equilibrium
A compound expression in which the first part of the compound does not modify the second part	En rule	dermal–epidermal junction dose–response curve case–control study
A compound expression in which the first part is a prefix	Hyphen	Dermo-epidermal junction

continued

For	You should use	Example
Complex associations	Hyphen and en rule or hyphen and solidus	oak-forest–hazel-scrub interaction or oak-forest/hazel-scrub interaction
Compound expressions that already contain hyphens	'To' not en rule	5- to 10-day interval not 5–10-day interval
Missing data in a table	En rule or em rule	e.g. for 'not tested'
Missing words or letters	Em rule	Rarely, it may be journal style in reference lists to indicate the same author(s) as the previous entry by em rules. Smith, B., and P.G. Pardey. The economics of —. Funding, structure and management

SEMICOLONS

- The semicolon is stronger than a comma but not as decisive as a full point. It can be used to separate sentences (whereas a comma cannot).
- Use a semicolon before, and a comma after, the **conjunctive adverbs** *however*, *that is, nevertheless*, etc.

COLONS

Colons are used to introduce material that restates, explains, enlarges upon or summarizes previous material. They also introduce items in a list set off from text (but a colon is not needed in run-on lists introduced by the words *for example, namely, including*, etc.; e.g. in the sentence 'The pavlova looks nice with red fruit on it, for example: strawberries, raspberries and redcurrants' the colon should not be there).

- In UK spelling, a capital letter is not used after a colon (except in titles and subtitles). In US spelling, if the material introduced by a colon consists of more than one sentence, or if it is a formal statement, quotation or speech in dialogue it should take a capital after the colon.
- Ratios containing words should have a thin space on each side of the colon (e.g. the light: dark cycle) but ratios containing numbers should be closed up (e.g. 16:8 h).

Key points

- Use commas to clarify sentences.
- Do not use a comma to separate sentences; use a semicolon (this is a particularly common error before 'however' and 'nevertheless').
- Do not use apostrophes with plural abbreviations (e.g. ANOVAs, not ANOVA's).
- For hyphenation, refer to your journal style sheet.
- Do not hyphenate adverbs ending in -ly (e.g. dermatologically tested soap).
- Use hyphens in compound terms to clarify meaning (e.g. six-well plates).
- Use en rules, not hyphens, for associations (e.g. dose–response curve).

1.6 Units

Check your **journal style sheet** for the use of units (e.g. some journals use a negative index and some use a solidus to indicate *per*).

DO USE

- Abbreviations for seconds (s), milliseconds (ms), minutes (min), hours (h), million years (Myr), million years ago (Ma) and billion years ago (Ga). (Exceptions in running text are e.g. 5 minutes' walk and five-minute start.)
- A hyphen with units as adjectives (e.g. 30-cm ruler, 2-min test, 5-kb fragment), unless this is not journal style.
- Either a solidus (/) or a negative index ($^{-1}$, $^{-3}$, etc.) for per (e.g. 5 m/s or 5 m s $^{-1}$).
- Figures for quantities that are measured in units, but words for numbers of objects less than 10 (e.g. 5 years but five dogs; also fifth but 15th). However, it may be better to break this rule if an inventory of objects is presented (e.g. 13 cats, 8 dogs and 24 mice).
- En rules for ranges of values (e.g. 15.4–27.6 g), except for values used with linked prepositions (e.g. *between... and*).
- Système International (SI) units, unless instructed otherwise.
- Closed-up figures for numbers in the single-digit thousands (1000–9999), and thin spaces in UK English for numbers of five figures and over (US English uses commas not spaces) (e.g. $12\,624,200\,000\,000$). However, it is usually preferable to express large numbers using factors of 10 (e.g. 3.75×10^7 cells/L).
- A unit term as a **singular** entity when considering subject–verb agreement (e.g. 5 g *was*...).
- Numbers and their units in full at the start of a sentence (e.g. *Fifty-eight kilograms of grain*...).
- Thin spaces between numbers and units, and between units (e.g. 10 min, 6.5 W, 20 °C, 47.6 m/s 5 mg mL⁻¹, but 4% and sometimes 20°C).

DO NOT USE

- Abbreviations for days, weeks, months and years.
- Acre; use hectare (1 acre = 0.4047 ha).
- Ångström; use nanometres (1 Å = 0.1 nm).
- Calorie; use joules (1 cal = 4.186 J).
- \times before gravitational force (e.g. 15 000 g not 15 000 \times g). Also, do not use r.p.m. as the unit for gravitational force, except for ultracentrifugation, where r.p.m. is usually given together with the centrifuge model and manufacturer and the rotor code (e.g. SS34).
- En rules with **linked prepositions** (*from* and *to*; or *between* and *and*) (e.g. *between* 10 and 15 *days*, not *between* 10–15 *days*).
- m for micron; use µm.
- N or N (small caps) for **normal concentration**: ask authors to provide the molar concentration.
- p.p.b. for parts per billion; use ng/g.
- p.p.m. for parts per million; use mg/g.
- Percent. Use either % or per cent.
- A unit term as a plural (e.g. 10 mL was... not 10 mL were...).

- Repeated units (e.g. between 10 days and 15 days should be written between 10 and 15 days).
- Superfluous material in units. For example, in the expression 'organic carbon at a concentration of 56 mg C/L' the symbol for carbon is superfluous in the unit; 'organic carbon at a concentration of 56 mg/L' is sufficient.
- Lots of zeros in numbers. Add unit prefixes so that values are ≥ 1 and ≤ 1000 (e.g. 0.081 g/L should be changed to 81 mg/L, and 1.67×10^{-7} m to 167 nm). However, always inform the author/editor of such changes and seek their approval.
- Expressions such as 20 mg/100 mL; use 200 mg/L.

MISCELLANEOUS UNITS

CFU	colony-forming units
Da	daltons (do not use d)
IU	international units
L	litre; this is now preferred to l
	(lower-case L)

Un	Unit prefixes			
m	milli (10 ⁻³)	k	kilo (10³)	
μ	micro (10 ⁻⁶)	M	mega (10 ⁶)	
n	nano (10 ⁻⁹)	G	giga (10 ⁹)	
p	pico (10 ⁻¹²)			

 $mL = millilitre = cm^3 (do not use cc)$

mmHg millimetres of mercury only in medical work; otherwise, use pascals (1 mmHg = 133 Pa)

MOLE AND MOLAR

It is recommended that you use **mol** for mole and **mol**/L or **mol** L^{-1} for molar. However, some styles use M for mole and M (small caps) for molar.

Key points

- There should be a **thin space** between numbers and units (e.g. *10 days*), or a **hyphen** in compound adjectives (e.g. *10-day cycle*).
- For per, use a solidus or a negative index, depending on journal style.
- For **quantities**, use figures (e.g. 5 *mL*); for **numbers of objects** less than 10, use words (e.g. *five patients*).
- A unit term is **singular** (e.g. 10 mL was added...).
- **Do not** use **en rules** with linked **prepositions** (e.g. *between 10 and 15 days*, not *between 10–15 days*).
- Do not repeat units unnecessarily (e.g. not 10 days and 15 days).
- L for litre is now preferred to l.
- Use Da for daltons, not d.

1.7 Italics

To find out whether a word should be italicized, check the latest edition of the recommended **dictionary**. You should also refer to your **journal style sheet** for journal-specific usage (e.g. for *et al.* and variables such as *P*).

DO italicize	DO NOT italicize
Foreign language phrases that are not in common usage (e.g. <i>ad libitum</i> , <i>en bloc</i> , <i>sensu lato</i>). These are better presented in italics than in inverted commas.	Foreign language phrases that are in common usage (e.g. alias, per annum, vice versa). The fact that a word has made it into an English dictionary is a good indication that it is familiar (or at least can be looked up), so it can be set in roman.
Book and journal titles Names of parties in legal cases	Names of people (except in legal cases), places or institutions
Genus and species names (e.g. <i>Homo sapiens</i>)	Family, order and class names (e.g. Hominidae, Primates, Mammalia) Modifiers to species names (e.g. cv., var., ex., ssp.), and authorities (e.g. L.)
Abbreviations for genes (e.g. <i>ced-3</i> for the <i>C. elegans</i> cell-death gene)	Abbreviations for gene products (enzymes/ protein) (e.g. CED-3)
Symbols and abbreviations that represent variables (e.g. x -axis, n)	Symbols, abbreviations and whole words that represent constants (e.g. e, π), functions (e.g. f, \exp, \log) or modifiers (e.g. n_a, n_{air}).
Parentheses (like these) within italic text.	Parentheses around italic text (like these).
	Italic words used in italic headings (e.g. <i>Preparations of P.</i> gingivalis)

EXAMPLES

a posteriori	mise-en-oeuvre
a priori	motif
ad libitum	née
bona fide	par excellence
debris	per annum; per capita
en bloc	post-mortem
in situ	raison d'être
in toto	role (not rôle)
in vitro; in vivo	sensu lato; sensu stricto
inter alia	tour de force
laissez-faire	via
levee	vice versa

1.8 Quotations

Every quotation should be accompanied by a reference to its source (e.g. Author 2003).

Short quotations (< 30 words) 'should run on within the normal sentence structure' (Author 2003). Use quotation marks to distinguish the quote, and, if appropriate, precede by a comma (for shorter quotations) or a colon (for longer quotations).

Long quotations (>30 words) should be displayed.

Displayed quotations do not require quotation marks. They should be set smaller than normal text type and indented by the normal paragraph indent, with no extra space above or below.

(Author 2003)

The spelling, grammar, etc. of direct quotations is **not edited**. Check that direct quotations have not been changed by any macros that have been run on the paper. Use '[sic]' (always in square brackets and italic) to signify a direct quote of an error.

Direct speech is the exact quotation of another person's words. Punctuation should be placed inside the quote marks when it belongs to the quotation or before mention of the speaker.

- 'This is an important finding,' the Director-General said.
- He asked, 'Why did you do it?'

Punctuation should be placed outside the quote marks when it does not belong to the quotation.

• WHO declared TB 'a global emergency'.

SINGLE OR DOUBLE?

It is **UK and Australian** style to use 'single' quotation marks, with closing punctuation outside marks (unless it belongs to the quoted material), and "double" marks for quotes within quotes.

It is **US** style to use "double" quotation marks, with closing punctuation (except colons and semicolons) inside marks, and 'single' marks for quotes within quotes.

Use a thin space between single and double quotation marks if they occur next to each other.

1.9 Lists

An itemized list that is part of the text should continue the **punctuation** of the sentence that precedes it, so:

- if preceded by a colon the list should begin with a lower case letter;
- there should be a full point at the end of the sentence.

For long, **complicated** lists with internal sentences, each item of the list should start with an initial capital, in which case the sentence preceding the list should be rewritten to **end in a full point**.

- 1 Check your journal style sheet for the **style** of numbered lists. Often, a bold number followed by a tab is used. Lists within lists should be indented, and have a different style of numbering from the main list (e.g. Roman numerals).
- 2 Some styles have extra space above and below lists, but some do not.
- 3 Lists of definitions of **abbreviations** should be displayed or, if set in continuous text, should have individual entries separated by commas and semicolons, not equals signs (e.g. Y, young; M, middle-aged; O, old; VO, very old).

1.10 Footnotes

- See your journal style sheet for the **formatting** of footnotes. On the title page, there may be a mixture of footnotes using numbers and symbols (e.g. for author affiliations or 'correspondence' details), depending on the journal style.
- Check for **consistency** of footnote links in text/tables with the footnotes themselves.
- Footnote links should be placed after punctuation.
- The preferred **order** of footnote symbols (which should not be superscripted) is *, †, ‡, §, ¶ (these are doubled up if more footnotes are needed, e.g. ††).
- When **superscript** numbers or letters are used, beware of potential confusion with other superscripts (e.g. ² for 'squared').

IN TEXT

Footnotes in the text are not encouraged for journals that are full text online. Sometimes it may be possible to eliminate a footnote by moving the text it contains to the main body of the article, especially if the footnote is short and just adds extra details.

- ✗ We randomly selected 24 individuals from each of six groups.¹ [Footnote: 1. Groups 3, 5, 11, 28, 30 and 34.]
- ✓ We randomly selected 24 individuals from each of six groups (groups 3, 5, 11, 28, 30 and 34).
- Numbers in the text indicating footnotes should be superscripts (do not use parentheses, punctuation or slash marks). Numbers for the notes themselves should be on the line and followed by a full point.
- When a footnote is **continued** on the next page, there should be a hairline rule above it. Avoid beginning a continued footnote with a full sentence, as this will make it look like a separate footnote.
- If the first mention of an abbreviation occurs in a footnote, it should be defined there.

UNDER TABLES

Footnote links. Notes about the table as a whole can be left unlinked (i.e. no linking letters/numbers/symbols) or linked to, for example, a relevant column heading. Notes about specific parts of the table should be linked using superscript lower case letters (preferred), superscript numbers or symbols (see Table 1 for examples). If lower case letters could be confused with the table data, use symbols or numbers instead. Avoid the use of superscript numbers in parentheses.

If an **abbreviation** is mentioned for the first time in a table (e.g. 'CE' in Table 1), it must be defined in a footnote to that table.

Asterisk footnotes are reserved for probability values in tables and usually signify the following values: *, $P \le 0.05$; **, $P \le 0.01$; ***, $P \le 0.001$. The asterisk is often used in mathematics and should therefore be avoided as a footnote symbol.

Order

Footnote links within the table itself should be ordered, according to first mention, across columns by row (see ^a, ^b, ^c in Table 1).

The actual footnotes should appear in the following order:

- source notes
- · other general notes
- notes on specific parts of the table (following the order in the table itself)
- notes on level of probability

Table 1. Ratios for wheat in 1989		
Group ^a	First ratio	Second ratio
1	1.31	4.56
2	6.57*	33.87***
3	15.89**	17.55
4	ND^b	2.35
5	10.66**	2.13
6	67.43***	23.56*
7 ^c	1.29	$\mathrm{ND^b}$
CE	3.45	6.57*

Data were obtained from Smith (1990).

All yields were measured in April–June 1989.

CE, controlled-environment plots; ND, not done.

1.11 Abbreviations

Keep the number of abbreviations in an article (particularly in the Abstract) to a minimum. If a term is not used often, do not use its abbreviation: it will not help readers if they have to search back through the article for its definition.

Use of abbreviations such as etc., i.e. and e.g. is best **avoided** in running text and is more suitable for use with parentheses.

Abbreviations are shortened forms of words or phrases.

Acronyms are abbreviations formed from the initial letter(s) of individual words in phrases. True acronyms serve as pronouncable words (e.g. QANTAS, ANZAC, radar); others are technically called 'initialisms' (e.g. ECG, LDL).

Contractions are abbreviations that include the first and last letters of a word (e.g. Ltd)

DEFINING ABBREVIATIONS

Some abbreviations are so **common** that they do not need defining (e.g. DNA, PCR, d.f.). Whether to spell out or not will depend on the subject matter of your journal.

^aEach group consisted of three separate plots.

^bPest infestation prevented data collection.

 $^{{}^{}c}$ The plots in Group 7 were not irrigated in April.

 $[*]P \le 0.05, **P \le 0.01 \text{ and } ***P \le 0.001, according to a$ *t*-test

Define all other abbreviations (term in full followed by abbreviation in parentheses) on **first mention** in the Abstract, text, figure legends and table legends or footnotes; thereafter, use the abbreviation only, except at the beginnings of paragraphs (it is acceptable to use abbreviations at the beginnings of sentences). If abbreviations are defined in an Abstract, they must be **redefined** at first mention in the main body of the text. Do not define or use abbreviations in titles or headings.

When defining a series of abbreviations in legends, use commas and semicolons (e.g. Y, young; M, middle-aged; O, old). Never use equals signs in definitions.

PUNCTUATION

Full points

- Abbreviations that are all caps generally do not take full points (e.g. USA, NSW), but abbreviations that are all lower case or end with a lower case letter do (e.g. i.v., b.i.d., Co., Ed.).
- When referring to authors by their **initials**, use full points and thin spaces [e.g. 'One of the authors (D. M. D.)…'].
- Full points are **not** used at the end of **contractions** (e.g. St, Mr, Dr, Natl, Figs, Ltd) in UK English, but they are used in US English.
- When an abbreviation that takes a full point comes at the **end of a sentence**, another full point is not necessary.

Apostrophes

An apostrophe should **not** be used when an abbreviation is pluralized, but it can be used to indicate possession.

FORMATTING

Roman type is generally used for scholarly **Latin** abbreviations (see below for some common examples). The notable exception is *et al.*, which is usually italicized.

There is no need to use capital letters in the **full term** (unless it is a proper name), even though the abbreviation might be in capital letters.

NAMES

Abbreviations should not be used for **given names** (e.g. William **not** Wm.). When a person is referred to by initials only (e.g. JFK), do not use full points. **Titles** should be spelt out before last names (e.g. General Washington) but abbreviated before full names (e.g. Sen. Robert A. Taft). 'Reverend' and 'Honourable' are only spelt out when preceded by 'the'. 'Jr' and 'Sr' are set off by commas after the name.

Agencies and organizations can be abbreviated in running text, in all caps with no periods (e.g. NAACP). They should be defined at first mention as usual.

SOME COMMON EXAMPLES

For more examples, see *The Chicago Manual of Style*, the *Concise Oxford Dictionary*, *Merriam-Webster's Collegiate Dictionary* and subject-specific lists in this guide.

Ms (not Mrs or Miss)

Bro., Bros., Co., Corp., Inc., plc, Pty, Ltd
(no need to spell out)

PO Box
Tel.: +44 (0) 1865 240201
Fax: +44 (0) 1865 200918

ed. (editor)
eds (editors)
edn (edition)
p. (page)
pp. (pages)
Suppl. (supplement)
Vol. (volume)

Eqn (equation; e.g. Eqn 2)

ISSN 1023-4567 (International Standard Serial No.)
ISBN 0 123 45678 9 hardback (International Standard Book No.)
CIP (Cataloguing in Publication)

etc.
e.g. and i.e. (use mainly in parentheses; comma before but no comma after)
vs (use between numerals only; spell out in text)
ca (circa: use before dates instead of ~)
cf. [compare with (confer imperative); use only in parentheses]
viz. (namely; with comma before not after)

r.p.m. avoid – ask for g value
2D (two-dimensional)

Key points

no. ('number' or 'number of')

- Define all abbreviations (except very common ones such as DNA) at first mention in the Abstract and again in the main text.
- Punctuate lower case (e.g. b.i.d.) but not upper case (e.g. USA) abbreviations.
- Do not use capitals in the full term (e.g. LSD stands for <u>least significant difference</u>).

1.12 Time

DATES

- In UK English, dates are given in the form 24 August 1964 (24/8/64). In US English, the form August 24, 1964 (8/24/64) is used.
- Do not use ordinal numbers in dates (e.g. 1st, 11th, 22nd or 23rd). For year ranges, use an en rule and do not elide (e.g. 1995–1999 not 1995–99). Decades should be written as e.g. 1960s not 1960's or '60's.
- For centuries, use the form 18th century.

AD Anno Domini (e.g. AD 1945)
BC before Christ (e.g. 3000 BC)
BP before present (e.g. 10 000 BP, not 10 000 years BP)

TIMES OF DAY

In UK English, the 24-hour clock is preferred (e.g. 1600 h, 16.00 hours or 16:00 h, depending on journal style). If AM and PM are used (US English), they should be small caps.

Major time zones

UT Universal Time

UK

BST British Summer Time

GMT Greenwich Mean Time

USA

cdt Central Daylight Saving Time

cst Central Standard Time

edt Eastern Daylight Saving Time
est Eastern Standard Time
mdt Mountain Daylight Saving Time
mst Mountain Standard Time
pdt Pacific Daylight Saving Time
pst Pacific Standard Time

UNITS OF TIME

Ma million years ago Myr million years

Ga billion years ago (10⁹ years)

year year (not a or yr)
day day (not d)

1.13 Special Characters

Special characters are characters that are **not** found on a **conventional keyboard**. These include mathematical symbols, and symbols used in linguistics and foreign languages (Greek, Latin, Arabic, Russian, Oriental languages, etc.). For more information on special characters used in linguistics and mathematics, please see the relevant sections in this guide.

BEWARE AMBIGUOUS CHARACTERS!

Care must be taken to distinguish between **upper and lower case** letters (particularly if subscripts and superscripts are used), between **Greek and other** characters and between **roman and italic** characters.

Examples

 α (alpha) versus α (proportional to)

d (differential) versus d (variable) δ (delta) versus ∂ (partial differential)

e (exponential) versus e (variable)

i (letter) versus ι (iota)

k (letter) versus κ (kappa)

l (ell) versus 1 (one) versus I (capital i)

O (letter) versus 0 (zero)

p (letter) versus ρ (rho)

μ (mu) versus υ (upsilon) versus ν (nu)

versus ν (letter v italic)

x (letter) versus × (multiplication sign)

versus χ (chi)

'(apostrophe) versus ' (prime)

1.14 Computing Terms

- Computer and word-processing languages should be given as their tradenames (e.g. WordPerfect). Those that are acronyms should be given in caps (e.g. BASIC, PASCAL).
- Computer **programs** should be given in small caps (e.g. SPSS for 'Statistical Package for the Social Sciences').

Some common terms		
database	hard copy	program, programming,
debug	Internet (capital I; not Net)	programmer
disk	log on (verb)	World Wide Web or the Web (caps)
email (no hyphen)	online (no hyphen), offline	website

1.15 Currency

There are full tables of countries and currencies at the backs of most dictionaries.

• Symbols (and abbreviations for non-US/UK currencies) for units of currency generally precede the figure (e.g. £58.00, \$4580, €120, EUR 350). The exceptions are those written in full (e.g. 12 rupees). Use \$ for \$US unless other dollar types are mentioned (e.g. \$A, \$HK).

• In book reviews etc., **prices** should be given with values for the two decimal units after a decimal point (e.g. \$A38.00 not \$A38).

ct cent (cts cents); \$ dollar

fl. florin

kr. krone

p pence; £ pound

¥ yen

€, EUR euro

- For 'million' use 'm' (e.g. £75m); for 'billion' use 'bn' (e.g. £75bn). Note that 'billion' means 'a million million' in UK English, but 'a thousand million' in US English.
- Use whole figures and decimals consistently (e.g. \$4.25 and \$7.00, not \$4.25 and \$7).
- The following EU countries are now using the **euro** (former currency in parentheses): Austria (schilling), Belgium (franc), Finland (markkaa), France (franc), Germany (mark), Greece (drachma), Ireland (punt), Italy (lira), Luxembourg (franc), the Netherlands (guilder), Portugal (escudo) and Spain (peseta).

1.16 Qualifications

Qualifications after a person's name should be listed in the following order.

- 1 Academic qualifications, in ascending order (e.g. BA MA PhD)
- 2 Professional qualifications (e.g.RN RM)
- 3 Honorary/fellowship qualifications (e.g. FAAN OBE)

Note that some qualifications automatically **supersede** others (e.g. to be a fellow of a college you must already be a member, so there is no point in putting MRCP if someone is also FRCP).

SCIENTIFIC/ENGINEERING/ARTS

BA or MA Bachelor of Arts or Master of Arts; Bachelor of Science (Oxford/Cambridge)

BEng Bachelor of Engineering
BSc Bachelor of Science
DPhil Doctor of Philosophy
MPhil Master of Philosophy
MS Master of Science (US)
MSc Master of Science
PhD Doctor of Philosophy

MEDICAL

BMedSci Bachelor of Medical Science

FFARCS Fellow of the Faculty of Anaesthetists of the Royal College of Surgeons

FFCM Fellow of the Faculty of Community Medicine
FFOM Fellow of the Faculty of Occupational Medicine
FRCGP Fellow of the Royal College of General Practitioners

FRCOG Fellow of the Royal College of Obstetricians and Gynaecologists

FRCP
Fellow of the Royal College of Physicians
FRCPath
Fellow of the Royal College of Pathologists
FRCPsych
Fellow of the Royal College of Psychiatrists
FRCS
Fellow of the Royal College of Surgeons
MB BChir
Bachelor of Medicine and Surgery
MB BS
Bachelor of Medicine and Surgery
Bachelor of Medicine and Surgery
MB ChB
Bachelor of Medicine and Surgery

MD Doctor of Medicine

DENTAL

BChD Bachelor of Dental Surgery
BDS Bachelor of Dental Surgery
DDS Doctor of Dental Surgery
MDS Master of Dental Surgery

VETERINARY

BSc(Vet) Bachelor of Veterinary Medicine and Surgery
BVMS Bachelor of Veterinary Medicine and Surgery
BVM&S Bachelor of Veterinary Medicine and Surgery

BVSc Bachelor of Veterinary Science

MRCVS Member of the Royal College of Veterinary Surgeons

TITLES

- Use Dr for physicians (i.e. medics who are not surgeons) and for scientists or others (e.g. dentists) with a doctoral degree (PhD, DPhil or DSc).
- Use Mr/Mrs/Miss/Ms for dentists without a doctoral degree and for surgeons.
- Use **Professor** for professors who are still working or who have retired but been made Professor Emeritus (otherwise they lose the title 'Professor' on retirement).
- Check the Medical Directory, Who's Who, etc. for honours such as OBE, CBE and DBE.

1.17 Organizations

Abbreviation	Organization
ANA	American Nurses Association
CERN	Conseil Européen de la Recherche Nucléaire
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CSIRO	Commonwealth Scientific and Industrial Research Organization
DEFRA	Department for Environment, Food and Rural Affairs (London) (formerly MAFF)
DoE	Department of the Environment (London)
DoH	Department of Health (London) (formerly DHSS)
DWP	Department for Work and Pensions (<i>London</i>) [DWP was formed from the Department of Social Security (DSS) and the Department of Education and Employment]
EU	European Union (no longer EC)
HMSO	Her Majesty's Stationery Office (London)
ICN	International Council of Nurses
IUPAC	International Union of Pure and Applied Chemistry (Oxford)
NHS	National Health Service (UK)
NIH	National Institutes of Health (US)
PAHO	Pan American Health Organization
UN	United Nations [not UNO] (New York)
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization (Paris)
USDA	United States Department of Agriculture (Washington, DC)
WHO	World Health Organization (<i>Geneva</i>)

1.18 Places

COMPASS DIRECTIONS

- North-west, south-southeast, etc. should be **abbreviated** if used extensively, particularly if used as part of a compound adjective (e.g. *SW-facing slope*, *NNE-trending escarpment*). Note that north—south comes before east—west in the abbreviations.
- Adjectives using north, south, east or west take the forms north-east, north-eastern, northerly, northeasterly, northward and northernmost.

LATITUDE AND LONGITUDE

Use the form 44°56′N, 71°45′E (north–south first then east–west). There is no reason to use the abbreviations 'lat.' and 'long.' in front of the coordinates because the compass directions show which of the two is being given. Coordinates are usually given with an altitude (not elevation), which should be given in metres above sea level (m a.s.l.).

UK GRID REFERENCES

Use the form 'NZ 684 018'.

COUNTRIES

- Avoid the terms *America* and *North America* unless it is clear that the continent is being referred to; otherwise, use USA (always abbreviate; do not use *U.S.A.* or *the States*). US is used as the adjectival form of *USA* (e.g. 'US aircraft carriers stationed in the Persian Gulf').
- Use UK (always abbreviate). Note that *UK* = Great Britain plus Northern Ireland; *Great Britain* = England, Scotland and Wales; *the British Isles* = UK plus the Irish Republic. *UK* can be used as an adjective (e.g., 'UK harrier jets flying over the Falkland Islands').
- Use **the Netherlands** not *The Netherlands* (although a capital *T* is usually used in addresses this rule also applies for *the Phillipines*) or *Holland* (a region).
- Republics. Use *China* not People's Republic of China/PRC (and *Taiwan* not Republic of China); *Korea* not Republic of Korea/ROK; *Germany* not Federal Republic of Germany/FRG; *Ireland* not Republic of Ireland (nor Eire); *South Africa* not Republic of South Africa/RSA.
- Other. Use Russia, the Ukraine, Belarus, Georgia, Latvia, Lithuania, Estonia, etc., not the USSR (use the former USSR if countries are not specified). Use the Czech Republic and Slovakia, not Czechoslovakia. Use Bosnia and Herzegovina, Croatia, Serbia and Montenegro, and Slovenia (or the former Yugoslavia if in doubt). Check the latest edition of an atlas to confirm any recent changes.

AUTHOR ADDRESSES

Institutes, street names, etc. are better given in the native tongue of the author (e.g. *Université de Lyon* should be preferred to *Lyon University*, and *Universität München* to *Munich University*). However, the names of cities and countries should be given in the language in which the paper is to be published.

CAPITALIZATION

- Use initial caps for e.g. Western Australia, South West Africa and Northern Ireland (proper names) but not for e.g. southern Scotland or eastern India (descriptive terms).
- When **climates or regions** are described using an adjective that is a proper name, the name is capitalized (e.g. *Mediterranean climate, Alpine region, sub-Saharan desert*).
- Northern Hemisphere, Southern Hemisphere (caps).

MISCELLANEOUS POINTS

- Use Asia—Pacific (en rule; not Asian-Pacific) and South-East Asia (initial caps; hyphen).
- Use *Island(s)* (do not abbreviate to *Is.*) and *River(s)* (do not abbreviate to *Riv.*).
- Use *Mount* (not *Mt*). Note that 'yama', 'dake' and several other suffixes mean *mountain* in Japanese; however, they should not be removed from the name unless it has been anglicized; check with the author or leave as supplied (e.g. Mount Tanakami-yama but Mount Fuji).

ABBREVIATIONS

American states

AK	Alaska	ID	Idaho	MT	Montana	RI	Rhode Island
AL	Alabama	IL	Illinois	NE	Nebraska	SC	South Carolina
AR	Arkansas	IN	Indiana	NC	North Carolina	SD	South Dakota
AZ	Arizona	KS	Kansas	ND	North Dakota	TN	Tennessee
CA	California	KY	Kentucky	NH	New Hampshire	TX	Texas
CO	Colorado	LA	Louisiana	NJ	New Jersey	UT	Utah
CT	Connecticut	MA	Massachusetts	NM	New Mexico	VA	Virginia
DC	District of Columbia	MD	Maryland	NV	Nevada	VT	Vermont
DE	Delaware	ME	Maine	NY	New York	WA	Washington
FL	Florida	MI	Michigan	ОН	Ohio	WI	Wisconsin
GA	Georgia	MN	Minnesota	OK	Oklahoma	WV	West Virginia
HI	Hawaii	MO	Missouri	OR	Oregon	WY	Wyoming
IA	Iowa	MS	Mississippi	PA	Pennsylvania		

Canadian provinces

AB	Alberta	NU	Nunavut
BC	British Columbia	ON	Ontario
MB	Manitoba	PE	Prince Edward Island
NB	New Brunswick	QC	Quebec
NF	Newfoundland	SK	Saskatchewan
NS	Nova Scotia	YT	Yukon
NT	Northwest Territories		

Australian states

UK regions and counties

You should usually delete region and county names from UK addresses, giving only the city or town and the postcode. However, it will occasionally be necessary to give the county or region (e.g. for rural addresses).

1.19 URLs in Text

CAPITALIZATION

- For consistency and ease of reading, always type URLs and email addresses in lower case letters (e.g. www.blackwellpublishing.com; person@blackwellpublishing.com). Both URLs and email addresses are case-insensitive, but there is a clear international trend to present both in all lower case text. In many other electronic contexts (e.g. Web searches), a capital letter represents only the capital letter, whereas the lower case letter represents both, so it seems sensible to retain the distinction for URLs and email addresses.
- There may be exceptions when the capitals have been used extensively in branding a website (e.g. www.GastroHep.com).

PREFERRED ADDRESSES

- 'http://' is needed in URLs in articles so that the link becomes live on Synergy.
- The Manuscript Central URLs do not start with 'www', so the URL should be written in full; e.g. http://jgh.manuscriptcentral.com
- The 'www' part of a URL doesn't appear at the start of all Web addresses, so when writing a URL that does start with 'www', it cannot be left out.
- There are a few variants of the **Blackwell** website URLs, but the preferred versions are as follows:

www.blackwellpublishing.com/<journal acronym> www.blackwell-synergy.com (note the hyphen)

BREAKING A URL

- When a URL must be broken over a line in a printed work, breaking after a slash or double slash is preferable.
- Try **not** to break after a **dot**, leaving the dot at the end of the line of text. **Do not use hyphens** to break long words at the end of a line.
- A hyphen within a URL shouldn't appear at the end of a line.

SETTING OFF URLS FROM SURROUNDING TEXT

- Do not set off URLs with angle brackets, because angle brackets are used in some markup languages.
- Do not underline URLs in printed text.
- Avoid placing punctuation directly after a URL, as it may be unclear whether the punctuation is part of the URL.

PART 2: DEALING WITH OTHER MATERIAL

2.1 Electronic Submission

PREPARATION OF ELECTRONIC ARTWORK

- Authors should be asked to submit EPS (line art) or TIFF (half-tone/photographs) files only.
- For scanned images, the scanning resolution (at final image size) should be as follows to ensure adequate reproduction: > 800 dots per inch (d.p.i.) for line art; > 300 d.p.i. for half-tones; > 600 d.p.i. for figures containing both half-tone and line images.
- EPS files should be saved with fonts embedded (and with a TIFF preview if possible).
- Black and white images should be supplied as grayscale.
- Colour images should be supplied as CMYK, not RGB.
- Multipart figures should be supplied in the final layout in one file.
- For further details, see http://www.blackwellpublishing.com/authors/digill.asp
- The following artwork packages give suitable quality formats when dealing with electronic artwork and allow you to 'save as' or 'export' as TIFF and EPS, the preferred standardized formats:

Adobe Illustrator 7.0 and above (EPS)

Adobe Illustrator 9.0 (EPS; also export as TIFF)

CorelDRAW 7.0 and above (EPS)

Deneba Canvas 6.0 and above (EPS)

Adobe Photoshop 4.0 and above (TIFF)

2.2 Disks

- CDs and floppy disks are both OK, but there is no current facility to process optical disks.
- Any word-processing format can be handled.
- The author must check that the **final version** of the hard copy and the file on the disk are the same.

2.3 Artwork

There are many journal-specific requirements for artwork, so refer to your **journal style sheet** and, if necessary, the 'Instructions for Authors' guidelines (usually on the inside back cover of the journal). See 'Electronic Submission' for information on electronic artwork.

GENERAL CHECKLIST

- Do the figures match the legends?
- What **level of intervention** is appropriate for figures in this journal? (There is always a 'cost versus quality' trade-off.)
- What **reduction** is appropriate for the figure? Consider (1) the size of any lettering and line art, and (2) the column width of the journal.

- Do you need to add (a), (b), etc. to the various parts of the figure?
- Is the text in the figure legible and error-free?
- Do any tints, areas of shading, etc. have to be redrawn? After reproduction, fine tints may become solid black, and light shading may disappear. A crude way to check whether this could be a problem is to photocopy the figure at the appropriate reduction.
- Is the figure to be processed as **colour**? If so, **special attention** needs to be paid to the authors' and editor's requirements as money is often involved! There is a requirement in some journals to minimize colour please consult the Blackwell Production Editor if you are unsure whether or not colour is acceptable.

2.4 Tables

WHEN IS A TABLE NOT A TABLE?

A table concisely presents numerical or factual information in a grid format. A table usually contains at least two rows (including the column headings) and two columns; otherwise the information may be better presented as a list. A 'table' containing graphics (e.g. arrows in a flowchart) is probably better treated as a figure, although occasionally figures may be embedded in tables (e.g. chemical structures); in this case, alert the typesetter to the fact that graphics need to be dropped into the table.

FORMATTING

- Make sure column headings are aligned (using tabs) with the entries below them.
- The first word of an entry should normally have an initial capital.
- Complex tables may benefit from extra spaces between groups of rows (see example overleaf).

EDITING

- The table **legend** should usually be treated as a title, and should stand on its own as a description of the content. It should contain only a brief, general description of what is shown in the table. Details about methods, statistics and specific parts of the table (e.g. 'Standard errors are given in parentheses') should be confined to footnotes.
- Units should be given in column headings, rather than repeated for every entry in the body of the table.
- Define any **abbreviations** in a footnote.
- See 'Footnotes' (1.10) for how to deal with table footnotes.
- Make sure that **rules** in hierarchical column headings are correct (i.e. that they span the appropriate text).
- In the column or row headings, authors sometimes neglect to include the top level of the hierarchy (i.e. they do not tell you what the numbers in the table actually are!). You may find that this information has been included in the legend (e.g. 'leaf dry weight' in the example table overleaf).

BEFORE...

Table 1. Leaf dry weight of three pea varieties grown at different temperatures (g). Values are given as means (n = 30). Within a column, means followed by the same letter are not significantly different at P < 0.05, using the Tukey test. Heat events were introduced at weekly intervals.

Varieties	Temperature	Days after sowing				
	Mean	HE	40	55	70	
EC-12876	18°C	35°C	0.40 a	3.88 a	0.17 a	
EC-12876	22°C	38°C	0.52 a	0.43 b	1.20 b	
EC-12876	25°C	38°C	1.35 b	5.36 a	4.20 c	
P-116	18°C	35°C	0.54 a	0.48b	1.99 b	
P-116	22°C	38°C	0.75 a	1.25b	1.56 b	
P-116	25°C	38°C	0.22 a	2.07b	1.43 b	
T-163	18°C	35°C	0.08 a	0.12a	0.97 a	
T-163	22°C	38°C	2.34 c	2.44a	1.67 b	
T-163	25°C	35°C	0.31 a	0.29 a	3.30c	

...AND AFTER

Table 1. Leaf dry weights of three pea varieties grown at different temperatures.

			Leaf dry weight (g)				
	Tempera	Temperature (°C)		Days after sowing			
Variety	Mean	HE	40	55	70		
EC-12876	18	35	0.40 a	3.88 a	0.17 a		
	22	38	0.52 a	0.43 b	1.20 b		
	25	38	1.35 b	5.36 a	4.20 c		
P-116	18	35	0.54 a	0.48 b	1.99 b		
	22	38	0.75 a	1.25 b	1.56 b		
	25	38	0.22 a	2.07 b	1.43 b		
T-163	18	35	0.08 a	0.12 a	0.97 a		
	22	38	2.34 c	2.44 a	1.67 b		
	25	35	0.31 a	0.29 a	3.30 c		

Values are given as means (n = 30).

HE, heat event (introduced at weekly intervals).

Within a column, means followed by the same letter are not significantly different at P < 0.05, using the Tukey test.

2.5 References

Check your **journal style sheet** for how to style references in the list and their citations in the text. In general, there are two main systems, **Harvard** and **Vancouver**, although there are some hybrids with features of both styles (e.g. alphabetical Vancouver).

HARVARD

Citations in the text take the form of author names and dates (e.g. Smith *et al.* 1990), and references in the list are sorted alphabetically by author name.

In the text

Sort references in the text chronologically (e.g. Smith 1990; Jones 1995), and then alphabetically within dates (e.g. Smith 1990; Brown 2001; Walton 2001).

For references with **three or more authors**, use the first author's name and 'et al.' in the text (e.g. Smith et al. 1990).

In the list

Sort references in the list alphabetically by first author, then by number of authors (one; two; three or more), then chronologically within the one-author group, alphabetically within the two-author group, and chronologically within the \geq three-author group:

```
Smedley, P. (2002)
Smith, G. (1983)
Smith, G. (2001)
Smith, G. and Jones, B.N. (1997)
Smith, G. and Stevens, D. (1996)
Smith, G., Wheeler, A., Lawrie, S. and von Hoffman, C. (1992)
Smith, G., McDonald, D.W. and Jones, B.N. (1994)
```

If two or more references have the same first author and date, you must use 'a', 'b', etc. after the date to distinguish them (e.g. Smith *et al.* 1990a). **NB** For two-author references, you need only do this if **both** authors are the same.

Lower case particles are listed under the letter of the name proper but upper case particles under the letter of the particle (e.g. da Silva under 'S' but Von Trapp under 'V').

VANCOUVER

- In **straight Vancouver**, references are numbered sequentially as they occur in the text. Citations in the text take the form of superscript or parenthetical **numbers**, which refer the reader to the references in the list. References in the list are ordered according to these **numbers**.
- In alphabetical Vancouver, the references are ordered alphabetically in the list and then numbered, and it is these numbers that appear in the text (so they will be out of sequence in the text; e.g. reference 51 might come before reference 6).

In the text

Reference numbers are set as **superscripts** or within **brackets** (usually square brackets), depending on the journal style. Superscripts should appear after, ¹ and square brackets within [1], punctuation. Use en rules for ranges; e.g., [1,2,3,4] becomes [1–4] and ^{24,25,26} becomes ^{24–26}.

In the list

Numbers in the list are set on the line.

- 1 Smith G, 1990
- 2 Author CD, 2001

EXAMPLES OF REFERENCE LIST STYLE

Check your journal style sheet for the style you should follow. These are just examples.

Article in journal

Author, A.B. & Author, B.C. (2000) Title of article. *Journal Title in Italics in Full*, **00** (**Suppl. 2**), 000–000. Author, A.B. & Author, B.C. (2003) Title of article. *Journal Title in Italics in Full*, in press.

Article within conference proceedings or book

Author, A., Author, B., Author, C. *et al.* [if e.g. > 6] (2002) Title of article. In: A. G. Smith & C. H. Jones (eds), *Conference or Book Title in Italics*, pp. 000–000. Publisher, City.

Book or conference proceedings

Smith, A.G. & Jones, C.H. (eds) (2002) *Conference or Book Title in Italics*. Publisher, City. Book-Author, T. (1997) *Book Title*. Publisher, City.

Court cases

Adkins v Thomas Solvent Co., 440 Mich 293, 487 NW2d 715 (Mich 1992).

DOIs (digital object identifiers)

Mazmanian, S. K., Ton-That, H. & Schneewind, O. (2001) Sortase-catalysed anchoring of surface proteins to the cell wall of *Staphylococcus aureus*. *Molecular Microbiology*, **40**, 1049–1057. doi:10.1046/j.1365-2958.2001.02411.x

Government departments

Use the Department as the author, and The Stationery Office (HMSO before mid-1997), London as the publisher.

Department of Health (1993) Caring for People: Community Care in the Next Decade and Beyond. HMSO, London.

Institutions cited as authors

Institutions cited as authors should be given in abbreviated form where referred to in the text (e.g. WHO 1989) and in abbreviated form (for the authors) and in full (for the publisher) in the reference list:

WHO (1989) Fisheries Handbook. World Health Organization, Geneva.

Newspapers

Cracknell, D. and Porter, A. Brown set for new tax bombshell. Sunday Times, 31 August 2003, p.1.

Thesis

Author, J. (2002) Title of thesis. PhD Thesis, University, City.

URLs

Full reference details must be given along with the URL, i.e. authorship, year, title of document/report and URL. If this information is not available, the reference should be removed and only the web address cited in the text.

Smith A. (1999) *Select committee report into social care in the community* [WWW document]. URL http://www.dhss.gov.uk/reports/report015285.html [accessed on 7 November 2003]

UNPUBLISHED REFERENCES

Unpublished references should only appear in the list if they are 'in press'. Otherwise, they should be cited in the text only, and should give the authors' names and (unless one of the authors is also an author of the present article) their main institution and city to enable the reader to trace them (do not give the article title or other details). Use e.g. 'unpublished results', 'manuscript in preparation' (in prep.), 'personal communication' (pers. comm.) or 'personal observations' (pers. obs.) depending on the context (e.g. authors of the present article can't make a personal communication with themselves!) and the journal style.

• ...was also found to be effective (S. Smith, University of Cardiff, Cardiff, unpublished results).

GENERAL RULES

- Avoid in litt. and op. cit. Use e.g. '(Jones et al. 1958, cited in Smith 1990)'.
- Avoid *ibid*. (*ibidem*, as above) in the text and the list. The full details should be repeated.
- Initials should be spaced when they occur before the surname and closed up when they occur after it.
- Jr, III, etc. go after the name and initials in both the text and the list (e.g. A. B. Author Jr; Author A.B., III).
- Do not give the total page extents of books and theses in the list.
- Refer to the *Index Medicus* or the *World List of Scientific Periodicals* for the correct way to abbreviate a journal title.

CHECKING REFERENCES

References can be checked at the following sites:

- Pubmed: www.ncbi.nlm.nih.gov/entrez/query/static/citmatch.html
- Medline: http://intapp.medscape.com/px/medlineapp/medline?cid=med&adv=1

2.6 Commercial Products

Any commercial product mentioned in the text (e.g. equipment, drugs or computer software) should be accompanied at **first mention** by the name, city and (US) state/country of the company that made it (usually in parentheses). Add a query to the author if this information is missing.

• ...incubated in the basal broth medium Easy-Grow (Biology Solutions, Boston, MA, USA)...

2.7 Permissions

- Authors must have written permission to reproduce figures, tables or any other material from another source. This also applies to data from which a figure or table has been produced. If you suspect that an author has taken material from another source, but either has not acknowledged this or has supplied incomplete information, add a query (we assume that authors have followed their responsibility to seek permission refer them to our Copyright Assignment Form).
- Acknowledge sources in figure and table legends in the format 'Reproduced from Smith *et al*. (1990), with permission from Mercat Press'. Some publishers may require the use of a particular copyright line. Make sure that there is a **reference** to the source of the material ask the author to supply one if there is not.
- Photographs of equipment or company products should be checked for reference to the manufacturer. It may be necessary to obtain permission for their use, particularly if the product is referred to in a negative light.

2.8 Appendices

Appendices contain extra material (usually tables, lists, equations or lengthy sections of text) and should be placed at the very end of the article.

- The style of appendices varies from journal to journal, but generally they are headed e.g. 'Appendix 1' and cited in the main body of the text as you would cite a figure or table. Equations in appendices are numbered separately (e.g. Eqn A1, etc.).
- An appendix may have its own reference list.
- Supplementary material (in the online publication) is now replacing appendices in many journals.

PART 3: SUBJECT-SPECIFIC STYLES

3.1 Scientific Names

The scientific name of a species is known as a **binomen** (zoology) or **binomial** (botany). There are differences in the naming conventions of animals, plants, bacteria and viruses (see *Scientific Style and Format* for detailed naming conventions and style for each kingdom, or the individual codes – listed below), but below are the basic guidelines.

International Code of Zoological Nomenclature

International Code of Botanical Nomenclature

International Code of Nomenclature for Cultivated Plants

International Code of Nomenclature of Bacteria

International Code of Virus Classification and Nomenclature

• Genus and species names are presented in italics (e.g. *Caenorhabditis elegans*) and they have singular endings. Higher taxa (i.e. family, order, class, phylum and kingdom) are set in roman

type with an initial capital (e.g. Coleoptera, Insecta and Rosaceae). These taxa have plural endings.

• Modifiers to species names are presented in roman after the species name and are always abbreviated.

 Spell out genus and species names in full at the first citation in the Abstract and text

Common modifiers

ssp. subspeciessp. n. species novacv. cultivarvar. variety

× cross (hybrid)

(e.g. $Bufo\ marinus$); abbreviate genus names thereafter (e.g. $B.\ marinus$ – note the full point and thin space after the abbreviated genus name). However, use the full name at the start of paragraphs, in tables, and whenever there could be ambiguity if the abbreviated name is used. If two genera with the same initial letter are referred to, it may be beneficial to use partial genus abbreviations (e.g. $Picea\ abies \rightarrow Pi.\ abies$ and $Pinus\ sylvestris \rightarrow P.\ sylvestris$; $Staph.\ aureus$ and $Strep.\ faecalis$). Alternatively, use the full name to make it clear which genus each species belongs to. If a new species of the same genus as another, already cited species is introduced, the full name of the new species (i.e. repeat the genus name) should be given at its first citation (e.g. if $Xenopus\ laevis$ has already been named, you still need to spell out Xenopus at the first mention of $Xenopus\ tropicalis$).

- Adjectives and nouns **derived** from genus names become roman with a lower case initial (e.g. *Felis* → feline, *Libellula* → libellulids, *Streptococcus* → streptococcal infection). Those derived from higher taxonomic groups also begin with a lower case letter and are presented in roman (e.g. Ostracoda → ostracods, Cactaceae → cacti).
- A scientific name given at its first mention after a vernacular name should be separated from it by a comma if the two names are exact synonyms (e.g. ... the two-spotted cricket, *Gryllus bimaculatus*,...) but not if the vernacular name may apply to more than one species (e.g. the starfish *Asterina pectinifera*, the medaka *Oryzias latipes*).
- The genus name is sometimes referred to alone, even in titles (e.g. *Xenopus*, *Asterina*), but the species name cannot be (*laevis*, *pectinifera*). Species within a genus can be referred to in general terms by the abbreviations sp. (singular) or spp. (plural) after the genus name (e.g. *Xenopus* sp.).

AUTHORITIES

The 'authority' of a scientific name is the **name of the person** who originally classified the species. It is particularly important to include the authority if there is some controversy about the classification.

L. (Linnaeus)

gen. & sp. indet.

the most well-known

(e.g. Parage aegeria L.)

'genus and species

authority

• The authority should be given at first mention of the species, set in roman after the scientific name (e.g. *Anthomyza elbergi* Andersson). Alternatively, a reference may be cited.

may be cited. indeterminate'

• If a date of classification is given with the authority, it should be separated from the authority by a comma (e.g. *Anthomyza bellatrix* Roháçek, 1984).

• When a species or subspecies is **transferred** to a genus other than that in which it was first classified, the original authority is placed in parentheses. In botany and microbiology, the authority of the new combination follows and is not placed in parentheses [e.g. *Calluna vulgaris* (L.) Hull, *Shigella dysenteriae* (Shiga) Castellani & Chalmers]. In zoology, the authority of the new combination is not given [e.g. *Lepomis gulosus* (Cuvier)].

BACTERIA NAMES

- Names of all bacterial taxa are **italicized** [e.g. *Pseudomonadales* (order), *Pseudomonadaceae* (family), *Pseudomonas* (genus), etc.].
- Some organisms that cannot be differentiated taxonomically at the level of subspecies are given the infrasubspecific designations pathovars (pv.), biovars (b.), serovars (sv.), phagovars, chemovars and morphovars.
- Vernacular names of bacteria are always set in roman lower case (e.g. mycobacteria, salmonella, klebsiellae).

VIRUS NAMES

- Virus names **end** in *virales* (order), *viridae* (family) *virinae* (subfamily) and *virus* (genus). They do **not** follow normal binomial naming.
- Approved (by the International Committee on Taxonomy of Viruses) international names for orders, families, subfamilies and genera are set in italics with initial capitalization. The name of the taxon should precede the term in formal use (e.g. the family *Paramyxoviridae*, the genus *Orthopoxvirus*).
- Names that have **not yet been approved** and **vernacular** names are set in lower case roman (e.g. maize dwarf mosaic virus, herpes simplex virus type I, rhabdovirus, yellow fever virus). Virus names are also set in roman when used in an adjectival form. Be careful not to jump hierarchical levels in vernacular usage (because it is not always easy to identify which level is being referred to): add taxon identification wherever needed.
- The first letter of a **proper noun or proper adjective** incorporated into the name of a virus is capitalized (e.g. West Nile virus). If part of the vernacular name incorporates a **Latin name**, the Latin name is capitalized and italicized.

RECOMMENDED TEXTS

Council of Biology Editors (1994) *Scientific Style and Format: The CBE Manual for Authors, Editors, and Publishers*, 6th edn. Cambridge University Press, Cambridge.

3.2 Aquaculture and Veterinary Science

AQUACULTURE

Names of **organisms** should be given in full, i.e. common name and Latin name with authority, when cited for the first time. Latin names should be given in italics.

Use of **parentheses** in scientific names follows strict protocols, and generally what is supplied will be correct [e.g. *Boops boops* (L.) but *Gadus morhua* L.].

Common terms

a.s.l.	above sea level	I	index
m.s.l.	mean sea level	$I_{ m G}$	gonado-somatic index
CPUE	catch per unit effort	$I_{ m H}$	hepato-somatic index
		L	length
fish	plural for one species	$L_{\scriptscriptstyle m F}$	fork length
fishes	plural for multiple species	$L_{ m S}$	standard length
		$L_{ m T}$	total length

RECOMMENDED TEXTS

American Fisheries Society Special Publication No. 20, Common and Scientific Names of Fishes from the United States and Canada.

For fishes occurring in British waters, give precedence to Wheeler A. (1992) A list of the common and scientific names of fishes of the British Isles. *Journal of Fish Biology* 41, Supplement A. www.fishbase.org

VETERINARY SCIENCE

Common abbreviations

ALS	advanced life support	IT	intratracheal
CI	cardiac index	LDPI	laser Doppler perfusion imaging
CO	cardiac output	MAP	mean arterial pressure
CPCR	cardiopulmonary cerebral	MHC	major histocompatibility complex
	resuscitation	OD	optical density
CVP	central venous pressure	OD	right eye
DAP	diastolic arterial pressure	OS	left eye
DSH	Domestic Short Hair	OU	both eyes
Fe'CO ₂	end tidal carbon dioxide	PACO ₂	partial pressure of alveolar carbon dioxide
FeLV	feline leukemia virus	PaCO ₂	partial pressure of arterial carbon dioxide
FHV-1	feline herpes virus	PV	papillomaviruses
FIV	feline immunodeficiency virus	PVR	pulmonary vascular resistance
g	not rpm or rev min ⁻¹	RAU	relative antibody unit
H&E	haemotoxylin and eosin stain	SAP	systolic arterial pressure
IO	intraosseus	SVR	systemic vascular resistance
IOP	intraocular pressure	w/v	weight/volume

Q12 hours, Q8 hours, Q24 hours every 12 hours, every 8 hours, every 24 hours, etc.

3.3 Linguistics

Follow either the style of the Modern Language Association (MLA) or that of the American Psychological Association (APA):

- http://www.apastyle.org/aboutstyle.html
- http://www.mla.org

3.4 Business, Economics, Maths and Statistics

BUSINESS AND ECONOMICS

Common terms

APT	arbitrage pricing theory	London	Stock Exchange
the Banl	k of England (also just 'the Bank')	LOOP	law of one price
BEA	Bureau of Economic Analysis	Nasdaq	
Bear-Ste	erns	Nikkei 2	225
below-n	narket performers	NYSE	New York Stock Exchange
bertrand	d competition	OECD	Organisation for Economic Co-operation
book-to	-market adjustments		and Development
buy-and	l-hold strategy	OPEC	Organisation of the Petroleum Exporting
CAP	Common Agricultural Policy		Countries
CPI	consumer price index	ROW	rest of world
cut-and	-run behaviour (but to cut and run)	RPI	Retail Price Index (in UK)
DAX100)	RTAs	regional trade agreements
DF	Dickey–Fuller test	S&L	
DTI	Department of Trade and Industry	S&P 500)
ECB	European Central Bank	SEC	Securities and Exchange Commission
EMU	European Monetary Union	spillove	r (n.)
EPO	European Patent Office	spin-off	$F(\mathbf{n}_{\cdot})$
ERM	exchange rate mechanism	t-statisti	ics
formula	s (not formulae)	<i>t</i> -value	
FTSE10	0	takeoff ((n.)
GATT	general agreement on trade and tariffs	tip-off (n.)
GDP	gross domestic product	trade-of	ff (n.)
GNP	gross national product	turnove	r (n.); turn over (v.)
IMF	International Monetary Fund	VAR	vector autoregression
IRPP	Institute for Research on Public Policy	WTO	World Trade Organisation
London	's Seaq		

MATHS

Equations

- Simple equations should run on in the text and should be punctuated as part of the sentence (e.g. '... was calculated as $h = a + B_2$ '). Complex equations should be displayed for clarity. Note that reactions and inequalities should be neither referred to nor numbered as equations.
- Even for displayed equations, **definitions** of symbols should run on in the normal sentence structure within the text:

$$s = 1 - [n(2 + y)],$$

where *s* is the growth rate, *n* is the number of cells...

- The order of brackets should be <{[()]}>.
- If an equation (displayed) runs over more than one line, **line breaks** should occur before a relational sign (i.e. =, >, \supset , \notin , \propto , etc.). The turnover line should then be aligned with previous relational signs. Breaks can also occur before operational signs (i.e. +, -, \pm , \times , \div , \sum , etc.); the turnover line then aligns to the right of the relational sign.
- Operational and relational signs have fixed thin spaces on either side of them (e.g. x + y).
- Fractions in run-on equations can be represented by use of a solidus [e.g. x/(y+1)] to prevent disruption to the line of text above. Parentheses often need to be added when converting fractions to the solidus form.
- The radical (root sign) is set using the symbol ($\sqrt{}$) or a superscript index ($^{-1/2}$), rather than taking a line (vinculum) across the whole equation. This is most important in run-on equations to prevent disruption to the line of text above.

Formatting

x -axis, n , χ^2 e, π f, exp, log, sin
•
f, exp, log, sin
script $d_{\rm F}, n_{\rm a}, n_{\rm air}$
A, V, M
(sometimes arrow over letter) a, AB, eb
alics T, T:S

Functions and operators

ad	adjoint	GL	general linear	s.t.	subject to
arg	argument	inf	infimum	sin	sine
cos	cosine	lim	limit	sinh	hyperbolic sine
cosh	hyperbolic cosine	ln	natural logarithm	sup	supremum
cov	covariance	log	logarithm	tan	tangent
det	determinant	max	maximum	tanh	hyperbolic tangent
dim	dimension	min	minimum	tr	trace
E	expectation	mod	modulus	var	variance
EU	expected utility	prob	probability	trn	transition
exp	exponential				

STATISTICS

Statistical tests

ANOVA (analysis of variance)	F-test	Student's t-test
ANCOVA (analysis of covariance)	Mann–Whitney <i>U</i> -test	χ²-test (chi-squared test)
MANOVA (multiple analysis of variance)		

Common abbreviations

CI	confidence interval	OR	odds ratio
CL	confidence limits	P	probability (always abbreviate)
d.f.	degrees of freedom	r	coeffient of variation
F	variance ratio	RMS	root mean square
$F_{x,y}$	variance ratio, where x and y are d.f.	SD	standard deviation
LSD	least significant difference	SE	standard error
n	number of observations	SEM	standard error of the mean
ND	not done	\overline{x}	average/mean
NS	not significant		

RECOMMENDED TEXTS

AMS (1986) Mathematics into Type (rev. edn). American Mathematical Society, Providence, RI.

3.5 Computing and Engineering

COMPUTING

Programming languages should be given in CAPS; **software** names in SMALL CAPS.

Common terms

Apple	email	MS-DOS	
BASIC	FORTRAN	PASCAL	Microsoft
BIOSYS-1	GenBank	PAUP	Access
BLAST, BLASTX	GLM	program	Excel
CD-ROM	Google	Prolog	
CELLSIM	IBM	SPSS	Outlook
CLUSTALX	Internet	TreeView	PowerPoint
COBOL	Lotus 1-2-3	URL	Word
DECORANA	Macintosh	WordPerfect	
disk	MEDLINE		

ENGINEERING

Common terms

COD	crack opening displacement	LBB	leak-before-break
EIFS	equivalent initial flaw size	LCF	low cycle fatigue
ERS	enhanced reference stress	RS	reference stress
FEM	finite element method	SCF	stress concentration factor
HCF	high cycle fatigue	SEM	scanning electron microscope

3.6 Law

• The official title of the **Supreme Court** is the Supreme Court of the United States. US Supreme Court is acceptable. Supreme Court is also acceptable if the context is clear (e.g. the article does not make frequent references to state supreme or other courts). Do not use United States Supreme Court.

- Washington, D.C. use comma and periods.
- Case names should be in italics.

Initial capitals	Lower case
Court, Bench, Justice, Term, Brethren and Chambers when referring to the Supreme Court	court in references to lower courts
Attorney General, Solicitor General, President, Vice President and Cabinet-level titles	ambassador, judge, assistant attorney general, etc. – i.e. any national position under Cabinet level ; any state position
Progressive Era, Federalist, Anti-Federalist and Prohibition	presidents or chairmen of commissions or companies
Framers of the Constitution and Founding Fathers	'party' when referring to a political party
Amendments to the Constitution and clauses within the Constitution (e.g. First Amendment, Commerce Clause)	government and parliamentary as adjectives

Useful websites

Modern Law Review website: http://www.lse.ac.uk/collections/law/modernLawReview.htm http://www.law.buffalo.edu/baldycenter/styleinfo.html http://dictionary.law.com/

3.7 Life and Physical Sciences

Note: for general biology, see also general medicine.

CHEMISTRY/BIOCHEMISTRY

Common terms

C4, C3	carbon-4 pathway, carbon-3 pathway	N	substituted nitrogen but N-terminus,
chlorophyll a	, b, c		C-terminus
cis-	same side	0	ortho
D	dextro	O	sub-oxygen
fac-	facial	P	para
fMet	formylmethionine	P680	photosystem II [photosynthesis]
$G_1, G_0,$		P700	photosystem I [photosynthesis]
S, G_2, M	phases of cell cycle	PGA ₁ /PGA ₂	prostaglandin A ₁ /A ₂
gem-	geminal	$P_{ m i}$	inorganic orthophosphate
Hb	haemoglobin	p <i>K</i> , pH	
$K_{ m m}$	Michaelis constant	R	recto
L	laevo	S	sinister
m	meta	T_4	bacteriophage
M	molar	trans	opposite side
mer-	meridional	vic-	vicinal
N	normal concentration	$V_{ m max}$	maximal rate
n	normo	v/v	volume in volume
		w/v	weight in volume

Useful website

• **Standard nomenclature and symbols** can be found at: http://www.chem.qmw.ac.uk/iubmb/nomenclature/

ECOLOGY

Vegetation classifications/plant community assemblages

- The UK National Vegetation Classification (NVC) scheme (co-ordinated by J. S. Rodwell) uses an en rule between species names, which are italicized (e.g. *Phragmites australis—Peucedanum palustre* tall herb fen).
- The phytosociological classifications (continental European) scheme (J. Braun-Blanquet) uses a hyphen between class names, which are not italicized (e.g. Class Oxycocco-Sphangetea, Order Sphagnetalia magellanici, Alliance Sphagnion magellanici, and Pallavicinio-Sphagnetum).

Common terms

blowdowns capture–mark–recapture cold-water species

DEFRA, Department of Agriculture, Food and Rural Affairs (was MAFF, Ministry of Agriculture,

Fisheries and Food)

flood-plain alder forests (but 'on the floodplain')

medium- and high-light treatments nutrient-poor or nutrient-rich habitats

plant functional type (PFT)

post-dispersal

quadrat, **not** quadrate relative growth rate (RGR)

root: shoot ratio root-shoot allocation

semi-arid semi-natural subalpine sub-blocks subpopulation

tree line (not tree-line or treeline)

GENETICS

For	Use	Examples	
Gene abbreviations	Italics	lacA, amp ^r	
Protein abbreviations	Roman	LacA	
Phenotypes	Roman	Lac ⁺	
Transposons	Roman	Tn5	

- Restriction endonucleases: HindIII, Hinfl, EcoRI, MboI, etc.
- Strains of mice: BALB/c, C57B1/6, BD/V, BD/IX, LEW, etc.
- Always abbreviate: mtDNA, mRNA, rRNA, tRNA
- R388::Tn1721 represents transposon Tn 1721 encoding gene R388
- Chromosome locations: 6q22-24, 11p15.5
- DNA sequence: 5′-ATCGGAG-3′

Common terms

AFLP	amplified fragment length	ORF	open reading frame
	polymorphism	PAGE	polyacrylamide gel electrophoresis
bp	base pairs	PCR	polymerase chain reaction
BLAST	basic linear alignment sequence tool	QTL	quantitative trait loci
bloodmeal	not blood meal	r	recombinant (e.g. lac ^r)
CAPS	cleaved amplified polymorphic	RAPD	random amplified polymorphic DNA
	sequence	RecA-	recombinant strain; but recA is a gene
Da	daltons (not d)	RFLP	restriction fragment length
FISH	fluorescence in situ hybridization		polymorphism
F_1	first filial generation	RT	reverse transcriptase
F_2	second filial generation	SMM	stepwise-mutation model
$(GATA)_4$	key genetic sequence	SNP	single nucleotide polymorphism
GBA	genetic bit analysis	SPAR	single primer amplification reaction
$H_{ m E}$	expected heterozygosity	ssDNA	single-stranded DNA
$H_{\rm O}$	observed heterozygosity	SSOP	sequence-specific oligonucleotide
IAM	infinite allele model		probes
ITS	internal transcribed spacer	SSP	sequence-specific primers
kb	kilobases (e.g. 10.3-kb fragment)	SSR	single sequence repeat
Mb	megabase (a unit of length for DNA	Tc^R , Ap^R	antibiotic resistance
	fragments)	TDT	transmission/disequilibrium test
$M_{ m r}$	relative molecular mass	TGF	transforming growth factor
N_e , $N_e m$	Nei's value	UTR	untranslated region

Useful websites

- Birgid Schlindwein's Hypermedia Glossary of Genetic Terms: http://hal.weihenstephan.de/genglos/asp/genreq.asp?list=1
- The Laboratory of Statistical Genetics at Rockefeller University: http://linkage.rockefeller.edu/wli/glossary/genetics.html
- National Genome Research Institute: http://www.genome.gov/glossary.cfm

GEOLOGY

Websites for glossaries

http://college.hmco.com/geology/resources/geologylink/glossary.html http://www.evcforum.net/WebPages/Glossary_Geology.html

PLANT SCIENCES

Liaht

In general, use units based on energy for heat or energy balance; use units based on photons for photochemical processes such as photosynthesis or photomorphogenesis. The waveband over which measurements are made should be specified [e.g. energy fluence rate (irradiance) of $650 \, \mathrm{W m^{-2}}$ over the waveband $300{\text -}1000 \, \mathrm{nm}$; photosynthetic photon fluence rate (PPFR) of $720 \, \mathrm{\mu mol m^{-2} \, s^{-1}}$ over the waveband $400{\text -}700 \, \mathrm{nm}$].

Units based on photons or energy

Recommended nomenclature	Units	Near-equivalent terms
Based on photons		
Quantity of photons	mol	
Photon fluence	$mol m^{-2}$	Photon density
Photon rate	$mol s^{-1}$	Photon flow; Photon flux
Photon fluence rate	$mol\ m^{-2}\ s^{-1}$	Photon flux density; Photon irradiance
Based on energy		
Radiant energy	J(Ws)	
Energy fluence	$J m^{-2} (W s m^{-2})$	Energy density
Energy rate	$J s^{-1} (W)$	Energy flow; Energy flux; Radiant flux
Energy fluence rate	$J m^{-2} s^{-1} (W m^{-2})$	Irradiance; Energy flux density Radiant flux density

Common terms

chlorophyll a and b or Chl a and b

cytochrome *c* or cyt *c* d. wt dry weight

EDTA ethylenediaminetetraacetic acid

 $\begin{array}{ll} {\rm f.\,wt} & {\rm fresh\,weight} \\ {\rm F_o} & {\rm initial\,fluorescence} \end{array}$

 F_{v} : $/F_{M}$ the ratio of variable to maximum fluorescence

 $g_{\rm c}$ stomatal conductance to ${\rm CO_2}$

g_s stomatal conductance to water vapour

glasshouse or controlled environment room not greenhouse

HPLC high-performance liquid chromatography

 $my corrhiza\ formation\ or\ my corrhiza\ development\ {\bf not}\ my corrhization$

mycorrhizas not mycorrihae for plural of mycorrhiza

PAR photosynthetically active radiation

photo usually closed up (e.g. photoprotective, not photo-protective)

PSI photosystem I PSII photosystem II UV-A, UV-B not UVA, UVB

vesicular-arbuscular

WUE water-use efficiency xanthi (always roman)

Soil classifications

The names of units of the USDA *Soil Taxonomy* should begin with upper case initials. The hierarchy is as follows:

Order (e.g. Spodosols) Suborder (e.g. Orthods)

Great Groups (e.g. Fragiorthods)

Subgroups (e.g. Typic Fragiorthods) Families

Series

The FAO/UNESCO Soil Map of the World is divided into World Classes (e.g. Fluvisols, Lithosols, Podzols, Redzinas, Chernozems, Phaeozems), which are divided into Soil Units.

3.8 Medicine

GENERAL MEDICINE

Drug names have recently changed; most now take American spellings (e.g. ganciclovir, not gancyclovir), with very different original names in brackets [e.g. epinephrine (adrenaline)].

Common terms

α-interfero	on, γ-interferon but IFN-α, IFN-γ when abbreviated	IDDM	insulin-dependent diabetes mellitus (but WHO recommends use of the term
AIDS	acquired immunodeficiency syndrome		'type 1 diabetes' instead)
BNF	British National Formulary	Ig	immunoglobulin
BSA	bovine serum albumin	Ig IL	interleukin
BU	Bethesda units	i.m.	intramuscular(ly)
CHD	coronary heart disease	INR	international normalized ratio
CNS	central nervous system	IU	international units
COPD	chronic obstructive pulmonary disorder	i.v.	intravenous(ly)
	counts per minute		lethal dose 50%
c.p.m. CSF	cerebrospinal fluid	LD ₅₀ LDL	low-density lipoprotein
CT	computed tomography	LOS, LES	lower (o)esophageal sphincter
CVD	cerebrovascular disease	LPS	lipopolysaccharide
DBP	diastolic blood pressure	mAb	monoclonal antibody
DMEM	Dulbecco's modified Eagle's minimal	MEM	minimal essential medium
DIVILIVI	essential medium	mmHg	minimar essentiar medium
dose–respo		MW	molecular weight
EBSS	Eisen's balanced salt solution	NICE	National Institute for Clinical
EBV	Epstein–Barr virus	NICL	Excellence
EC	Enzyme Commission	NOS	nitric oxide synthase
EC	effective concentration	NSAID	nonsteroidal anti-inflammatory
ECL	enhanced chemiluminescence	Nonio	drug
ED ₅₀	50% effective dose	OD	optical density
EDTA	ethylenediaminetetraacetic acid	PBMC	peripheral blood mononuclear cells
EEG	electroencephalogram	PBS	phosphate-buffered saline
EGTA	ethyleneglycoltetraacetic acid	PCR	polymerase chain reaction
ELISA	enzyme-linked immunosorbent assay	PET	positron emission tomography
EMBL	European Molecular Biology Laboratory	PGA ₁	prostaglandin A ₁
	a coli (E. coli)	p.o.	per os (orally)
FACS	fluorescence-activated cell sorter	PRP	platelet-rich plasma
11100	(FACScan)		four times daily
FasL	Fas ligand	QoL	quality of life
FB	fast blue	RNAse	(not RNase) deoxyribonuclease
FCA	Freund's complete adjuvant		(no need to define)
FCS	fetal calf serum	RR	relative risk
FDA	Food and Drug Administration (US)	SBP	systolic blood pressure
FITC	fluorescein isothiocyanate	s.c.	subcutaneous(ly)
GI	gastrointestinal	t.d.s./t.i.d.	three times daily
HAART	highly active antiretroviral therapy	TEQ	toxic equivalents
haematom	a/hamartoma are often confused	TG	triglyceride
H&E	haematoxylin and eosin	TNF	tumour necrosis factor (usually a)
HDL	high-density lipoprotein	tumour stag	ges: stage I, stage II, etc.
HIV	human immunodeficiency virus	VCAM	vascular cell adhesion molecule
HPLC	high-performance liquid	VF	ventricular fibrillation
	chromatography	w/v	weight/volume
hyperkalae		X ray (n.), X	-ray (v., adj.)
ICU	intensive care unit		

ANAESTHESIOLOGY

Variables

Cconcentration in liquid F fractional concentration

P pressure Q volume (blood) V

Gas modifiers (subscript)

volume (gas)

Α alveolar В barometric D deadspace E expired T inspired Т total (tidal)

General modifiers

first time derivative mean (over variable) mixed (over gas) end value

Blood modifiers (subscript)

arterial а b blood (general) capillary С

pulmonary p shunt S total (of CO) t

venous

Examples

 \bar{P}_{a} mean arterial pressure $\dot{V}_{\rm CO_2}$ production rate of CO₂

 $P_{\rm A}N_2$ pressure of N₂ in alveolar gas $F_{\rm E}$ CO₂ fraction CO₂ in mixed expired gas

 $C_{\bar{a}'}O_2$ end-tidal O2 concentration in arterial blood

Common terms

ARDS Acute Respiratory Distress Syndrome

(use initial caps for full term)

b min⁻¹ not bpm

CBFcerebral blood flow CPPcardiopulmonary pressure **CPR** cardiopulmonary resuscitation

endtidal not end tidal

EPS electrophysiological studies

epinephrine not adrenaline

 FEV_1 forced expiratory volume in 1 s

FVCforced vital capacity

HR heart rate

IPPVintermittent positive pressure ventilation Infant Respiratory Distress Syndrome **IRDS**

laryngotracheo-oesophageal cleft not laryngo-

tracheo-oesophageal cleft

LVdP/dtrate of change of left ventricle pressure

nasopharyngeal

not PECO, $P_{\rm F}$ CO₂

PEEPpositive end-expired pressure RA, RV right atrium, right ventricle **RFA** radiofrequency ablation **TCAD** tricyclic antidepressant drugs

TOF train of four

No need to define

ASA American Society of Anesthesiologists ASA PS ASA physical status

AV atrioventricular

CVP central venous pressure

EMLA cream P_ECO₂

LMA laryngeal mask airway

MAC minimum alveolar concentration NIBP non-invasive blood pressure

PO per oral

No need to provide manufacturer for LMA or

Tuohy needle

HAEMATOLOGY

Common terms

APTT activated partial thromboplastin time **PCV** packed cell volume AΤ antithrombin PE pulmonary embolism BUN PT blood urea nitrogen prothrombin time CRP PTT C-reactive protein partial thromboplastin time Ristocetin co-factor (**not** RcoF) CVP central venous pressure Rco DDAVP 1-8-deamino-d-arginine vasopressin rFVIIa recombinant factor VIIa (also known as desmopressin) TED thromboembolic disease DIC thrombin generation time disseminated intravascular coagulation TGT DVT deep vein thrombosis TIA transient ischemic attack factor (F)V Leiden TMthrombomodulin FVII factor VII von Willebrand disease, not von Willebrand's disease GPI glycophosphatidylinositol (type 1, 2A, 2B, 3); VWD, **not** vWD. hemophilia A, hemophilia B von Willebrand factor, **not** von Willebrand's factor; INR VWF, not vWF. international normalized ratio LMWH low molecular weight heparin VPC ventricular premature contractions MCV mean corpuscular volume VTE venous thromboembolism PCF platelet contractile force

Common terms

Drug names

Note use of capitals and trademarks (superscript).

beneFix® Haemate-P Kogenate® OctanolTM

FEIBATM Havrix[®] NovoSeven[®]

OBSTETRICS AND GYNAECOLOGY

Common abbreviations

CIN	cervical intraepithelial neoplasia	birthweight (not birth weight)
FIGO	International Federation of Gynecologic	bottle-feed
	Oncology (no need to give in full)	breastfeed
HPV	human papillomavirus	breastmilk
LOH	loss of heterozygosity	gynaecology (UK spelling)
LVSI	lymphvascular space invasion (not	gynecology (US spelling)
	lymphovascular)	Kaplin-Meier
SCC	squamous cell carcinoma	Pap test
VAIN	vaginal intraepithelial neoplasia	paraprofessional
VIN	vulvar intraepithelial neoplasia	

IMMUNOLOGY

Anti-	
antibody	anti-goat
antimicrobial	anti-human
antiserum	anti-mouse
antitetanus	anti-rabbit

Immunoglobulin heavy chains					
IgA	α	IgG	γ		
IgD	δ	IgM	μ		
IgE	ε				

Common terms

ADCC	antibody-dependent cell-mediated	GVH	graft-versus-host
	cellular cytotoxicity	H-2	mouse version of MHC
αIL-4	anti-interleukin-4	HDL	high-density lipoprotein
Antigens:	Der p III, Der f III	HLA	human leucocyte antigen
APC	antigen-presenting cell	[³H]TdR	[³ H]thymidine
autoantige	n, autoimmune	I-A ^b	(not I-Ab)
C3	the third component of complement	ICAM-1	intercellular adhesion molecule type 1
CALL	common acute lymphocytic leukaemia	LCL	lymphoblastoid cell line
CD45RO+		mAb	monoclonal antibody
CD8 ⁺ CD4	t ⁺ (thin space between parts)	MACS	magnetic antibody cell sorting
CDR	complementarity determining region	MHC	major histocompatibility complex
cIgM	cytoplasmic immunoglobulin G	MIP	macrophage inflammatory protein or
CMC	cell-mediated cytotoxicity		medial intraparietal (area)
CTL	cytotoxic T lymphocyte	MOI	multiplicity of infection
CTLA	cytotoxic T-lymphocyte antigen	NK	natural killer
DLN	draining lymph nodes	PMN	polymorphonuclear cells/leucocytes
EIA	enzyme immunoassay	TCGF	T-cell growth factor (= IL-2)
$F(ab')_2$		TCR	T-cell receptor (not TcR)
Fab´	(no brackets if not a dimer)	TDL	thoracic duct lymphocytes
FLI	Fos-like immunoreactivity	TGF	transforming growth factor
GM-CSF	granulocyte-macrophage colony-	Th	T helper (Th1 never Th-1 or Th 1)
	stimulating factor	TNF- α	tumour necrosis factor- α
gp60	glycoprotein 60	TRF	T-cell replacing factor

PHARMACOLOGY

Devices, products and drugs

At first mention of a device, product or drug, give its generic name (in lower case; e.g. amoxycillin) followed (in parentheses) by its brand name (with initial capitals; e.g. Amoxil) and the manufacturer's name, city and state (include Inc., Corp., Ltd and Co.). Trademark ($^{\text{TM}}$) symbols are not used unless referring to a registered trademark ($^{\text{®}}$), and then only at first mention.

- A siliastic catheter (Catheter X, Manufacturer, City, State) was used.
- Patients were given furosemide (Lasix, Hoechst-Roussel Pharmaceuticals, Inc., Somerville, NJ).

In all subsequent references, only the generic name of the device, product or drug should be used, unless a clear distinction is being made between two or more such products with different brand names.

Dosage/dose

- A **dosage** is a regimen, usually expressed as a quantity per unit of time. Always **abbreviate** b.i.d., t.i.d., q.i.d. (two, three and four times daily, respectively) and h.s. (*hora somni*, at bedtime).
- A dose is a quantity to be administered.

Abbreviations

- In **drug administration**, always abbreviate i.d. (intradermal), i.m. (intramuscular), i.p. (intraperitoneal), i.v. (intravenous), p.o. (per os, oral), p.r. (*per rectum*, rectal), s.c. (subcutaneous) and s.l. (sublingual).
- Abbreviations for drugs and other humoral mediators use a roman or Greek character with an additional alphanumeric or numeric designator (usually subscript) [e.g. α_{1A}, α_{1B} (alphaadrenoceptors); D₁, D₂ (dopamine receptors)].

Common terms

AUC_{0-24}	area under the concentration–time	LD_{50}	median lethal dose (mg)
	curve	NSAIDs	non-steroidal anti-inflammatory drugs
	measured from $t = 0$ to $t = 24$ h (mg h/L)	p <i>K</i> a	dissociation coefficient
α	absorption-rate coefficient	Q	blood flow (L/h)
β	elimination-rate coefficient	$t_{1/2}$	half-life
beta-block	er	$t_{1/2\alpha}$	absorption half-life
β-adrenoc	eptor	$t_{1/2\beta}$	elimination half-life
$C_{\rm max}$	maximum concentration (of a drug)	V _{d(area)}	volume of distribution (L)
Cl	clearance (L/h)	$V_{d(ss)}$	volume of distribution at steady state (L)
D	dose (mg)	. ,	
ED_{50}	median effective dose (mg)		

3.9 Nursing, Health and Dentistry

NURSING, MIDWIFERY AND ALLIED HEALTH

Common terms

audiotape/videotape (n.), audio-/video-tape (v.), Likert scale (5-point Likert scale) audio-/video-taped (adj.) low-birthweight/very low-birthweight

birthweight (not birth weight) meta-analysis

bottle-feed NHS Modernisation Agency

breastfeed/breastmilk NHS <u>trust</u> (generic), NHS <u>Trust</u> (specific)

caregiver, caregiving Pap tes

case finder, finding, manage, manager, Pearson product-moment correlation coefficient

management, study **but** caseload, caseworker (with en rule, not hyphen)

day care pretest

endpoint primigravadas (pl.)
firstborn Registered Nurse (RN)

full-term/preterm tape-record (v.), tape recorder, tape recording (n.),

health care tape-recorded (adj.)

healthcare (adj) well-being in utero (roman) wet nurse

inpatient/outpatient World Health Organization (WHO)

life span or Organisation mondiale de la Santé (French) life-event or Organización Mundial de la Salud (Spanish)

Common abbreviations

ANA American Nurses Association ICNP® International Classification for Nursing

APTs Acute Pain Teams Practice

CINAHL Cumulative Index to Nursing and NHS National Health Service (UK)

Allied Health Literature NIH National Institutes of Health (US)

DoH Department of Health (UK) PAHO Pan American Health Organization

ICN International Council of Nurses

DENTISTRY

BMD

CK

GCF

Common terms

ABL alveolar bone loss OHIP oral health impact profile
AgNOR argyrophilic nucleolar organizer OLP oral lichen planus

argyrophinic flucicolar organizer OLF oral fiction plantas

region OSCC oral squamous cell carcinoma bone mineral density PBL problem-based learning cytokeratin PDGF platelet-derived growth factor

DMFT decayed, missing or filled permanent PGE2 prostaglandin E,

eeth Sjögren's syndrome

dmft decayed, missing or filled primary TGF\$1 transforming growth factor \$1

teeth TIMP tissue inhibitor of matrix

gingival crevice fluid metalloproteinase

GSTM glutathione S-transferase $\mu 1$ TMD temporomandibular disorder HGF hepatocyte growth factor TMJ temporomandibular joint IGF-1 insulin-like growth factor-1 TNF tumour necrosis factor

MMP matrix metalloproteinase VEGF vascular endothelial growth factor

RECOMMENDED TEXTS

Blackwell's Dictionary of Nursing (1994). Blackwell Science, Oxford. Zwemer T.J. (1998) *Mosby's Dental Dictionary*. Mosby, London.

3.10 Social and Behavioural Sciences

GEOGRAPHY

See the section 'Places' in Part 1 of this guide.

Common terms

destination choice interregional subarea distance-related intraregional subnational economies-of-scale nonsurvey town-wide export-demand per capita tract-level geography export-sector policymaker trade-area survey graph-theoretic shortest-path worldwide

gross and net migration shortest-route/path

in- and out-migration street-front

SOCIOLOGY

Please refer to the 'Politically sensitive terms' section of 'English Usage and Grammar' in Part 1 of the guide. In particular, you should avoid gender bias and ethnic stereotyping.

DO use	DO NOT use	
person, people and humankind	man, men and mankind	
'he or she', 'her or him', 'his or hers' (varying the order occasionally)	'he/she', 'him/her' and 'his/hers'	
or		
change to plural 'they'		

PSYCHOLOGY

Please refer to the 'Politically sensitive terms' section of 'English Usage and Grammar' in Part 1 of the guide.

Common terms

Asian American (n. and adj.) cross section (n.); cross-sectional (adj.)
Black Likert

bipolar midlife (n.)
bivariant multiscale
broad-based neo-Freudian
covariance sociocultural
Cronbach's alpha well-being
cross-cultural White

Common abbreviations

ANOVA analysis of variance CES-D Center for Epidemiology Depression Scale

BPI Basic Personality Inventory DIF differential item functioning
CECS Courtauld Emotional Control Scale WAI Weiberger Adjustment Inventory

RECOMMENDED TEXTS

APA (2001) *Publication Manual* (5th edn). American Psychological Association, Washington, DC (available from http://www.apastyle.org/pubmanual.html).

ASA (1996) *American Sociological Association Style Guide* (2nd edn). American Sociological Association, Washington, DC (available from the ASA Executive Office, 1307 New York Avenue NW, Suite 700, Washington, DC 20036, USA).

3.11 Resources for Journal Abbreviations

Index Medicus

ftp://nlmpubs.nlm.nih.gov/online/journals/ljiweb.pdf

- PubList (You need to register before using this one, but it's free to do so.) http://www.publist.com/
- ISI Journal Abbreviations Index http://library.caltech.edu/reference/abbreviations/
- Guide to Journal Abbreviations
 http://www.library.uiuc.edu/vex/vetdocs/jnabbrev.htm

3.12 Recommended Reference Books

STYLE MANUALS

The Chicago Manual of Style: The Essential Guide for Writers, Editors, and Publishers, **15th** edn **(2003)** by The University of Chicago Press, Chicago, IL.

• The 'essential reference for authors, editors, proofreaders, indexers, copywriters, designers, and publishers' in all subject areas.

Copy-editing: The Cambridge Handbook for Editors, Authors and Publishers, 3rd edn (1992)

by J. Butcher. Cambridge University Press, Cambridge.

• Covers all aspects of the editorial process.

MLA Style Manual and Guide to Scholarly Publishing, 2nd edn (1998)

by J. Gibaldi. The Modern Language Association of America, New York, NY.

• Guide for graduate students, teachers, and scholars in the humanities and for professional writers in many fields.

The Oxford Guide to Style (2002)

by R. Ritter. Oxford University Press, Oxford.

- A completely rewritten and expanded modern edition of 'Hart's Rules for Compositors and Readers'.
- The 'ultimate guide for all printers, publishers, and editors'.

Publication Manual of the American Psychological Association, 5th edn (2001)

by the American Psychological Association, Washington, DC.

• Style manual for behavioural and social sciences.

Scientific Style and Format: The CBE Manual for Authors, Editors, and Publishers, 6th edn (1995)

by E. J. Huth. Cambridge University Press, Cambridge.

- Covers all sciences, not just biology and the medical sciences.
- Both US and UK preferences are recognised.

DICTIONARIES AND REFERENCE WORKS

Concise Oxford Dictionary, 10th edn

For standard UK spelling.

Macquarie Dictionary, 3rd edn

For standard Australian spelling.

Merriam-Webster's Collegiate Dictionary, 11th edn

For standard US spelling.

American Psychological Association Publication Manual, 5th edn (2001)

By the APA. American Psychological Association, Washington, DC (available from http://www.apastyle.org/pubmanual.html).

American Sociological Association Style Guide, 2nd edn (1996)

by the ASA. American Sociological Association, Washington, DC (available from the ASA Executive Office, 1307 New York Avenue NW, Suite 700, Washington, DC 20036, USA).

Blackwell's Dictionary of Nursing (1994)

by Blackwell Science, Oxford.

Butterworths Medical Dictionary, 2nd edn (1978)

edited by M. Critchley. Butterworth, London.

Dictionary of Medical Acronyms and Abbreviations, 4th edn (2001)

by S. Jablonski. Hanley & Belfus, Philadelphia, PA.

A Guide to IUPAC Nomenclature of Organic Compounds: Recommendations (1993)

by J.-C. Richer, R. Panico and W. H. Powell. Blackwell Scientific Publications, Oxford.

See also http://www.iupac.org/dhtml_home.html

List of Journals Indexed in Index Medicus (published annually)

US Department of Health and Human Sciences, National Library of Medicine, Bethesda, MD. See also http://www.nlm.nih.gov/tsd/serials/lji.html

Mosby's Dental Dictionary (1998)

edited by T. J. Zwemer. Mosby, London.

Mathematics into Type (1999)

by E. Swanson. American Mathematical Society, Providence, RI.

Medical Directory (2003)

See http://www.informalaw.com/LPP863/?source=healthcare

Units, Symbols and Abbreviations: A Guide for Medical and Scientific Authors, 5th edn (1994)

edited by D. N. Baron. The Royal Society of Medicine Press, London.

Stedman's Medical Dictionary, 27th edn (2000)

by Stedman's. Lippincott Williams & Wilkins, Hagerstown, MD.

Who's Who

See http://www.marquiswhoswho.com/

USAGE GUIDES

The New Fowler's Modern English Usage, 3rd edn (1998)

revised by R. W. Burchfield. Oxford University Press, Oxford.

The Elements of Style, 4th edn (2000)

by W. Strunk Jr and E. B. White. Allyn & Bacon, Needham Heights, MA.

Modern Australian Usage, 2nd edn (1997)

by N. Hudson. Oxford University Press, Melbourne.

Longman Guide to English Usage (1996)

by S. Greenbaum and J. Whitcut. Penguin, London.

GENERAL BOOKS

How to Copyedit Scientific Books and Journals (1986)

by M. O'Connor. ISI Press, Philadelphia, PA.

Woe is I: The Grammarphobe's Guide to Better English in Plain English (1996)

by P. T. O'Conner. Riverhead Books, New York, NY.

The New Print Production Handbook (1997)

by D. Bann. Little & Brown, London.

The Australian Editing Handbook (2001)

by E. Flann and B. Hill. Common Ground Publishing, Australia.

On Writing, Editing and Publishing, 2nd edn (1986)

by J. Barzun. University of Chicago Press, Chicago, IL.

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