Numbers, statistics, and units

In this section:

Dates

In this section:

Standard date format

Cochrane documents always use this format and sequence for dates:

- day (numeral) month (always in full) year (four-digit numeral)

No additional punctuation or suffixes should be used.

Regional considerations

There are regional differences in the way dates are expressed. Always use the standard format in Cochrane documents.

Be careful when referring to seasons, as they occur at different times of the year in different parts of the world.

Decades and centuries

Decades are always expressed as numerals, and century numbers may be expressed as numerals or written in full (e.g. '19th century' or 'nineteenth century').

Examples of formatting of dates and time periods

Note: the date formats in the examples below are for use in the text of Cochrane documents. Date formats to be used in references are described in the [References](#).

Correct	Incorrect
1 May	May 1
1 May 2024	May 1 2024 or May 1, 2024
May 2024	—
7 November	7/11 (UK = 7 November; USA = 11 July)
1960s	1960's or '60s
19th century or nineteenth century	19th century

Numbers

In this section:

Overview of number formatting

- Whole numbers and ordered events less than 10 should be written as words, not numerals (see [examples](#)), although there are some [exceptions](#).
- Numbers with two or more digits should be written as numerals unless they are at the start of a sentence (see [examples](#)).
- Numbers between 1000 and 9999 should contain no punctuation.
- Whole [numbers with five or more digits](#) should include commas (not decimal points or full stops).
- Use 'from' and 'to' instead of a dash to describe a [range of numbers](#) in text. Numbers written out in full should be [hyphenated appropriately](#).
- Often, judgement is needed to determine the best presentation for a set of numbers.

Examples of number formatting

Correct	Incorrect
We sent the review to four referees.	We sent the review to 4 referees.
The 10 participants agreed.	The ten participants agreed.
The 25 studies are available.	The twenty-five studies are available.
Thirty-three adults and five children participated.	33 adults and 5 children participated.
Ninth	9th
112th	one hundred and twelfth

Exceptions to basic rule for numbers and ordered events less than 10

Exception	Guidance	Example
Sentence contains numbers < 10 and ≥ 10	Acceptable to use only numerals	from 2 to 12 years from 5% to 25% of the number of participants There were between 9 and 15 people in the room.
Equations, numerical results, statistics	Numerals only	2/20 OR 1.06 (95% CI 0.90 to 3.02; 6 trials, 1500 participants) (3.1% at 6 months versus 4.7% at 5 months)
Sentence starts with a number	Spell number	Eleven per cent of people … Twenty authors attended the workshop. Eight separate doses are described.
Number with a unit	Always use numerals	8 mg 25 mL 6 s 0.7 kg
Tables (see also: Tables in Cochrane Reviews)	Numerals for all numbers including those < 10	—
Description of a measurement scale	Acceptable to include numeral	Outcomes were evaluated using the 9-point ORBIT classification.

Numbers with four or more digits

Note: this is an exception to the style convention for SI units; see Units and systems of measurement.

Correct	Incorrect
7677	7,677

Correct	Incorrect
10,000	10000
12,100	12.100

Ranges of numbers

Correct	Incorrect
from three to nine participants	from three - nine participants
−12 to −4	−12 - −4
The risk ratio was 0.38 (95% CI 0.30 to 0.49)	The risk ratio was 0.38 (95% CI 0.30-0.49)
(MD −11.50 hours, 95% CI −20.04 to −2.18)	(MD −11.50 h, 95% CI −20.04 - −2.18)
1% to 10%	1%-10%
4 mg to 5 mg	4-5 mg, or 4 to 5 mg

Number hyphenation

Rule	Correct	Incorrect
Hyphenate compound numbers from twenty-one through to ninety-nine	ninety-seven one hundred and forty-two forty-three thousand and eighty-three	ninety seven one-hundred-and-forty-two one hundred and forty two forty three thousand and eighty-three forty three thousand and eighty three
Hyphenate written-out fractions	two-thirds two-fifths	two thirds two-third two fifths two-fifth

Large numbers

Use '6.1 million' rather than '6,100,000'

Avoid 'billion' and 'trillion', due to ambiguity about their value. If they are used, they should be explained in terms of millions (e.g. '6 billion (6000 million)')

Statistical and mathematical presentation

This section provides general guidance on the presentation of statistical and mathematical terms and values. Please also refer to the *Cochrane Handbook for Systematic Reviews of Interventions*.

For guidance on abbreviating statistical terms commonly used in Cochrane Reviews see Common abbreviations.

	Guidance			
Decimal places	Odds ratios, risk ratios, and standardized mean differences should usually be quoted to two decimal places.	12.26	12.3	

	Guidance		
	For very large or very small values, use judgement to determine whether fewer or more decimal places should be used to express the appropriate level of precision.		
Decimal points	Use full stops, not commas.	15.51	15,51
Equals sign	For values that are represented by a mathematical symbol (e.g. P and I^2) use an equal sign and do not include the word "value" when used to present a value. For terms that are represented as abbreviations (e.g. RR, OR, MD) do not use an equals sign. Note: an equals sign should have a single space on either side of it.	P = 0.015 I^2 = 20% RR 0.05	P value = 0.015 P 0.015 I^2 20% RR value 0.05 RR = 0.05 RR=0.05
Mathematical equations	Avoid building equations or formulae spaced over two or more lines in the text of the review, as text formatting will change during publication process.	2 = 10/5	$2 = \dfrac{10}{5}$
	Use spaces either sides of '-', '+', and '=' symbols in mathematical equations. See also: Guidance on spacing around commonly used symbols	SE = sqrt((1/r1) + (1/(n1 – r1)) + (1/r2) + (1/(n2 – r2)))	SE = sqrt((1/r1)+(1/(n1–r1)) +(1/r2)+(1/(n2–r2)))
Number needed to treat (NNT)	Express all NNTs as positive whole numbers, all decimals being rounded up. Use NNTB (number needed to treat for an additional beneficial outcome) and NNTH (number needed to treat for an additional harmful outcome) in preference to NNT. (Authors may use NNT as long as the corresponding direction of effect is clear in the related paragraphs and sections.)	NNTB or NNTH NNTB 10	NNH NNTB 10.5
P value	P values should be stated exactly, apart from values less than 0.001, which should be expressed as P < 0.001.	P = 0.03 P < 0.001	P < 0.05 P = 0.0005
	Use the phrase 'P value' in text if referring to the statistic,	We calculated the P value.	We calculated P.

	Guidance		
	but use 'P = ' when presenting a value.	P = 0.05	P value = 0.05
	Use an upper-case 'P' (not italic), and do not add hyphen between the 'P' and the value	P value	p value *P* value P-value p-value
	P values should be expressed with two significant figures and up to three decimal places.	P = 0.23 P = 0.051 P = 0.003 P = 0.001	P = 0.232 P = 0.05 P = 0.0025 $P = 1.3 \times 10^{-3}$
Sample and population sizes	For dichotomous outcomes, use the headings n/N within each intervention arm, where n denotes the number of events and N is the sample size. It is preferable to standardize the use of n/N for these where possible.	—	—
Summary statistic and confidence interval	Only use abbreviations for summary statistics (e.g. RR or MD) and confidence interval (CI) if they have already been defined (see Abbreviations and acronyms for further guidance).	The risk ratio (RR) was 0.38 (95% confidence interval (CI) 0.30 to 0.49)	—
	Separate the summary statistic from its CI using a comma when presented inside a single set of brackets.	…was statistically significant (RR 0.09, 95% CI 0.02 to 0.38)	—
	Define the CI (e.g. 95% or 99%).	(odds ratio 1.11, 95% CI 0.98 to 1.20)	(odds ratio 1.11, CI 0.98 to 1.20)
	Separate the CIs with 'to' instead of using a hyphen.	(mean difference −11.11 hours, 95% CI −20.04 to −2.18)	(mean difference −11.11 hours; 95% CI −20.04- −2.18)
Order of presentation of information in results brackets	Where multiple pieces of information are presented within a bracket, use this order and punctuation: **Focused-format reviews** (summary statistic, CI; P value, I^2; number of studies, number of participants; level of evidence; link to Figure *or* **state** Analysis number). **Long-format reviews** (summary statistic, CI; P	(MD −11.11 hours, 95% CI −20.04 to −2.18; P = 0.01, I^2 = 20%; 6 studies, 3011 participants; moderate-certainty evidence; Figure 1) (MD −11.11 hours, 95% CI −20.04 to −2.18; P = 0.01, I^2 = 20%; 6 studies, 3011 participants; moderate-certainty evidence; Analysis 10.1)	(MD −11.11 hours; 95% CI −20.04- −2.18, P 0.01; I^2 20%, six studies, n = 3011; *moderate certainty evidence*) Figure 1, Analysis 1.1

	Guidance		
	value, I^2; number of studies, number of participants; level of evidence; link to Analysis). Note: it is permissible to use numerals for numbers under 10 in results brackets. Note: it is not necessary to include all these parameters for every result.		

Units and systems of measurement

In this section:

Standard units

The International System of Units/Le Système International d'Unités (SI) is the standard metric system of measurement. This system is made up of SI base units (the foundation units, e.g. metre), derived units (e.g. square metre), and non-SI units that are accepted for use within the SI (e.g. minute).

Commonly used units

This table lists SI units and other units that are often used in Cochrane Reviews. The full list of SI units and further information is available from the International Bureau of Weights and Measures (BIPM) and the NIST Reference on Constants, Units, and Uncertainty.

Unit name	Symbol	Type
kilogram	kg	base unit
microgram	µg	base unit
metre	m	base unit
second (unit of time)	s	base unit
cubic metre	m^3	derived unit
degree Celsius	°C	derived unit
metre per second	m/s	derived unit
square metre	m^2	derived unit
day	d	non-SI unit
degree	°	non-SI unit
hour	h	non-SI unit
litre Note: the BIPM adopted the symbol 'l' in 1879; it then adopted the alternative 'L'	L	non-SI unit

Unit name	Symbol	Type
in 1979 in order to avoid the risk of confusion between the letter 'l' and the number '1'. Use 'L' or 'mL' instead of 'l' or 'ml'.		
minute (unit of time)	min	non-SI unit
minute (measurement of angle)	'	non-SI unit
second (measurement of angle)	"	non-SI unit

Prefixes for SI units

This table includes the SI prefixes commonly used in Cochrane reviews.

Factor	Name and symbol	Example
10^{-1}	deci (d)	decilitre (where 'litre' is the base unit)
10^{-2}	centi (c)	centimetre (where 'metre' is the base unit)
10^{-3}	milli (m)	milligram (where 'gram' is the base unit)
10^{-6}	micro (μ)	microlitre
10^{-9}	nano (n)	nanogram
10^{-12}	pico (p)	picogram

General guidance on SI units

SI units and their derivatives should follow the style conventions listed below. Unlike most abbreviations and acronyms, it is not necessary to define the full unit name on first use.

These are a selection of style conventions from NIST and BIPM (see links above). Cochrane reviews may deviate from some of the style conventions due to the nature of Cochrane review production; for example, Cochrane reviews use commas to separate digits into groups of three (e.g. 150,739) instead of thin, fixed spaces (150 739).

Guidance	Correct	Incorrect
Unit symbols are unaltered when plural	10 mg	10 mgs
Unit symbols are not followed by a full stop, except when followed by normal sentence punctuation	I added 60 μg of salt.	I added 60 μg. of salt.
The unit symbol to which a numerical value belongs, and the mathematical operation that applies to the value of a quantity, should be clear.	20 °C to 30 °C 123 g ± 2 g	20 °C-30 °C 20 to 30 °C 123 ± 2 g (123 ± 2) g
Values of quantities: use numerals plus symbols for units	m = 5 kg the current was 15 A	m = five kilograms m = five kg the current was 15 amperes

Guidance	Correct	Incorrect
Put one space between the numerical value and the unit symbol. Do not put a space between a prefix and the unit symbol. Note: except in the case of superscript units for angles or degrees (e.g. 2° 3').	2 s 25 nL	2s 25 n L
When a value with unit is used as a modifier before a noun, write out the name of the metric quantity and use a hyphen between the numeral and unit.	a 2-second delay a 20-liter container	a 2-s delay a 20 L container
When combining units, use the 'per' symbol rather than $^{-1}$	mg/kg	mg kg^{-1}
Do not mix information with unit symbols or names	the water content is 20 mL/kg	20 mL H_2O/kg 20 mL of water/kg
Informal references to non-SI units, such as a historical quotes using inches, are acceptable depending on the context.	It took five hours to travel 10 miles in 1945.	It took five hours to travel 10 miles (16.09 km) in 1945.

Currencies

Currencies are expressed using the standard three-letter codes (ISO-4217). For guidance on when to use these see: Common abbreviations: currency abbreviations.

Guidance	Correct	Incorrect
Currency codes go before the amount.	USD 4 million 4 million US dollars	4 million USD US dollars 4 million
Add a space between the code and the amount.	EUR 300 300 euros	EUR300 300euros
Currencies (dollars, euros) are do not have a capital letter, but capitalize any associated nations or regions as normal.	15 euros 30,000 Canadian dollars	15 Euros 30,000 Canadian Dollars