

Description

Abbreviations and acronyms are shortened forms of word (s) or phrases (s). They assist in making manuscripts easy to read and understand. Additionally, they help in meeting the strict word-count targets, avoiding the repetition of words, thereby making the text easy to read. Many times, authors introduce new acronyms when they develop a novel technique and want to give it a catchy name. Authors believe that this increases the chances of accepting and remembering the technique! Some remarkable examples of such acronyms are NOESY (Nuclear Overhauser Effect Spectroscopy) and COSY (Correlation Spectroscopy).

However, one must use abbreviations with caution! Its overuse may in turn reduce readability, especially for a non-technical or non-specialist reader. It may puzzle your readers and force them to flip pages back and forth to locate the original definition, thereby losing interest after a while.

Let us look at some useful tips for using abbreviations correctly in scientific writing and keeping up with the journal standards.

How do you decide whether to use an abbreviation or not?

It is better to use the unabbreviated form if the abbreviation is not present frequently in the manuscript. According to 'The Chicago Manual of Style' an abbreviation can be used only if it finds a mention five or more than five times in the article. Several journals also provide specific instructions on how to introduce, define, and use them. Moreover, certain journals also provide a cut-off. For instance, the PLOS ONE journal specifies that one must not use non-standard abbreviations unless they appear for a minimum of three times in the article. The Vancouver referencing style popularly used in biomedical sciences states that the titles of the journals should be abbreviated according to the style given in the National Library of Medicine's *Journals in NCBI Databases.*

How is an abbreviation different from an acronym and an initialism?

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Although both acronyms and initialisms fall under the category of abbreviations, the difference lies in the way one pronounces them.

Usually, acronyms are the combination of the first letters of each word of the phrase. For example, the acronym for ‘Enzyme-Linked Immunosorbent Assay’ is written as ‘ELISA’ and pronounced as a word. Other examples include AIDS (Acquired Immune Deficiency Syndrome), RAM (Random Access Memory), and PIN (Personal Identification Number).

Initialisms are also a series of initial letters, but pronounced by spelling each of its letters distinctly, such as ‘DNA’ for ‘Deoxyribose Nucleic Acid’ and ‘DOI’ for ‘Digital Object Identifier’.

Types of abbreviations

There are two types of abbreviations that are commonly used in scientific writing. These include standard abbreviations and non-standard abbreviations.

Standard abbreviations

Standard abbreviations, such as units of measurement, need not be spelled out even at their first mention.

One may directly use these widely accepted abbreviations in the manuscript. Examples include measurement units (g from grams, m for meter, s for seconds, etc.) or short forms of chemical elements (Na for sodium, Ca for calcium, K for potassium, etc.)

Non-standard abbreviations

These are field-specific, non-standard abbreviations that the author must define on their first introduction in the manuscript.

As a special case, there are certain non-standard abbreviations such as ‘LASER’ (full form: Light Amplification by Simulated Emission of Radiation) or ‘RADAR’ (full form: Radio Detection And Ranging) that do not require a definition. Several common dictionaries list them as words, owing to their popularity and widespread use.

Thumb rules for using abbreviations in a manuscript

It is important to use the abbreviations consistently following their first mention. Moreover, one should stick to the same format throughout the manuscript.

Every journal has special guidelines for the use of abbreviations and acronyms. One can use these pre-defined discipline-specific abbreviations from the list directly, without defining them. For instance, some well-known abbreviations that journals allow to use directly include DNA, RNA, ANOVA, etc.

It is a good practice to spell an abbreviation that may imply more than one widely known definition. For instance, the abbreviation CD has several commonly known expansions such as ‘compact disk’,

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‘cluster of differentiation’, ‘curative dose’, and ‘circular dichroism’.

Latin abbreviations are commonplace in academic writing. All these must be used as per convention and in lower case. The most widely used ones include:

1. e.g. (*exempli gratia*) – used for citing an example
2. etc. (*et cetera*) – used to show that there are many more in the list
3. i.e. (*id est*) – used to represent ‘in other words’ or ‘that is’
4. et al. (*et alii*) – used to represent ‘and others’ or ‘and co-workers’

Abbreviation usage in title, abstract, and figure captions

In general, journals permit the use of non-standard abbreviations in an abstract if the author intends to use it more than two times. Also, one must define a non-standard acronym at its first mention in the abstract and then again in the main body of the manuscript.

Experts recommend that one must avoid using abbreviations in the title and keyword list as readers frequently use these features while searching and browsing for articles.

Certain journals such as PLOS ONE strictly discourages the use of abbreviations in the title and abstract section. However, in certain cases, one may use an abbreviation in the title if it is paramount for the article.

For example, consider the title ‘CAMP Responsive Element-Binding Protein (CREB): An Important Signalling Molecule in Physiopathology of Epilepsy’.

Here, the abbreviation ‘CREB’ is the focus of the investigation. it is important to define it if you want your audience to connect with the manuscript.

It is a good practice to define the abbreviation/acronym in the figure caption or legend. This assists those readers who prioritize scanning the figures first before moving to the main paper.

How to use an article prior to an abbreviation?

Correct article usage before an abbreviation is a must! The choice of an article depends on the pronunciation of the abbreviation. One should use the indefinite article ‘a’ before a consonant sound, for instance, ‘A FACS analysis’. On the contrary, one should place the indefinite article ‘an’ before a vowel sound, for instance, ‘An MRI scan’.

It is always advisable to carefully read and follow instructions regarding the suggested terms, styles, and conventions for abbreviations and acronyms.

Did you face any challenges while using abbreviations? What tips do you follow? Share with us in the comments section!

Category

1. Manuscript Preparation
2. Publishing Research

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shwetad

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