

## English Corner 11: tenses of verbs

The three tenses used in scientific writing (the **future**, for action going to happen or to be the case in time to come; the **present**, for action happening or being the case now; the **past**, for action having happened or being the case in the past) each have two forms. The **simple** forms refer to individual events done once, being done once now or to be done once in the future and the **perfect** (or completed) forms which refer to results which were initially done only once but are reproducible and have consequences that are still valid at the time of writing.

### The simple future tense

- This refers to some future time and employs the auxiliary verb **shall/will** with the *infinitive* without the infinitive marker **to** [I **shall/he will culture** the cells on Monday next week]. The written form may differ from that of the spoken word where the **future tense** of the verb **to be** and a continuous (or imperfect, because uncompleted) verb form (*present participle*) may be used [If you come at 11.00 I **shall/he will be culturing** the cells].
- In manuscripts it is used to state what you plan to do, whether active [We **shall** next **examine** the regulation of these transporters] or passive, with the **future tense** of the verb **to be** and a *past participle* [The regulation of these transporters by osmolality **will be examined** next].

### The future perfect tense

- This is used for considering actions that will be completed (or **perfected**) at some future time. It is formed from **shall/will** and the *present perfect* (see below) whether active [If you come at 13.00 I **shall/he will have finished** culturing the cells. By the time the grant application has been submitted I **shall/he will have completed** the manuscript] or passive [If you come at 13.00 the cultures of the cells **will have been finished**. The manuscript **will have been completed** by the time the grant application is submitted].
- An anomaly of the future perfect tense is that when two such verbs are present in a sentence, the one in the *subordinate clause* is **elided** [omitted from the text but provided mentally by the reader] so that the nominally correct form [When I [*shall*] **have** finished my work, I **shall come** to see you] is presented verbally and orally with **ellipsis** [When I **have** finished my work, I **shall come** to see you].
- If the **future perfect** is used with an *infinitive*, there is a temptation to write both verb forms in the future perfect tense [I **should have liked to have been** there. I **had planned to have finished** it yesterday] when only one needs to be. These sentences should either have only the present perfect of the *infinitive* [I should like **to have been** there. I planned **to have finished** it yesterday] or of the *auxiliary verb* [I **should have liked** to be there. I **had planned** to finish it yesterday].

### The simple present tense

- This refers to the present time. What is written as a statement of fact [Every Tuesday I **culture** the cells] may differ from the spoken word employing a continuous verb form (imperfect), with the **present tense** of the verb **to be** and a *present participle* [Don't come now as I **am culturing** the cells].

- In manuscripts the **simple present** tense is used for accepting as correct others' conclusions [Hyperactivation **precedes** the acrosome reaction (Jones et al. 1978)]. It may seem incongruous that the **present** tense is used for **past** work, but it is used only with reproducible work generally accepted to be sound knowledge. Although the work may have been done once (published in 1978), every time it is repeated the same results are obtained. Similarly, the **simple present** is used for conclusions from the current reproducible results [Our work **shows** that temperature **affects** sperm motility].
- This usage resembles that of **universal statements**, which appear to be factual conditional statements [**If** you heat water, it boils] but are not true conditionals because **if** can be replaced by **when** or **whenever** [**When** you heat water, it boils. **Whenever** you heat water, it boils], meaning that every time that the action is performed, the same result is obtained.
- By the same reasoning (every time the paper is read the data are to be found in Table 1 and Figure 2) the **simple present** is used to indicate where the results are to be found [The data **are** presented in Table 1 and Figure 2].

#### The present perfect (or perfect) tense

- This is used for reports that are completed (or **perfected**) at the present time, and whose reproducible results may still be valid today. It is formed with the **present tense** of an **auxiliary verb** and a **past participle** with the main statement also in the **present tense**, to denote accepted knowledge, whether active [Jones et al. (1974) **have shown** that hyperactivation **precedes** the acrosome reaction] or passive [It **has been shown** that hyperactivation **precedes** the acrosome reaction (Jones et al. 1974)].
- It is also used for what is concluded from the reproducible results of work being written up [This work **has shown** that temperature **affects** volume regulation].

#### The simple past (or definite past) tense

- This refers to the past time. What is written as a statement of fact [Last Wednesday I **cultured** the cells] often differs from the continuous tense spoken form with the **simple past tense** of the verb **to be** and a **present participle** [Last week at this time I **was culturing** the cells].
- In manuscripts the **simple past** is used to describe what was done [The spermatozoa **were** incubated for 4 h at 37°C] and to state what was found [After drug treatment there **was** a drastic decrease in motility].
- The **simple past** is also used describe published work where the emphasis is on the one occasion that the work was done. The verb in the **that clause** is also in the **simple past** tense, to emphasise that only the individual results on that occasion are being discussed [In **1978** (not 1980) **Jones** et al. (not Hinton et al.) **showed** that hyperactivation **preceded** the acrosome reaction].

#### The past perfect (or pluperfect) tense

- This is used for reports that were completed at some past time, and whose reproducible results may still be valid today. It is formed with an **auxiliary verb** in the **simple past tense** and the main statement also in the **present tense**, to denote accepted knowledge [By the 1970s it **had been shown** that hyperactivation **precedes** the acrosome reaction].

### Reported tense

- When text is reported there may be a change from the **original tense** depending on the nature of the reporter and how it is quoted.
- When the **present tense** is reported in the third person singular, for **direct** quotations (where the words actually spoken or written are cited within quotation marks after **X said “...”**) the original tense is retained. If the words Cooper spoke were “The regulation of volume **is** (present tense) an important sperm function”, the **direct** quotation retains the present tense [Cooper **said**, “The regulation of volume **is** (present tense) an important sperm function”]. For indirect quotations (where the spoken or written words are paraphrased without quotation marks after **X said that ...**) the tense changes to the **simple past** [Cooper **said** [simple past tense] **that** the regulation of volume **was** [simple past tense] an important sperm function].
- Similarly for statements of **first** and **second** persons in the **future tense** with **auxiliary verbs** [**I shall** be retiring in 2009. **You will** live to regret it], the **first** and **second** person **simple past tense** of the auxiliary verb is used in indirect reports in the third person [He said that **he would** be retiring in 2009. She said that **I should** live to regret it].
- When there is self-reporting of statements made in the **first** person singular or plural [**I shall arrive** tomorrow. **We shall have finished** by the weekend], the reports take the **simple past tense** of the **first person** of the auxiliary verb, be they future-in-the-past [I thought that **I should arrive** on Monday] or future-perfect-in-the-past [We believed that **we should have finished** by the weekend].
- When reported in the **second** or **third** person singular the **simple past tense** of the **second** or **third** person of the past auxiliary verb is used [You said that **you would arrive** on Monday. They said that **they would have finished** by the weekend].
- If what is said is stylistically **incorrect**, the words quoted depend on whether the quotation is **direct** or **indirect**. If the words spoken were “It is **possible** (*indicative*) that it **could be** (*conditional*) due to a vitamin-deficiency”, where both **possible** and **could** indicate uncertainty when only one such word is necessary, for **direct** quotations the spoken or written words are **retained** [He **said**, “It is **possible** that it **could be** [sic] due to vitamin-deficiency”, where [sic] indicates that the words have been given *verbatim* and include uncorrected errors) but for **indirect** quotations, judgement may be used when paraphrasing to correct the style [He **said that** it was **possible** (*indicative*) that it **was** (*corrected to indicative*) due to vitamin-deficiency].

### Examples of how tenses may vary in each part of a manuscript follow

#### Title

Abdominal temperatures **reduce** [simple present: conclusion from present reproducible results] sperm motility.

#### Introduction

It **has been shown** [present perfect: previous reproducible work valid today] that temperature **influences** [simple present: accepted knowledge] male fertility. As scrotal temperature **is** [simple present:

accepted knowledge] 34°C the effects of temperature on sperm function **were** examined [simple past: what was done] in this report.

### Methods

A medium containing 15 mM inositol **was prepared** [simple past: what was done] in BWB and the sperm suspension **was incubated** [simple past: what was done] for 10 min at temperatures ranging from 30 to 37 °C. Sperm motility **was** measured [simple past: what was done] by CASA at each temperature.

### Results

High incubation temperature **reduced** [simple past: the results] the motility of spermatozoa. Fig 1 **shows** [simple present: where the results are] that above 35°C there **was** [simple past: the results] a sharp decline in forward progression. The mean kinematic parameter values at each temperature **are** [simple present: where the results are] presented in Table 1. The data **show** [simple present: conclusion] that there **was** [simple past: the results] a biphasic relationship between temperature and sperm motility characteristics.

### Discussion

The current work **has shown** [present perfect: present reproducible work] that the motility of spermatozoa **is** [simple present: conclusion from present reproducible results] temperature-sensitive under the conditions employed. This accords with the tenet that scrotal temperature **influences** [simple present: accepted knowledge] the functional responses of spermatozoa. The effect of temperature regulation on volume regulation by spermatozoa **will be examined** [simple future: what will be done] next.

### Conclusion

This work **has shown** [present perfect: present reproducible work] that sperm motility **is affected** [simple present: conclusion from present reproducible results] by temperature.

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