

Zeitgebers and the Sleep-Wake Cycle



This activity will help you to:

- Understand and discuss the role of zeitgebers in the sleep wake cycle:*
- Search for psychological information*
- Read and summarise psychological studies*

The Sleep-Wake Cycle

So far we have seen that bodily rhythms are governed by two general factors:

- Endogenous pacemakers**, which act as biological clocks, generating their own rhythms.
- Exogenous zeitgebers**, which can alter the functioning of pacemakers by causing them to run faster or slower under certain circumstances.

In the case of the sleep wake cycle, we have seen that the most important pacemaker is the **suprachiasmatic nucleus** (SCN) an area of the **hypothalamus** that controls sleeping and waking by affecting the rate at which the **pineal gland** releases **melatonin**.

What You Need To Do...

You are going to be using the resources available to find out about how the sleep-wake cycle is affected by zeitgebers. Here are some important questions in this general area:

- What happens when a person is cut off (for a lengthy period) from all sources of information about what time it is?
- What happens when people try to adjust to a 'day' that is significantly shorter or longer than 24 hours?
- Can people use other zeitgebers if daylight is not available (e.g. in the arctic circle during winter)?

For each of these questions:

1. Find **at least** one study that provides an answer to the question, and write a short summary of it (APF).
2. Explain what the study tells us about the answer to the question.

Once you have done this, write a paragraph giving a general overview of the role of zeitgebers in regulating the sleep-wake cycle.