Infradian rhythms

- Biological cycles lasting more than 24 hours.
- *Menstrual cycle* is an example regulated by hormone secretions such as oestrogen and progesterone from the ovaries. Controlled by endogenous pacemaker hypothalamus but exogenous zeitgebers seen to play a part now.
- *Premenstrual syndrome* is another example, occurring few days prior to bleeding stereotypically characterised by irritability.
- Not always monthly yet can occur once a year. For example seasonal affective disorder occurs during the winter months, experiencing low mood and depression thought to be brought about by less light and increased melatonin production in darkness by pineal gland. Serotonin linked to melatonin and low levels of serotonin linked to depression.

- *Reinberg*—women spent 3 months in a cave and menstrual cycle shortened to 25.7 days as no external lighting implying infradian rhythms influenced by exogenous zeitgebers.
  
  **Low ecological validity**—Not representative of real life settings as women lived in a cave. Results cannot be generalised as a result so casual conclusions cant be made as we don’t know if it was the absence of light as smell, temperature and other confounding variables may interfere.
  
  **Case study**—although rich indepth data it may not have external validity and so be generalizable due to individual differences.

- *Russell*—applied underarm sweat of women on top of one another’s lips and this synched in their menstrual cycle. Supporting idea that pheromones act as exogenous zeitgebers and can influence endogenous pacemakers.

  **Womens cycles are not universal**—so invalidate results.
  
  Menstrual cycle synchronisations sometimes seen as random occurrences and provide little statistical evidence.

  **Evolutionary significance**—synchronised periods allow women living together to share child caring duties so people have adapted accordingly to increase chance of survival for children. This is therefore speculative.

- *Real world applications*—understanding role of darkness in SAD has led to effective therapies such as phototherapy/light boxes in order to change melatonin and serotonin levels. This use reduces symptoms.

- SAD also explained as become natural outcome of infradian rhythms but could be consequence of disrupted circadian rhythm. As seasons change circadian rhythms may be thrown out of phase, often go to bed later because it gets darker. Means biological system gets idea that time is shifting and result is similar to jet lag.

- *Real world application*—PMS used in court cases as a mental disorder and so can be excused for defence such as Ms English who killed her married lover and was put on probation.

  **Deterministic**—presumes women have no free will over this mental disorder and cannot be accounted as liable for actions. How much does free will play a role as many could cite for other aggressive acts? In truth, nurture and environment plays mitigating role in enabling people to manage emotions as many suffer yet can show restraint. **Reductionist** to cite PMS as mental disorder and oversimplify peoples control over actions.