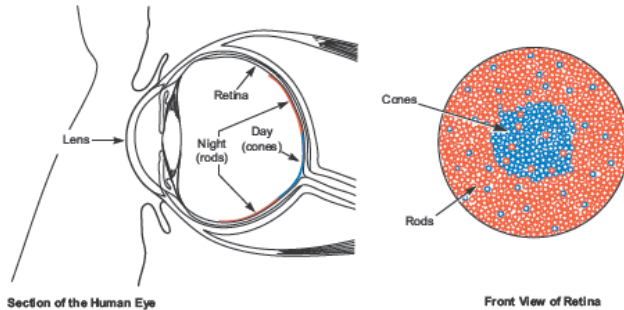


Introduction to Night Work

Night Vision



The eye has two sets of light sensitive cells which are used for seeing; one set by **day (cones)** which are in the centre of the eye, and the other set by **night (rods)** which are placed around the day cells.

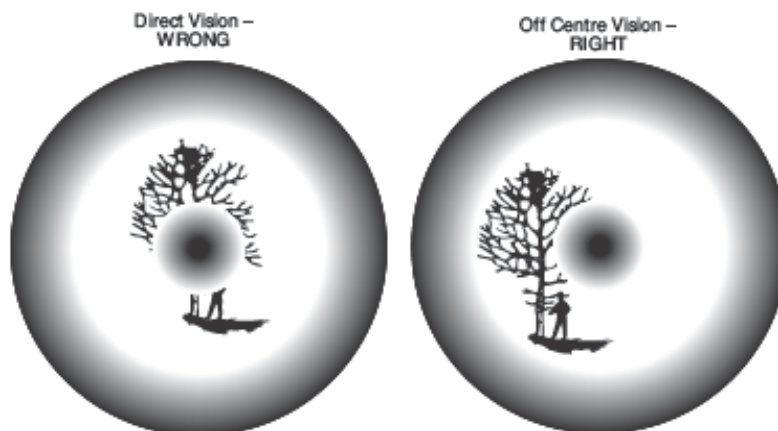
Adaptation

The change-over from seeing with day cells in strong light to seeing with the night cells in darkness is known as night adaptation. It is a slow process for the night cells take about **30 minutes** to become completely efficient.

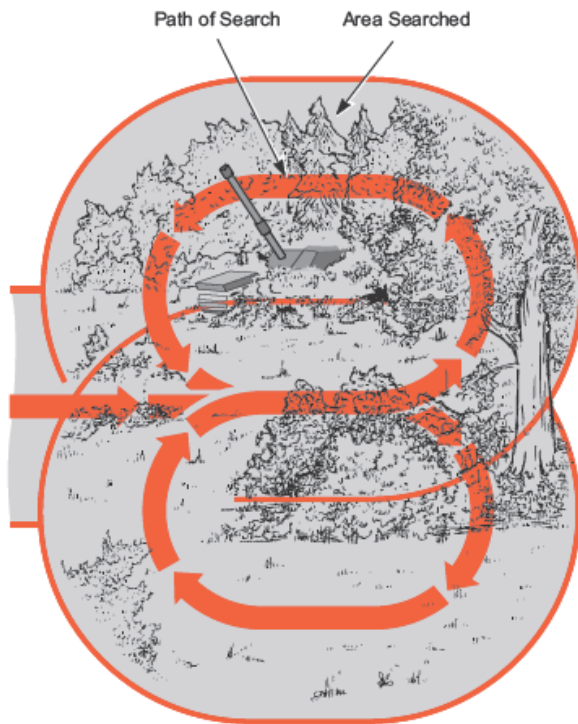
Once adaptation has taken place, it is not possible to stare at an object without vision becoming blurred for longer than **4- 10 seconds**.

Off-Centre Vision

The day cells are in the centre of the eye. At night when looking at an object very little will be seen because these cells cannot work in poor light. The night cells must be used to see at night. They are around the day cells so this means looking at an angle (**6-10 degrees**) away from the object. This is called off-centre vision.



Scanning



When observing at night it is possible to scan the ground using the method used in daylight. In order to study an object or piece of ground in greater detail, it is better to scan using a “**figure of eight**” technique, which makes full use of off-centre Vision.

Things to note;

- » All objects are seen by silhouette, so the observer must be close to the ground to obtain a sky line.
- » No detail or colour can be seen.
- » Judging distance is impossible.

Protection

Any bright lights will spoil night adaptation. A match flame or a muzzle flash will spoil it for several seconds. An illuminating flare will ruin night vision. **It must become an instinctive reaction to cover one eye when faced with any light at night.** This will preserve part of the night vision.

Staring

If any single point of light or a prominent object is stared at for too long, **it will seem to move.** This is the reason why a sentry imagines that he is being stalked at night and sometimes fires without apparent reason. This can be prevented by “placing” the object against something else, such as **a finger at arm’s length.**