NIGHT EYES

The pupils of the eyes expand (top) to let in more light in darkness, but are normally smaller in daylight.

After a much longer time, your rod vision adapts to the darkness and you can begin to see shapes and outlines in the night that were not even vague bulking shadows when you first came out.

The air raid warden, the soldier, or the pilot who at the sound of an alert leaves a lighted room to run on duty, is completely at the mercy of his enemy so far as his vision is concerned. By the time he gains the use of his night eyes, the emergency might be all over.

And even when your eyes are dark adapted, flashing on a light, even for a very short time, may ruin your night vision for another half hour.

But there are ways to fool your eyes and have them ready for night duty when the call comes.

If you must read, you can do so with one eye. The eyes can be dark adapted separately. Put a heavy patch over one eye and you can keep it dark adapted while you use the other for reading in the light.

Much better are the red goggles used by the Navy for men on night duty. They wear these when they go into a lighted room, and protect their night eyes from the glare.

Best protection for night vision is darkness. Avoid the use of flashlights or illuminated dials. Turn out the light at least a half hour before you must go on duty in the dark and then protect your eyes from any glare as you value your life.

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PSYCHOLOGY

Red Light Best in Blackout Blue Easily Seen From Air

BLUE LIGHTS for blackouts are out so far as the U. S. Navy is concerned.

"Blue light is the worst possible for this purpose," reports the Navy's new Night Vision Board.

Lights for use during blackouts must serve a double purpose. They must give enough illumination so that instruments, charts, or dangerous obstacles can be seen. They must give a minimum of aid to the enemy.

In addition, the lights used during blackouts should, if possible, be so selected that they will not spoil the dark adaptation of the eyes that must penetrate the night's blackness in search of the enemy.

Red is generally best for all blackout purposes, the Night Vision Board finds. With red light, adapted eyes haven't the advantage over daylight vision that they have under other colors. For this reason, the red light you read your watch by is seen no more clearly by the enemy pilot in the sky than it is by you, even though you must use light-adapted vision for this purpose. If you had a blue light bright enough for this purpose, it would appear a thousand times brighter than the red light to dark adapted eyes. It could be seen ten times as far away.

Here are some other advantages of red light for the illumination of instruments and for all purposes where some light is essential:

1. The dark adaptation of the observer is disturbed less by red light than by light of any other color.

2. The after image which results from looking at instruments or other surfaces illuminated with red light is much less intense and of shorter duration than when blue, green, or white light is used. If you have been in the dark for a long time and suddenly turn an ordinary flashlight on your watch dial, you may "see" the watch face for some time afterwards and this will interfere with your ability to see the dark form of a plane or a ship.

3. Use of red light for the illumination of instruments causes less glare than when other colors are used.

4. The reflections which are caused by instrument lighting, as for instance on windshields or plateglass, may be strikingly reduced or suppressed completely by the use of red light.

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