

## Light Pollution and Our Eyes

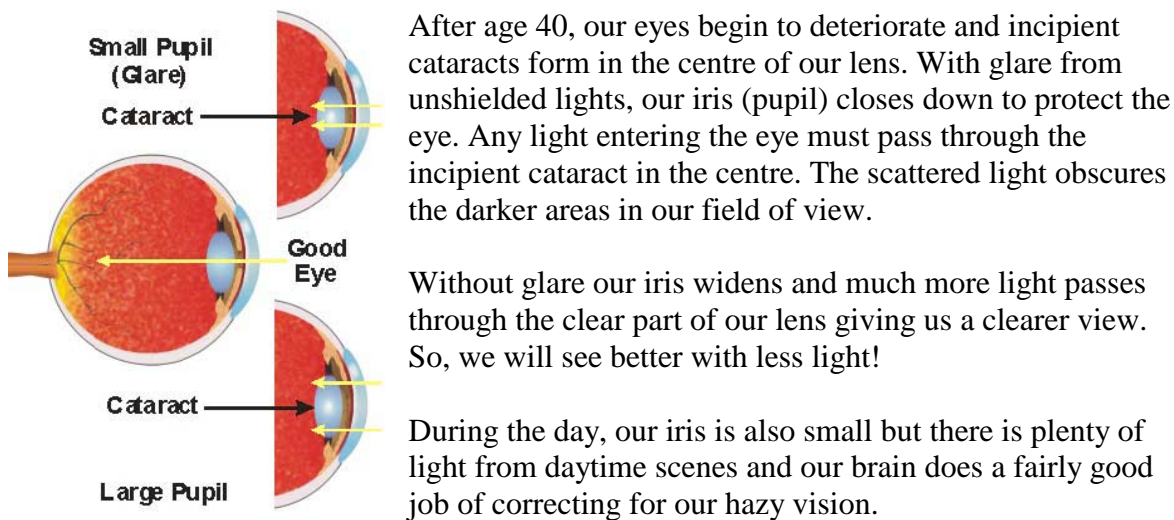
Most of us take our eyesight for granted. Our eyes evolved to provide exceptional visual acuity during the day and they also give remarkably good nighttime vision. But few of us experience our nighttime vision to its fullest.

The light receptors on the inside surface of the eye (the retina) contain a photochemical that breaks apart when it absorbs light. The results are electrical signals that are sent to the brain where they are perceived as images. Very bright light temporarily exhausts this chemical causing local blindness. (Remember the dark after image of a flash bulb.) But the chemical is continually produced so our eyes recover after a few minutes.

We can see extremely well at night if we give our eyes a few minutes to build up this chemical. You can try this by stepping outside from a bright room and looking up at a clear night sky. Initially few stars are visible. But after a few minutes you will begin to see many more.

Artificial light in your area will limit the sensitivity of your eyes. Not only will fewer stars be visible in a light polluted area we will be limited to seeing only the ground that is under direct illumination. Shadows will appear dark and featureless, hiding hazards and reducing our safety and security. This is not what the light was supposed to do.

We expect light to help us see after dark but it can have the opposite effect, especially if we are senior citizens!



What can we do? Experience how well we can see with minimal artificial lighting. Aim our lights down to the ground, not into our eyes. Not only will you save energy but you will take advantage of the natural sensitivity of our eyes.