Lighting to Avoid Eyestrain

(Written for "The Listener" by Dr. H. B. Turbott, Director of the Division of School Hygiene, Health Department.)

IN these days most factories and homes use electricity for artificial lighting. The demand is outrunning the supply and we are requested to economise. Many homes and factories were imperfectly lit before this emergency. If lights are reduced in these, eyestrain will be further increased. There is already a good deal of eyestrain from the wrong use of lighting, not only in factories, for many a home uses more than one lighting point in a room without getting adequate illumination for father's reading or mother's sewing. That's the crux of the matter-to avoid eyestrain the work in hand must be evenly and adequately lit.

To see clearly the eye has to adjust its focus according to the distance of the object to be seen. Correct focusing makes the object stand out sharp and clear, other things in the background further away or nearer being indistinct and blurred. The eye does this focusing, by pulling on the lens and altering its curvature. The small muscles that do this are working at high pressure. Just think how often and how quickly you are changing your focus as you look about or do your work. Yet this "accommodation" business is automatic and without conscious effort. Other little muscles bring both eyes converging on the object to give single vision. As you do fine work or read or look at small objects your accommodation and convergence eye muscles are going "all out." They can't keen it up too long without getting tired. So one thing to do is to have little rests for the eye. Look into the distance frequently, relaxing the eye muscles. Another thing is to be sure of enough light and light falling from the right direction to avoid shadows, on the actual working area. If there's insufficient light more focusing and convergence has to be done, and feelings of weariness, nervousness, and headache, are nature's way of telling you the little eye muscles are overworking.

By "good lighting" is meant lighting emple for the tasks in hand and producing an agreeable background to the activities. Effort in using our eyes is then absent and there's no eyestrain. Daylight is the yardstick-adequate, constant and uniform. It doesn't fall directly in our eyes when working, so there is no glare. Any glare, or sharp contrast of lighting in patches of light and deep shadow, makes heavier calls on eye muscles. Lights should be shaded so that the filaments are not distinguishable through the shade. That shading should not produce shadows. There is a need for general brightness to keep us cheerful and alert. Dingy grey and brown walls should give place to light colours that prevent glare and give brightness.

A check in your home might enable you to do without some lights if others were less shaded, better placed or directed. Any economy must still allow brightness, and light as ample as daylight over the immediate work.



