wise, the minimal dosage schedules which induce withdrawal phenomena have yet to be established.

Two important clinical implications merit brief mention. First, the qualitative similarity of the meprobamate and the barbiturate abstinence syndromes implies that precautions should be taken to minimize both the development of physical dependence on meprobamate and the severity of the withdrawal syndrome; such precautions as those currently used in the case of barbiturates could be expected to be effective. In particular, following a period of chronic administration of large doses of the drug, medication should never be stopped abruptly. The second implication is that demonstration of physical dependence and an abstinence syndrome following abuse of meprobamate suggests that all members of the new classes of tranquilizing agents should be held suspect until definitely proved to be devoid of such undesirable properties.

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Enlargement of Avian Eye by Subjecting Chicks to Continuous Incandescent Illumination

During studies on the effect of different durations of diurnal artificial illumination on the growth of chicks, it was observed that the eyes of chicks subjected to continuous light appeared to be flattened. This condition was manifested by reduced depth of the anterior chamber and the apposition of the periphery of the iris to the cornea.

Because of these observations, the eyeballs of chicks from two different lighting treatments were subjected to certain measurements. Eight chicks that were exposed to continuous incandescent illumination and eight chicks that received such light for 12 hours daily provided the material for the study. Each pen, from which all natural light was excluded, received artificial light from a 60-watt, frosted incandescent lamp with a light intensity of 2 to 3 ft-ca measured at the bird height. The chicks were 6 weeks of age when they were sacrificed, and they had been on the two different light treatments since the day after hatching.

The average weight of eyeballs removed from chicks that had received continuous light was about 38 percent greater than the weight of eyeballs of chicks that had received only 12 hours of artificial light each day (Table 1). When the weight of the eyeballs is expressed as a percentage of body weight, there is still a large difference between the two treatments. Thus the data show that an enlargement of the eyeballs of chicks was produced by continuous artificial light.

It was of interest to determine whether the increased size of the eyeballs was brought about largely by an increase in tissue water content or by an increase in both water and tissue dry matter. When fluid was drawn from the posterior chamber of the eye by a hypodermic syringe, about twice as much fluid could be extracted from the eyeballs of chicks that had been subjected to continuous light (0.80 ml per eye) as could be extracted from the eyeballs of chicks that had been subjected to 12 hours of diurnal light (0.45 ml per eye). When the dried weight of the eyeballs is expressed as a percentage of the live body weight, there is only a slight difference between the two treatments. These results show that the increased size of the eyeballs of chicks that received continuous light was caused primarily by an increased accumulation of fluid.

It was found that the average diameter of eyeballs enucleated from chicks that received continuous light was 2.4 mm larger than that of eyeballs from chicks that had not received continuous light. Although average depth was also slightly increased, it appeared that the major change was in the diameter of the eyeballs.

A peculiar enlargement of eyeballs in chicks caused by feeding them a high level of glycine was reported by Groschke *et al.* (*1*). In these studies, the eyes were greatly enlarged by the addition of 8 percent free glycine to a purified diet. When a similar amount of glycine was added in the peptide form, no such enlargement was observed.

The data presented in this report (*2*) indicate that investigations on the effect of continuous illumination on the eye might well be expanded to determine the mechanism of the development of the abnormality. A study of the relationship of this light-induced abnormality to that of eye abnormalities in other species, including man, would be of interest.

Table 1. Effect of length of diurnal incandescent illumination period on eyes of chicks.

Item	Daily illumination period	
	24 hours	12 hours
No. of chicks	8	8
Av. body weight at 6 wk (g)	760	733
Av. weight of eyeballs (g)	4.83	3.50
Av. weight of dried eyeballs (g)	0.515	0.465
Av. diameter of eyeball (mm)	17.6	15.2
Av. depth of eyeball (mm)	12.9	12.1

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Effects of Embryonic Age on Potency in Tissue Culture of Embryonic Nucleoprotein Fractions

In the preparation of various biological growth media, and especially those for tissue culture, it is customary to use whole embryo extract as a source of growth-promoting factors (*1*). The choice of age of chick embryo used for making the extract is commonly one of convenience, usually embryos of 8 to 11 days (*2*). However, Gaillard (*3*) and Fowler (*4*) found that growth of chick heart fibroblasts in plasma culture was stimulated more by saline extracts of 14- to 18-day chick embryos than by similar extracts of 8- to 11-day embryos.

Recently a streptomycin-precipitation procedure was developed using 12-day chick embryos for isolation of the high-molecular-weight growth factors from whole-embryo extract (*5*). It seemed of interest to determine whether this active nucleoprotein fraction (NPF) would show a similar increase in potency or specific activity—that is, biological activity at the same concentration with in-