receptors over a significant area of the retina. The results of Fig. 1 likewise show little photochemical adaptation, and the locally recorded *b*-wave is influenced by convergent pathways from receptors (*10*). Our findings also compare well with those of Dowling (*3*), who showed in the rat that low levels of light adaptation which did not bleach rhodopsin nevertheless caused changes of sensitivity, as demonstrated by recording *b*-waves of threshold amplitude; stronger light adaptation was required to demonstrate reductions in the concentration of rhodopsin. Thus our results confirm, by independent methods, the findings of both of these studies. Our results also define more precisely one of the levels of the pathway through the retina at which a neural mechanism of adaptation occurs.

It was recently found that the late receptor potential is affected by interaction among receptors and, furthermore, that the type of interaction among receptors differs between light- and dark-adapted states (*13*). Hence neural effects of adaptation have also been demonstrated in terms of the late receptor potential. Such effects have been seen only when particular efforts were made to keep the anesthetic as light as possible; they were not seen under similar stimulus conditions in this study, where no such special efforts were made. Thus the interaction among receptors, which is influenced by adaptation, is apparently mediated by synaptic pathways which are particularly sensitive to barbiturate anesthetic. Since the deeper anesthetic used in this study blocks the interaction among receptors, a functional isolation of the receptors from each other seems to have been approximated. This simplifies the interpretation of amplitude of the late receptor potential. Under these conditions the late receptor potential should reflect any photochemical adaptation which occurs, and also any adaptation which may occur in the processes which intervene between absorption of light by the photopigment and generation of the late receptor potential (see *8*). Since our results with the late receptor potential are similar to those obtained by Dowling (*3*) with rhodopsin concentration, there is no indication so far of a stage of adaptation in the mechanism of generating the late receptor potential. The earliest stage of neural adaptation which has been identified is a qualitative change in the type of receptor interaction which affects the late receptor potential. Hence the type of neural adaptation reported here is at least the second stage; this occurs between the late receptor potential and the generation of the *b*-wave by cells of the inner nuclear layer.

KENNETH T. BROWN
KOSUKE WATANABE*
Department of Physiology, University of California Medical Center, San Francisco

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* Present address: Department of Physiology, Tokyo Women's Medical College, Kawada-Cho, Shinjuku-ku, Tokyo, Japan.

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Cesium-137 in Alaskans

Commenting on our report on cesium-137 in Alaskans [H. E. Palmer, W. C. Hanson, B. I. Griffin, L. A. Braby, *Science* **147**, 620 (1965)], S. Novick (*ibid.*, p. 1596) asks for a "bench-mark value" with which the increases we reported can be compared. Although the Federal Radiation Council has not given specific recommendations regarding the allowable radiation dose for cesium-137 as they have for iodine-131, strontium-90, and radium-226, the maximum permissible body burdens of cesium-137 for a population and individuals can be derived from the council's recommendations.

As Novick says, FRC recommendations indicate that the average body burden of cesium-137 for a population should not exceed 1000 nanocuries. This is one-third the amount calculated to deliver 0.5 rem if the amount is constant in the body for one year. The average adult body burden of 1280 nanocuries during the summer of 1964 at Anaktuvuk Pass was the maximum value for that year, and the average burden decreases to about half this maximum value during the winter months, as we indicated. Five measurements of cesium-137 in Anaktuvuk Eskimos during 1964 show that the yearly average adult burden was 940 nanocuries, which does not exceed the RPG for a population. The highest average individual body burden at Anaktuvuk Pass in 1964 was 1620 nanocuries, which is below the RPG for an individual. The person with a 3000-nanocurie burden was not an Alaskan native and was not from Anaktuvuk Pass.

H. E. PALMER
Physics and Instruments Department, Battelle-Northwest, Richland, Washington

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