

perfusion of the kidneys did not cause liberation of renin when the femoral artery was constricted. Renin caused vasoconstriction when injected into the femoral artery during this perfusion.

Conclusion. Renin appears to be produced by normal isolated dog's kidney perfused with blood when pulse pressure and blood flow are reduced by constricting the renal artery. Reduction of mean pressure is not a necessary condition. It is not produced when the hind leg is perfused under similar circumstances nor by kidneys perfused by blood under normal pressure-flow conditions.

11122 P

Diminution of Acetylcholine Content of Retina After Prolonged Functional Disuse.

HSI-CHUN CHANG, WEI-MING HSIEH, LAO-YING LEE AND
TSUNG-HAN LI.

From the Department of Physiology, Peiping Union Medical College, Peiping, China.

With aseptic precaution, the eyelids of one of the dog's eyes were sutured together, the other being left untouched as a control. After a period of blindfolding, the lids were opened up under ether anesthesia, the eyeball enucleated, and the retina carefully freed from the ciliary muscle and extracted with alcohol. All these procedures were done in the dark room under red light. The control eye was similarly prepared under ordinary illumination. The acetylcholine (AC) was identified by different tests, and the quantity determined by assay with the toad's rectus preparation.

While the AC content of the retina of the eye blindfolded for 7-49 days was found to be 11-25% less than that of the control in 5 experiments, that of the eye blindfolded for 160-170 days was over 58% less than the control in 4 experiments. The variation of the AC content of the retinae of the 2 normal eyes encountered in 12 experiments was $9.3 \pm 8.4\%$.

As there was no sign of infection, injury or irritation of any sort in the blindfolded eye, the diminution of the AC content after 160-170 days' blindfolding was apparently due to the prolonged functional disuse.