

toward the end of the experiment. There was a marked fall in chlorides which apparently was not due to the decreased fluid output or to the loss of chlorides in the perspiration. The excretion of chlorides fell to a minimum in twenty minutes after exercise and then returned to normal. There was a considerable fall in the total nitrogen excretion but no characteristic change in creatinine due to the exercise. The changes observed in the composition of the urine, when compared with the variations in the composition of the blood observed by Barr and his collaborators, indicate that the kidney responds rapidly and efficiently to aid in the neutrality regulation in the body.

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**The excretion of lactic acid in the urine after muscular exercise.**

**By S. H. LILJESTRAND and D. WRIGHT WILSON.**

*[From the Department of Physiological Chemistry, School of Medicine, University of Pennsylvania, Philadelphia, Pa.]*

To study the excretion of lactic acid after exercise, urine was collected in ten minute periods and was analyzed for lactic acid by Clausen's method. After one or two minutes of strenuous exercise the lactic acid excretion rose from a normal of about 2 mg. in ten minutes to about 150 mg. in ten minutes. The excretion reached a maximum within twenty minutes after exercise and then fell rapidly. There was a return to normal in about one hour. The experiments were carried out using men as subjects.