MEASUREMENT OF CARDIAC OUTPUT AND CHANGES

WHICH OCCUR DURING TRAINING

Current methods of measuring cardiac output in men were discussed with special reference to exercise studies. The direct Fick procedure, the dye dilution technique, the CO₂ method and foreign gas methods were reviewed.

A modified acetylene method was described which has a reproductibility of ± 0.6 l./min (S. D. at outputs of 20-25 l./min). This was demonstrated in a series of 85 measurements on the same subject covering a period of 9 months. The results suggest that day to day differences in output at high work intensity are due to physiological variation as much as to the technical error.

Some effects of training were discussed, especially the fact that cardiac output cannot be predicted by heart rate because of the wide variation in stroke volume between fit and unfit people.

Dr. L. G. C. Pugh