

# LETTER TO THE EDITOR

## Adrenaline and Blood Potassium

It is well known that the intravenous injection of adrenaline into mammals results in a transient, though very marked and prompt, increase in the serum potassium. By using adrenaline-like substances, D'Silva<sup>1</sup> showed that the reaction appeared to depend on the catechol nucleus and on the presence of a hydrogen atom linked directly with nitrogen on the side-chain. When the portal area was excluded from the circulation, none of these substances increased the serum potassium 1 minute after injection. We have now obtained results in a series of cats under chloralose anaesthesia to show that the rise in serum potassium following the intravenous injection of adrenaline can be greatly reduced, or even prevented, by the previous administration of dibenamine, an anti-adrenaline agent. A typical example of this action is shown in Table I, estimations of the potassium content of the serum being carried out by the colorimetric method of Abdul-Fadl.<sup>2</sup>

TABLE I

EFFECT OF DIBENAMINE (15 MG./KG) ON THE RISE OF SERUM POTASSIUM PRODUCED BY THE INTRAVENOUS ADMINISTRATION OF ADRENALINE (50  $\mu$ g.)

	Serum Potassium (mg./100 ml.)		Difference calculated as a percentage over the control value
	Before Adrenaline	After Adrenaline	
Before Dibenamine ... ..	17.3	38.0	+ 120
After Dibenamine ... ..	21.3	20.0	- 5

Department of Pharmacology,  
School of Pharmacy,  
University of London,  
17, Bloomsbury Square, W.C.1.

M. E. FIELDING  
G. B. WEST

March 15, 1950

### REFERENCES

1. D'Silva, J. L., *J. Physiol.*, 1949, **108**, 218.
2. Abdul-Fadl, M. A. M., *Biochem. J.*, 1949, **44**, 282.