

## Urinary histamine and urine volume in man

In 1944, Anrep, Ayadi & others reported the results of experiments in which diuresis had been induced in dogs and concluded that the amount of histamine excreted in the urine was independent of urine volume. Much work since then has confirmed this finding in other species, including man, and the 24-h excretion of free histamine has been widely used as an index of histamine metabolism. In view of this, the report by Horlington, Kolthammer & Lazare (1970) that there is a correlation between urinary histamine and urine volume in rats will require repeated confirmation by other workers before it can be held to invalidate previous work on urinary histamine. Moreover, it has often been pointed out (e.g. Mitchell, 1965) that the great differences between the rat and man in their metabolism of histamine are an indication for extreme caution in making inferences about human metabolism from observations made on rats. In many hundreds of estimations of free histamine in human urine during the past 20 years, I have repeatedly substantiated Anrep's finding that there is no relation between urine volume and the excretion of free histamine (e.g. Mitchell, 1956). To confirm this observation, a comparison was made between the amounts of free histamine excreted on each of two successive days, the fluid intake being severely limited on the first day and large quantities of fluid being administered on the second day. Free histamine was estimated in duplicate samples by the Decalso method of Roberts & Adams (1950) and expressed in terms of histamine base. The results recorded for five healthy men (Table 1) support the statement that in man the excretion of free histamine bears no relation to urine volume.

Table 1. *The effect of variations in urine volume on the urinary excretion of free histamine by healthy men.*

Subject	Low fluid intake		High fluid intake	
	Urine volume in 24 h (ml)	Urinary free histamine in 24 h ( $\mu$ g)	Urine volume in 24 h (ml)	Urinary free histamine in 24 h ( $\mu$ g)
1	520	9.0	1780	9.6
2	540	22.7	2440	22.2
3	1080	17.3	3770	16.0
4	610	13.2	3500	15.7
5	625	8.9	4100	8.5
Mean	675	14.2	3120	14.4

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