

Journal of Andrology, Vol 4, Issue 3 197-202, Copyright © 1983 by The American Society of Andrology

## JOURNAL ARTICLE

# The ability of the rat epididymis to concentrate spermatozoa. Responsiveness to aldosterone

T. T. Turner and D. M. Cesarini

Experiments have been performed to determine if aldosterone is involved in the control of water reabsorption from the epididymal lumen in vivo. Micropuncture samples of lumen content were collected from the epididymides of control rats and those receiving adrenalectomy, adrenalectomy + 25 micrograms aldosterone/day, 10 mg spironolactone/kg body weight/day, 10 mg spironolactone + 1 mg testosterone/kg body weight/day, 5 mg desoxycorticosterone acetate (DOCA)/day, 50 micrograms aldosterone/day, or 0.1 ml vehicle alone.

The treatment period was three days. Seminal vesicles weights and testis weights were obtained. Sperm concentrations (SEM) in the caput, corpus, and cauda epididymidis of normal rats were  $0.75 \pm 0.05$ ,  $1.24 \pm 0.13$ , and  $1.99 \pm 0.15 \times 10^9$  sperm/ml, respectively. Both inhibition and removal of aldosterone caused significant reduction ( $P$  less than .01) of intraluminal sperm concentrations. Sham treatment had no effect. Sperm concentrations were normal in animals receiving adrenalectomy plus aldosterone replacement. It is concluded that water resorption in the rat epididymis is responsive to aldosterone.

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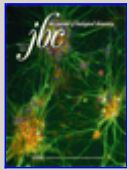
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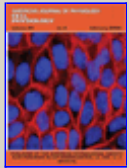


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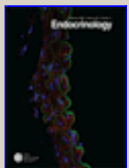


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