

Renal Vignettes

ADH Response to Decreased Blood Volume

HUMAN vignettes are brief, highly targeted exercises aimed at reinforcing single basic physiological points. The student may then continue to explore by further modifying the experimental design as they wish.

Decreased blood volume (or blood pressure) should elicit an attempt to rebuild the blood volume via an appropriate ADH response.

Below we deplete blood volume via hemorrhage and then monitor the ADH system and the effectiveness of its response. [Further discussion of this topic can be found in Guyton 359-60 and fig. 28-10).

Below please find the experimental protocol to carry out this investigation. Note well that *you should understand each of the variables employed*; use Help info on: or from a Help screen pick the View summary of [all variables](#) link.

View Output:

UOSM EXH2O BV AP ADH POSM

as: text text text text text text

Experiment Controls

Change Variable	Enter New Value	Info on Variable
HEMVOL	1000	ml
HEMMIN	10	Minutes

Run Experiment:
for 24h minutes at 4h minute intervals.

Go Start Over

Help

Help info on: ADH

Tips: Hemorrhage

View

Variable Value: Choose

Patient Charts or Lab tests: Choose One

Graph Style Size: 600

Normalized, one graph

Describe the adaptive nature of response pattern generated to the volume depletion.

Note: a 24 hour period is used rather than a shorter period to downplay the early strong effects of the blood loss anti-pressure diuresis and consequent early effect on POSM. Users needn't look into this effect unless they wish to.