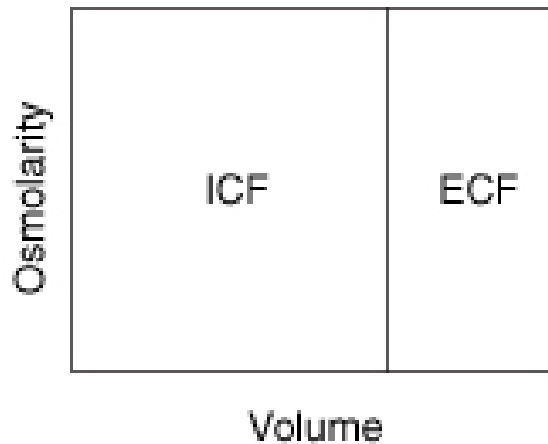


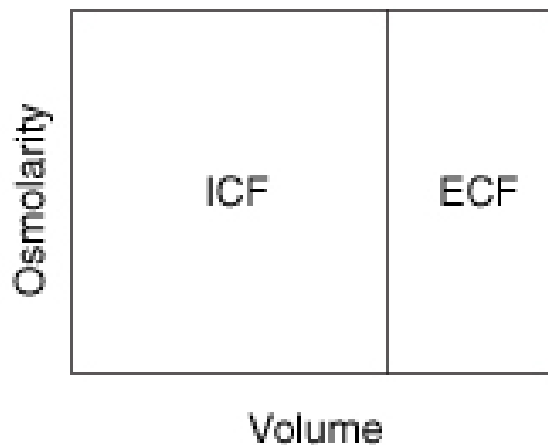
RENAL PROBLEMS
SB Problem Session #6, Problem Set #1
Mon., Nov. 25, 2008, 10:00-11:30 AM, Bldg. 102; Rm. 475

1. Figure 6-5 (renal-1 notes, p. 7) shows the initial and final equilibrated states for three volume contractions and three volume expansions. Use the six templates below, one for each identified situation, and show the intermediate step (the disturbance) which are missing in the text figure.

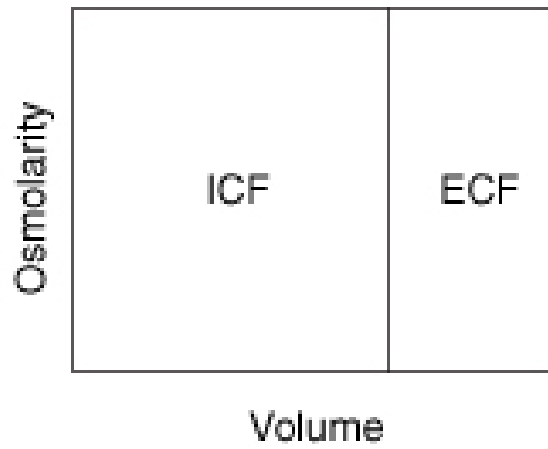
a. Infusion of isotonic NaCl (isosmotic volume expansion)



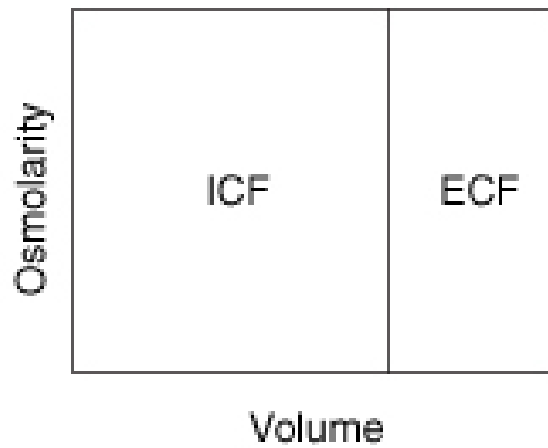
b. High NaCl intake (hyperosmotic volume expansion)



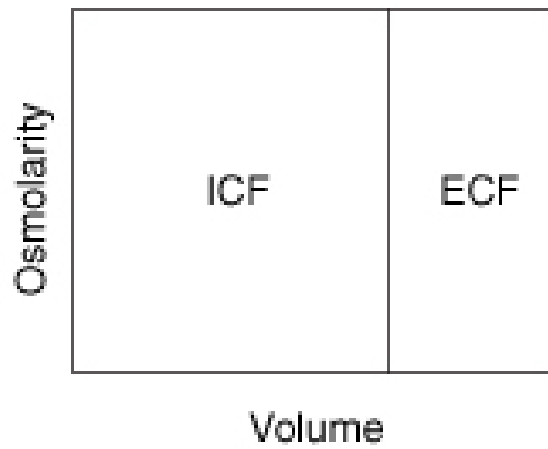
- c. SIADH (hyposmotic volume expansion)



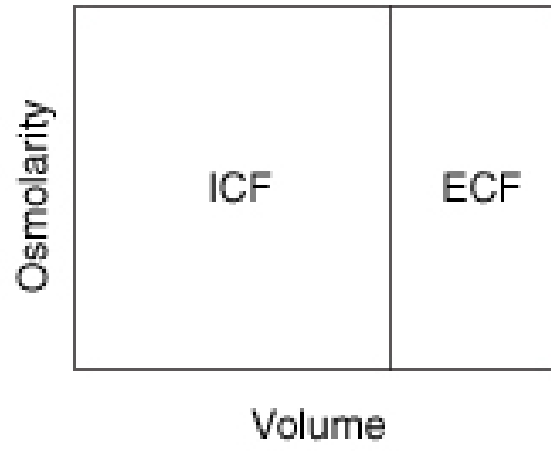
- d. Diarrhea (isosmotic volume contraction)



- e. Water deprivation (hyperosmotic volume depletion)



f. Adrenal insufficiency (hyposmotic volume deficiency)



2. Construct glucose titration curves (F, E, R loads) for three different situations with each subject possessing the same T_m value: a); c).

a) Theoretical subject with absolutely no splay

b) Subject with normal splay

c) Subject with exceptionally wide splay due to very poor glucose-carrier binding affinity