

Table III. Fluid Deprivation Test for the Diagnosis of Diabetes Insipidus

Procedure:

1. Initiation of the deprivation period depends on the severity of the DI; in routine cases, the patient should be made NPO after dinner, whereas in cases with more severe polyuria and polydipsia, this may be too long a period without fluids and the water deprivation should be begun early on the morning (e.g., 6 am) of the test.
2. Obtain plasma and urine osmolality, serum electrolytes and a plasma AVP level at the start of the test.
3. Measure urine volume and osmolality hourly or with each voided urine.
4. Stop the test when body weight decreases by $\geq 3\%$, the patient develops orthostatic blood pressure changes, the urine osmolality reaches a plateau (i.e., $< 10\%$ change over two or three consecutive measurements), or the serum $[\text{Na}^+] > 145$ mmol/L.
5. Obtain plasma and urine osmolality, serum electrolytes, and a plasma AVP level at the end of the test, when the plasma osmolality is elevated, preferably > 300 mOsm/kg H_2O .
6. If the serum $[\text{Na}^+] < 146$ mmol/L or the plasma osmolality < 300 mOsm/kg H_2O when the test is stopped, then consider a short infusion of hypertonic saline (3% NaCl at a rate of 0.1 ml/kg/min for 1–2 hr) to reach these endpoints.

7. After the desired endpoint is reached, administer AVP (5 U) or desmopressin (1 µg) SC and continue following urine osmolality and volume for an additional 2 hr.