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### Fluids and Electrolytes

**TOTAL AND EXCHANGEABLE BODY POTASSIUM** Exchangeable body potassium measured by dilution techniques 24 hours after administration of  $^{42}\text{K}$  is commonly used to estimate total-body potassium. Evidence would suggest that equilibration of  $^{42}\text{K}$  is not complete until at least 40 hours after administration. A study was performed to compare total-body potassium measured by whole-body monitoring with that estimated by exchangeable potassium measured at 24 and 44 hours in a variety of patients. The authors also compared measured total-body potassium with that estimated from regression equations considering height, weight and age, or just height and age. They confirmed that equilibration was not complete at 24 hours, but when exchangeable potassium was expressed as either a percentage of total-body potassium or as mEq/kg, the mean values at 24 hours were not sig-

nificantly different from those at 44 hours. In a hypokalemic patient, however, exchangeable potassium did not accurately reflect total-body potassium before treatment or when the patient was normokalemic. The authors conclude that: 1) an equilibration time of 24 hours is sufficient for practical purposes for measuring exchangeable potassium; 2) in patients with abnormal potassium metabolism, i.e., those most likely to be studied, equilibration may take longer and even then may not accurately reflect total-body potassium; 3) estimation of total-body potassium of obese patients is more accurate if weight is not involved in the regression equation. (Boddy, K., King, P. C., and Davies, D. L.: *The Relationship Between Total Body Potassium and Exchangeable Body Potassium Measured at 24 Hours and 44 Hours after Administration of  $^{42}\text{K}$* . *Eur J Clin Invest* 3:188-192, 1973.)