TREATMENT OF POTASSIUM BALANCE DISORDERS

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Potassium is the third most abundant mineral element in ruminant tissues.[6] It is a monovalent cation that plays a critical role in determining resting cellular membrane potential, and thus, neuromuscular excitability. The terms *hypokalemia* and *hyperkalemia* refer to the concentration of potassium in the plasma (and extracellular fluid); however, only 2% of the potassium in the body resides in the extracellular fluid, so plasma concentration of potassium does not necessarily reflect the status of total body stores of that cation.[1] The vast majority of potassium in the body is located in the intracellular fluid of skeletal muscle, so shifts of potassium between intracellular and extracellular space can profoundly influence the concentration of potassium measured in the plasma. It is not practical to measure intracellular potassium content in clinical patients, although occasionally this is performed in a research setting.

POTASSIUM REGULATION

The concentration of potassium in plasma is determined by two functions: external potassium balance, or the net difference between intake and elimination of potassium, and internal potassium balance, or the shift of potassium ions between the intracellular and extracellular fluid spaces.[1]

External potassium balance is determined by the difference between dietary consumption of potassium and elimination, which includes renal, salivary, and gastrointestinal routes of elimination. The dietary po-

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