Randomized controlled crossover study design. Women consumed two experimental diets [low in protein and potential renal acid load (LPLP) or high in protein and potential renal acid load (HPHP)] in random order for 7 wk each with one wk break period when diets were not controlled (15 wk total). After 3 wk dietary equilibration (e.g., wk 4 and 11), the entire 2-d cycle menu of each diet was radio-labeled with $^{47}$Ca. Calcium retention was measured by whole body scintillation counting for 4 wk after ingestion of the radio-labeled meals. Blood (at the end of wk 3, 5, and 7) and 24-h urine (at the end of wk 1, 2, 3, 5, and 7) samples were collected to assess the effects of the diet on biomarkers of bone metabolism and renal adaptation to the acid-load.