Abstract: This study tested whether providing cows a 4-wk period on pasture would improve gait and change lying behavior. Eighteen groups, each of 4 lactating Holstein cows initially housed in a freestall barn, or moved to pasture to provide changes in both physical environment and diet. To assess lameness, gait scores (1 to 5) were recorded weekly for 4 wk. Gait improved by an average of 0.22 units/wk for those cows kept on pasture. We also recorded 4 specific gait attributes (head bob, back arch, tracking up, and reluctance to bear weight evenly on all 4 hooves), and found that the latter 2 attributes also improved during the pasture period. Improved gait for cows on pasture was not because of increased lying times. Cows on pasture actually spent less time lying down than cows kept indoors (10.9 vs. 12.3 h/d), although this lying time was spread over a larger number of bouts (15.3 vs. 12.2 bouts). Cows housed on pasture also lost more weight and produced less milk relative to cows in free stalls, likely because of reduced nutrient intake. These results indicate that a period on pasture can be used to help lame cattle recover probably because pasture provides a more comfortable surface upon which cows stand, helping them to recover from hoof and leg injuries.

Key words: gait score, lameness, housing, behavior