This study examines how wellness scores generated from the Health Risk Appraisal are associated with prospective medical claims costs, controlling for age, gender, and disease status. The study was conducted among 19,861 active employees who participated in the Health Risk Appraisal and selected indemnity or PPO medical plans from 1996 to 1998. A multiple regression model based on group averages of age, gender, disease status, and wellness score levels was developed among a randomly selected screening subsample (n=10,172) from the study sample. Total medical claim costs of -$56, $88, and $3574 were estimated for one additional point on the wellness score, 1 year of additional age, and an existing major disease, respectively. No significant differences were found between the model predicted and actual medical claims costs for the individuals in both screening and calibration (n=9689) subsamples.