This study examined whether there is a progressive correlation between body mass index (BMI) and health care costs and absenteeism. The study was conducted at First Chicago NBD (FCNBD). FCNBD employees (6,465) took at least one health risk appraisal (HRA) between 1989 and 1995. Of these, 3,066 qualified for absenteeism analysis and 843 qualified for cost analysis. Employees at risk for BMI were more likely to have other health risks than those not at risk for BMI, and had twice as many sick days (8.45) as those not at risk for BMI (3.73). When total mean medical costs were analyzed by BMI level, a "J-shaped" curve was produced. The mean health care costs for the BMI at-risk population was $6,822 compared to $4,496 for the not-at-risk population. The most important differences in health costs were found for employees aged 45 and older. The excess cost associated with BMI risk was $3,514 overall. With the exception of neoplasms, health care costs tend to increase as BMI increased.