PURPOSE: To examine health risk changes among participants of a multicomponent worksite health promotion program. DESIGN: A study using health risk changes among health risk appraisal (HRA) participants linked to program participation records. Baseline risk and participation in multiple programs were examined in relation to risk change in multivariate models. SETTING: Worksite health promotion programming sponsored by the United Auto Workers (UAW) and General Motors (GM). SUBJECTS: Active employees (12,984) who voluntarily participated in an HRA in each of two program years. INTERVENTION: The nationwide program was a mailed HRA and a 1-800 nurse line. A pilot program (implemented in two cities) added screening, wellness programs, a materials resource, and, for high risk participants, health coaching and vouchers for medical office visits. MEASURES: Using 13 selected health risk factors from the HRA, changes in overall health risks were measured as program outcomes in three ways: one-directional, net, and risk status change. RESULTS: A greater decrease in the number of health risks was observed with increased program participation. The decrease was significantly related to the number of baseline risk factors and eligibility for high risk programs. Associated with program participation, the number of people at low risk status increased from 70.1% to 71.3% at year 2 among nationwide participants and from 52.4% to 58.9% among pilot participants. CONCLUSIONS: Participation was associated with a significant impact on health risk. Baseline risk of participants and eligibility for high risk programs were necessary factors to control when measuring program effects on health risk changes.