Descriptive data on change in physical activity during adulthood are important in designing effective interventions to increase physical activity. There is some evidence that activity participation difference between the lowest and highest socioeconomic groups may be widening over time. The purposes of this study were to describe changes in leisure-time physical activity and to examine how socioeconomic factors were related to those patterns using data from the Atherosclerosis Risk in Communities (ARIC) cohort. Past year physical activity was measured by the modified Baecke questionnaire at the initial visit (1987-89) and 6-years later (1993-95) in 2843 African American and 9661 White participants age 45 to 64 years at baseline. At initial examination, prevalence of exercise participation was highest in White men (72.4%), followed by White women (69.8%), African American men (50.8%), and African American women (40.9%). Over the 6-year period, improvements in exercise participation occurred in African American women (8.5%) and African American men (4.2%), while declines were noted in White women (-2.7%) and White men (-2.5%). Baseline sport and leisure scores generally increased with increasing education or income. Six-year changes in activity did not occur evenly across socioeconomic groups, with more favorable changes occurring with higher education and income. Higher education or income predicted maintenance of exercise when compared to those who stopped exercise and adoption of any exercise when compares to those who remained sedentary. Physical activity during adulthood is a complex, dynamic process which must be considered when designing effective programs to promote activity. Our results suggest the need to account for social determinants of physical activity patterns when designing strategies to increase physical activity at the population level.

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