

## **The Healthy Growth Study: Findings from Year Four**

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### **Abstract**

*Objectives:* For African American girls, the research questions were: 1) Do body fat, maturity, and physical activity predict blood pressure values? 2) Do body fat, maturity, and psychosocial and environmental variables predict physical activity? 3) Do maturity and physical activity predict body fat? *Methods:* The design was a four year observational study and measures were taken twice a year. The anthropometric measures and interviews were completed by trained staff. *Results:* Moderate-to-vigorous physical activity decreased and sedentary behavior increased over time. Age, body mass index, and height were significant predictors of systolic blood pressure. Height was the only significant predictor of diastolic blood pressure. Age (negative relationship), cognitive and social factors were significant predictors of moderate-to-vigorous physical activity. Age and maturity (more advanced breast stages) were significant predictors of body mass index. *Conclusions:* Promoting healthy lifestyles in adolescent, African American girls should include preventing the decline in physical activity by developing positive social networks.

**Key Words:** Longitudinal Study, Physical Activity, Body Mass Index, Blood Pressure, Obesity, African American Girls

### **Introduction**

Obesity and related health compromising conditions (e.g., diabetes and hypertension) are the primary public health challenges in the United States (U. S. Department of Health and Human Services, 2000) and possibly the world (Kettaneh et al., 2005). In the United States, the prevalence of overweight and obesity among children and adolescents has more than doubled during the past three decades and the trend is escalating (Miech et al., 2006, Ogden et al., 2006, Ogden et al., 2002, Troiano et al., 1998). The associated consequences of overweight status are type 2 diabetes, hypertension, poor quality of life in childhood and increased morbidity and mortality in adulthood (Daniels et al., 2005, Ebbeling et al., 2002, Miech et al., 2006, Schwimmer et al., 2003, U. S. Department of Health and Human Services, 2000, Williams et al., 2005).

African American females are at greater risk for overweight, physical inactivity, and the related consequences of excess weight and physical inactivity compared to other racial/ethnic groups (females and males) and males of all racial/ethnic groups (Mensah et al., 2005, U. S. Department of Health and Human Services, 2000). Identifying, describing, and understanding the predictors of overweight status, physical activity, and sedentary behaviors are critical in developing effective interventions and prevention programs; however, few longitudinal studies have been conducted, particularly in adolescents and children. In one longitudinal study, Finnish girls who remained active over six years had significantly lower subscapular skinfold thickness, but not body mass index (BMI), compared to sedentary girls (Raitakari et al., 1994). Only one longitudinal study with African American girls was found (Kimm et al., 2005, 2002,