

INCREASED PREVALENCE OF CARDIOVASCULAR DISEASE/RISK AMONG PARENTS OF CHILDREN WITH CHRONIC KIDNEY DISEASE: CKiD STUDY RESULTS.

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Common genetic susceptibility patterns for progression of chronic kidney disease (CKD) and susceptibility to cardiovascular disease (CVD) have been proposed in adult CKD, but have been less well studied in children.

Family history of CVD and CVD risk factors was obtained from 560 subjects in the Chronic Kidney Disease in Children (CKiD) prospective cohort study, aged 1-16 years at enrollment between 2005-07. This cross-sectional data was compared to similar questionnaire data from a general population sample of 13,944 children within the 3rd National Health and Nutrition Examination Survey (NHANES III) conducted from 1988-94. NHANES III survey data was weighted such that the population of examined children reflected the demographics of the CKiD cohort: mean age 10 years, 62% male, and approximately 69% White, 18% Black, and 14% Hispanic ethnicity. The table compares age, body mass index (BMI), and CVD/risk in parents in each cohort.

	CKiD	NHANES III*
% parent high blood pressure/stroke	30.8	19.4**
% parent heart attack/angina	2.8	2.1
% parent high cholesterol	28.6	20.8**
% parent diabetes	13.4	3.5**
mean maternal BMI	28.4	25.5**
mean paternal BMI	28.2	26.6**
mean maternal age, years	37.6	35.3**
mean paternal age, years	40.6	39.5**
*CVD/risk data available for 13,042 mothers and 4,625 fathers of NHANES subjects; **p<0.0001		

Children with CKD are significantly more likely to have parents with a history of CVD or CVD risk factors. CKiD parents comparatively had greater BMI and were of older age, and data was collected 15 years after the NHANES data. However, the magnitude of the difference in CVD/risk may be suggestive of common genetic or environmental risk factors for CKD and CVD in this population.