

Changes in cardiovascular risk factors in the Melbourne Chinese cohort study

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The cross-section study of Melbourne Chinese indicated that Melbourne Chinese were low in blood pressure, the prevalence of overweight and obesity, serum triglyceride and LDL cholesterol level compared to the Australian average (1). To identify lifestyle factors that contribute prospectively to the increase of cardiovascular (CVD) risk in this population, a follow-up study was conducted between 1995 and 1997. A total of 290 (547 cohort subjects) had been followed up, including 11 deaths. The average follow-up period was 7.35 years. This paper reports changes in major CVD factors over the follow-up period. The average age for this cohort was 53.0 years for men and 51.7 years for women. Paired T-test was used to test the significance of changes in cardiovascular disease risk factors.

The results indicate that body mass index (BMI), systolic and diastolic blood pressure (SBP & DBP) and fasting serum glucose concentration increased significantly for men and women. The waist-to-hip ratio (WHR) and fasting serum lipid levels remained unchanged. Changes in CVD risk factors among men and women were consistent. Decreased stature and increased body weight resulted in increase in BMI. The self reported hypertension for women has increased from 12% to 21.2%. There were no significant changes in smoking rates, though the trend was in decline. Self reported diabetes also remained unchanged.

In summary, noticeable changes in CVD risk factors in this cohort were stature and body weight (hence BMI), blood pressure and fasting blood glucose. Public health programming with focus on CVD prevention thus needs to take into account risk factors where changes are significant and amenable, especially in men and women undergoing mid-life transition of the 50's.

	Men (139)		Women (125)	
	Mean ± SE	significant	Mean ± SE	significant
Stature (cm)	- 0.55 ± 0.26	*	- 0.78 ± 0.28	**
Body weight (kg)	3.21 ± 0.49	***	1.73 ± 0.54	**
BMI (Kg/M ²)	1.32 ± 0.15	***	0.97 ± 0.18	***
WHR	0.08 ± 0.07		0.11 ± 0.12	
Systolic BP (mmHg)	7.93 ± 1.15	***	6.93 ± 1.73	***
Diastolic BP (mmHg)	6.93 ± 0.85	***	9.02 ± 0.94	***
Glucose (mmol/L)	0.88 ± 0.10	***	0.60 ± 0.16	***
Total Cholesterol (mmol/L)	0.05 ± 0.07		0.11 ± 0.10	
Triglyceride (M mole/L)	0.04 ± 0.11		0.01 ± 0.07	
HDL (M mole/L)	0.01 ± 0.02		0.07 ± 0.05	
LDL (M mole/L)	0.07 ± 0.07		0.07 ± 0.08	
LDL/HDL ratio	0.62 ± 0.67		0.24 ± 0.14	

Paired T-test; *: P<0.05; **: P<0.01; ***: P< 0.001; SE: standard error.

1. Hage BH-H. Food habits and cardiovascular health status in adult Melbourne Chinese, Ph D. Thesis, 1992.