

# Association Between C-reactive Protein and Cardiometabolic Diseases in Young Adults

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## INTRODUCTION

Metabolic syndrome and cardiometabolic diseases have been linked to chronic subclinical inflammation. However, few studies have investigated the association between C-reactive protein (CRP) and cardiometabolic diseases in young individuals.

## OBJECTIVE

To assess the association between CRP and cardiometabolic diseases in 22-year-old individuals from the 1993 birth cohort of Pelotas (Brazil).

## METHODS

Cross-sectional study based on the 22-year follow-up of the 1993 Pelotas birth cohort. The cardiometabolic diseases (overweight/obesity, high blood pressure, dyslipidemia, and diabetes) were evaluated by anthropometric or serum measurements and medical diagnosis. CRP was evaluated by immunoturbidimetric assay. Linear regressions using logCRP have been performed in Stata 13 and  $p < 0.05$  was considered statistically significant. The analyses were adjusted for adiposity, and sociodemographic (skin color, asset index) and behavioral (alcohol abuse, smoking, physical inactivity) variables.

## RESULTS

The initial sample was composed of 1657 (46.3%) men and 1921 (53.7%) women of approximately 22 years old.

**Table 1.** Description of the sample in median (25-75 IQR) or percentage.

CRP (mg/dL)	1 (0.4; 2.7)
Overweight (n)	961 (27%)
Obesity (n)	577 (16.2%)
HBP (n)	713 (19.9%)
Dyslipidemia (n)	1439 (41.5%)
Diabetes (n)	161 (4.5%)

**Table 2.** Adjusted linear regression coefficient between each cardiometabolic disease and C-reactive protein.

	Coefficient (95%CI)	P-value
Overweight/obesity	0 (-0.1; 0.1)	0.982
HBP	0.05 (-0.06; 0.16)	0.353
Dyslipidemia	0.2 (0.11; 0.29)	<0.001
Diabetes	0.17 (-0.04; 0.37)	0.11

## CONCLUSION

In our study, CRP concentration was positively associated with dyslipidemia at a young age. The associations between CRP and overweight/obesity, HBP, and diabetes were not statistically significant after adjustment for potential confounders.