

## **Cardiovascular Epidemiology**

### **Plasma Levels of Apolipoproteins in a Healthy Population of Argentina: Implications for Cardiovascular Prevention**

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#### **Background**

Epidemiological and intervention studies demonstrated that plasma levels of apolipoprotein B (ApoB), apolipoprotein A-1 (ApoA-1) and ApoB/A-1 ratio are independent predictors of cardiovascular risk. Yet, updated regional information regarding biomarkers distribution, reference values and goals is not available.

#### **Objectives**

1) To describe the distribution of ApoB, ApoA-1, and ApoB/A-1 ratio in a healthy population of Argentina. 2) To analyze the influence of gender, age, body weight and smoking habits. 3) To infer ApoB goals that can be applied to our population.

#### **Material and Methods**

We analyzed the distribution of apolipoproteins in blood donors according to the variables described using univariate and multivariate analyses. The preestablished percentiles of LDL-C were compared to those corresponding to ApoB.

#### **Results**

The concentration of apolipoproteins was measured in 463 subjects and conventional lipid profile was determined in 263. Compared to women, men had an average ApoB level 9.3 mg/dl higher (95% CI 4.08-14.52), ApoA-1 level 22.23 mg/dl lower (95% CI 15.98-28.45) and ApoB/A-1 ratio 0.25 higher (95% CI 0.11-0.19). ApoB levels increased 5.6 mg/dl (95% CI 3.79-7.46) and ApoB/A-1 ratio increased 0.03 (0.02-0.05) every 10 years of age. Overweight increased ApoB levels 7.9 mg/dl (95% CI 2.88-12.83) and ApoB/A-1 ratio increased 0.07 (95% CI 0.04-0.11). Percentiles 20 and 80 of LDL-C corresponded to values closer to the recommended goals in high and low coronary risk subjects, <100 and <160 mg/dl respectively. The corresponding levels of ApoB were 72 and 117 mg/dl.

#### **Conclusions**

Gender, age and body weight affected apolipoproteins levels. These findings might be related to the greatest cardiovascular risk observed in certain sub-populations. Our results suggest that current ApoB goals should be reviewed.