

## Prevalence of Elevated Cholesterol in Portugal: National Health Examination Survey Results (2015)

Ana Paula Rodrigues

AP Rodrigues<sup>1</sup>, I Kislaya<sup>1</sup>, L Antunes<sup>1</sup>, V Gaió<sup>1</sup>, M Barreto<sup>1</sup>, AJ Santos<sup>1</sup>, AP Gil<sup>1</sup>, S Namorado<sup>1</sup>, H Lyshol<sup>2</sup>, B Nunes<sup>1</sup>, CM Dias<sup>1</sup>

<sup>1</sup>Department of Epidemiology, National Institute of Health Doutor Ricardo Jorge, Lisbon, Portugal

<sup>2</sup>Norwegian Institute of Public Health (NIPH), Oslo, Norway

Contact: ana.rodrigues@insa.min-saude.pt

### Background

High cholesterol level is a major and modifiable cardiovascular (CV) risk factor. This study aims to estimate the prevalence of elevated cholesterol in the Portuguese population based in the direct measurement of total serum cholesterol.

### Methods

The First National Health Examination Survey (INSEF) is a cross-sectional epidemiological study representative of the Portuguese population using a random sample (N=4,911) aged between 25 and 74 years. Data collection included physical examination, blood collection and personal interview. Serum from participants' blood samples was used for total cholesterol measuring, using the enzymatic method in accordance with international quality standards. Elevated cholesterol (EC) was defined as having a total serum cholesterol concentration  $\geq 190$  mg/dL or reporting taking lipid-lowering medication. EC estimated prevalence was stratified by sex, age, educational level and employment status. Adjusted prevalence ratios (aPR) were estimated using Poisson regression.

### Results

The overall prevalence of EC was 63.3 % [95 %CI:61.2-65.4]. Significant differences in EC prevalence between age groups were found: prevalence was twice higher among groups aged 55-64 (80.1 % aPR =2 [1.8-2.3]) and 65-74 (79.2 % aPR= 2 [1.7-2.3]) when compared to 25-34 (38.4 %). No significant differences were observed according sex, level of education, and employment status. 43.3 % [38.9-47.8] of the individuals taking lipid-lowering medication showed EC.

### Conclusions

INSEF results showed that 63.3 % of the Portuguese population aged between 25-74 years had total cholesterol above the desirable level. Among those under treatment, almost half was also EC. Although total cholesterol level should be evaluated considering other CV risk factors, lowering total cholesterol levels may contribute for reducing the burden of CV diseases in Portugal.

### Key messages:

- In Portugal 2/3 of adult population (25-74 years) has total cholesterol above desirable levels
- Lowering total cholesterol levels may contribute for reducing the burden of cardiovascular diseases