

## **IS HDL-C NECESSARY FOR LIPID SCREENING IN TAIWAN? ANALYSIS FROM TW3H<sup>a</sup> STUDY**

YH Yan<sup>1,3</sup>, YP Lin<sup>2</sup>, GJ Hsu<sup>3</sup>, TJ Cheng<sup>1</sup>

<sup>1</sup> Institute of Occupational Medicine and Industrial Hygiene, <sup>2</sup> Center for Health Risk Assessment and Policy, National Taiwan University, Taipei, Taiwan, <sup>3</sup> Department of Internal Medicine, Chia-Yi Christian Hospital, Chiayi, Taiwan

**BACKGROUND/AIMS** : Screening of high-density lipoprotein cholesterol (HDL-C) in addition to total cholesterol (TC) in healthy adults has been controversial. We used data from the TW3H<sup>a</sup> study to determine, through the inclusion of HDL-C measurement in addition to TC in lipid screening, the proportion of people that were misclassified as being normal or at greater risk for cardiovascular disease (CVD).

**METHODS** : The cross-sectional screening project (TW3H) enrolled a random sample of 3,166 men and 3,432 women above 15 years of age in Taiwan. Cardiovascular risk was assessed by TC, HDL and TC/HDL ratio.

**RESULTS** : The analysis was conducted in subjects greater than 40 years of age. Among 424 subjects (10.0%) with TC greater than 240mg/dL, 283 subjects (6.7%) had a TC/HDL ratio<5 (97 men and 186 women, 4.8% and 8.3%, respectively), whereas among 3,831 subjects (90.0%) with TC less than 240 mg/dL, low HDL levels ( $\leq 40$ mg/dL) were found in 450 subjects (10.6%; 337 men and 113 women, 16.6% and 5.1%, respectively).

**DISCUSSION/CONCLUSIONS** : Screening based on TC alone may overestimate risk in a considerable number of healthy people, especially in women. This phenomenon is also observed in Western populations. Interestingly, addition of TC/HDL may identify a significant amount of adults at increased risk for CVD in those with TC<240 mg/dL, particularly in men. Our results suggest that the screening strategy needs to be adjusted based on lipoprotein distribution.

<sup>a</sup> : Hyperglycemia, Hyperlipidemia and Hypertension Prevalence Surveillance in Taiwan, 2003

**Key words** : Lipid screening, Lipoprotein, Cardiovascular disease