PREVALENCE OF NON-COMMUNICABLE DISEASE RISK FACTORS IN ERITREA

**Objective:** To establish the baseline prevalence rates for non-communicable disease risk factors in Eritrea.

**Study Design:** A cross-sectional survey was conducted among all the ethnic groups in Eritrea with the WHO STEPwise approach. Hypertension was defined as blood pressure ≥140/90 mm Hg or a person on medication for hypertension, while diabetes based on medical history of the disease. Of the targeted sample size of 2460, 2352 responded. Respondents were distributed among the six regions of the country proportional to population size. A multistage cluster sampling technique was used. Males and females from 15 to 64 years of age were studied.

**Main Outcome Measures:** Prevalence rates of hypertension, diabetes mellitus, obesity, smoking, alcohol consumption, physical inactivity, and low vegetable and low fruit consumption.

**Results:** Prevalence rate of daily smoking of 7.2% with variations among age, sex, religion and regions. A high prevalence of low fruit and vegetable intake was observed at 84.7% and 50.6% respectively. Alcohol drinking was 39.6%. Level of physical activity was high (90%). The prevalence of obesity was low at 3.3%. The prevalence of hypertension in the general population was 16%, while 2.2% were known diabetic patients. More than 80% of the hypertensive persons were not aware of their condition. No significant rural/urban or sex difference was seen in hypertension prevalence.

**Conclusion:** The baseline data are useful for developing interventions designed to prevent and control NCDs in Eritrea. *(Ethn Dis. 2006;16:542–546)*

**Key Words:** Africa, Eritrea, NCD Prevalence

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**INTRODUCTION**

The rapid rise of non-communicable diseases (NCDs) represents one of the major health challenges to global development. According to World Health Report 2002, for instance, cardiovascular diseases are responsible for approximately one third of global deaths annually.¹

Eritrea is already experiencing a shift in the pattern of diseases. The efforts made in the control of communicable diseases and the changes in the living standards and lifestyles of Eritrean people as well as environmental factors are leading to an epidemiologic shift from communicable to non-communicable diseases. Mortality data from hospitals and health centers in Eritrea² show that, in the population older than five years, hypertension, heart failure, diabetes mellitus, and liver diseases were among the 10 leading causes of deaths in 2003. These diseases combined were responsible for 35.5% of all hospital deaths. Just five years earlier in 1999, they were responsible for only 17% of all hospital deaths. In addition, hypertension, heart failure, and diabetes mellitus each ranked above malaria as a cause of death in 2003.

The modifiable risk factors of smoking, unhealthy diet, and physical inactivity are expressed as hypertension, diabetes, obesity, and high blood lipid levels. Together they contribute to the total cardiovascular risk and are the root causes of the global cardiovascular disease (CVD) epidemic.³

Measuring risk factors for NCDs is an attempt to predict the future distribution of NCDs in a population and is vital to promoting disease prevention and control programs.⁴ This study is aimed at providing baseline data on the major NCD risk factors in Eritrea to be used for the establishment and evaluation of a control program.

**METHODS**

The study was a cross-sectional survey that ran from August to November 2004. All six (zobas) zones of the country and all nine ethnic groups were included.

The sample size was calculated by using the formula:

\[ N = \frac{Z^2 \cdot p \cdot (1-p)}{E^2} \]

Where \( Z \) is the \( Z \) score, \( p \) is the proportion of the factor under investi-