

## original article

## Prevalence of arterial hypertension among Ecuadorians from Vilcabamba, Ecuador

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**ABSTRACT****Background**

Arterial hypertension (AH) is the most widely spread cardiovascular disease in the world associated with about 54% of all stroke cases, 47% of ischaemic heart disease, 75% of hypertensive disease, and 25% of other cardiovascular diseases. However, data on the prevalence of AH in many developing countries is scarce.

**Aim**

The goal of this research was to assess the rate of AH among people living in or near Vilcabamba, Ecuador, area of Ecuador with rapid westernization.

**Material and Methods**

The sample included 417 men (30%) and women (70%) between 18 and 93 years of age. Hypertension groups of Stages I, II and III were used for the clinical assessment.

**Results**

Results showed that 103 participants (24.7%) had normal blood pressure, 74 (17.7%) had pre-hypertension, 103 (24.7%) had Stage I and 64 (15.3%) had Stage II hypertension. About 41% of females and 30.0% of males in the sample had either Stage I or Stage II hypertension.

**Conclusions**

The majority of people diagnosed with AH were unaware of their condition. The rate of AH in this sample equaled or exceeded rates found in many industrial countries such as the U.S., Canada, Sweden or Italy. The high rate of AH is likely due to rapid westernization, especially adoption of diet that is high in refined foods, high in sodium, and saturated and trans fats. Education about lifestyle factors, especially diet that is low in sodium is needed to control and prevent from further development of AH in this area.

**Keywords:** blood pressure, hypertension, diagnosis, Vilcabamba, Ecuador.

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**INTRODUCTION**

In the last few decades a significant increase in the prevalence of mortality and morbidity from chronic diseases in many developing countries has been reported. Chronic health conditions such as coronary heart disease and cerebrovascular disease are currently the main causes of disability and death among adults in many developing countries.<sup>1</sup> The Institute of Medicine of the National Academy of Sciences (IOM) estimated that except for the sub-Saharan Africa region, already in the year 1990 cardiovascular diseases caused three times as many deaths in both men and women between 30 and 69 years of age as did infectious and parasitic diseases.<sup>2</sup> Arterial hypertension (AH) is the most widely spread cardiovascular disease in the world.<sup>3</sup> Lowes et al. estimated that about 54% of stroke cases, 47% of ischaemic heart disease, 75% of hypertensive disease, and 25% of other cardiovascular disease worldwide is attributed to hypertension.<sup>4</sup> Similar estimates were reported by WHO, which stated that globally about 62% of cerebrovascular disease and 49% of ischaemic heart disease are attributable to suboptimal blood pressure (BP) defined as systolic BP >115 mmHg).<sup>1</sup>

Although it is commonly believed that the prevalence of AH is higher in developed countries and countries of Eastern Europe than in most developing countries, recently, a significant increase in AH has been reported in some developing countries such as Brazil or Ecuador.<sup>5</sup> According to the World Health Organization, three of the first five leading causes of death in Ecuador are now due to AH complications including ischemic heart disease (1<sup>st</sup>), cerebrovascular disease (2<sup>nd</sup>) and hypertensive heart disease (5<sup>th</sup>).<sup>6</sup> However, very little is known about the exact prevalence of cardiovascular disease in general and hypertension in particular in specific ethnic groups or geographic regions of Ecuador.

The goal of this study was to assess the rate of hypertension among people living in or near Vilcabamba, Ecuador. Vilcabamba is located in the southern region of Ecuador in the province of Loja. Vilcabamba is known world-wide as the Valley of Longevity. During the 1960s and 1970s reporters from popular magazines such as the Readers Digests and National Geographic, and scientists alike came to Vilcabamba