



# SOUTH ASIANS AND HEART DISEASE

## Introduction

In the UK the highest recorded rates of coronary heart disease (CHD) mortality are in people born in the Indian Sub-continent countries of India, Pakistan and Bangladesh (“*South Asians*”). *South Asian* men have an age-standardised mortality rate about 40% higher than the whole population, and for women the figure is 51%. However, the many ethnic groups within *South Asian* are heterogeneous in relation to social custom and risk factors.

## Why is CHD so common in *South Asians*?

Four main categories of explanation have been offered.

### 1. Excess exposure to risk factors

The established risk factors which are commoner in *South Asian* populations include a low HDL cholesterol, elevated triglycerides, diabetes (which is much commoner in *South Asians*) and lack of aerobic exercise. For LDL cholesterol, high blood pressure and obesity the findings have been inconsistent with variations between studies. By contrast, smoking is less common amongst Indian men (but not Pakistani and Bangladeshi men) and all *South Asian* women.

### 2. Greater susceptibility

The explanation that *South Asians* are more susceptible to established CHD risk factors has not been systematically studied. However, proposed mechanisms include genetic differences (as yet unidentified) or a mismatch between a fetal/early life metabolism and that in middle age. A third possibility is that rapid change in some risk factors may, itself, confer a risk. For example, Punjabis in Southall had a mean serum cholesterol of 6.5mmol/l compared with 4.9 mmol/l for their siblings in Punjab, India. By inference, the cholesterol concentration rose about 1.6mmol/l after migration. Rapid rises in risk factors of this magnitude could be very important.

### 3. Specific risk factors

The third explanation is that there are specific risk factors that are as yet unidentified. The search for a cause has led to the development of numerous hypotheses including the

use of ghee and other cooking oils, racism, insulin resistance and specific lipid abnormalities. None of these has been proven but the best studied is that of insulin resistance which underlies the high rates of diabetes in *South Asians*. The results of prospective studies are awaited.

### 4. Competing causes

The fourth, but rarely considered explanation, is that there are fewer competing causes of death in middle-aged *South Asians*: cancer rates are comparatively low, for example.

## What action needs to be taken by primary care teams?

The control of the coronary heart disease epidemic in *South Asians* requires a co-ordinated, vigorous response based on established principles and available evidence on effectiveness. These are addressed in the National Service Framework on coronary heart disease. Primary care teams should:

- Adopt broadly-based strategies that focus on established risk factors, taking account of language and cultural needs.
- Smoking cessation, which has been relatively neglected, needs to be targeted at Bangladeshi and Pakistani men and all *South Asian* teenagers. The British Heart Foundation funds an Asian Quitline.
  - Bengali 0800 0022 44
  - Gujarati 0800 0022 55
  - Hindi 0800 0022 66
  - Punjabi 0800 0022 77
  - Urdu 0800 0022 88
- Other key risk factors requiring vigorous control include diabetes, hypertension, obesity, raised cholesterol and triglyceride values and lack of physical exercise.
- Disease registers and practice lists may need an ethnic code so services can be appropriately targeted.
- Community involvement will probably be needed to devise effective implementation of these policies and ensure that *South Asians* are well informed about their risk of coronary heart disease.

### **Further reading**

1. Balarajan R. Ethnicity and variations in mortality from coronary heart disease. *Heath Trends* 1996;28:45-51.
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3. McKeigue P M, Shah B, Marmot M G. Relation of central obesity and insulin resistance with high diabetes prevalence and cardiovascular risk in South Asians. *Lancet* 1991;337:382-86.
4. Department of Health. *Modern Standards and Service Models. Coronary Heart Disease, National Service Frameworks.* London, Dept of Health, 2000.
5. Kooner J S. Coronary Heart Disease in UK Indian Asians: the potential for reducing mortality. *Heart* 1997;78:530-532.