

**Health Survey for England**

**2004**

**The health of  
minority ethnic groups**

**Summary of key findings**

A survey carried out on behalf of The Information Centre

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# Introduction

## The Health Survey for England

The Health Survey for England (HSE) is part of a programme of surveys commissioned by the Department of Health, and provides regular information that cannot be obtained from other sources on a range of aspects concerning the public's health and many of the factors that affect health. Since April 2005, commissioning the survey has been taken over by the new Health and Social Care Information Centre.

Each survey in the series includes core questions and measurements (such as blood pressure and anthropometric measurements and analysis of blood, saliva and urine samples), as well as modules of questions on specific issues that vary from year to year. In recent years, the core sample has also been augmented by an additional boosted sample from a specific population subgroup, such as children, older people or, as this year, those from the largest minority ethnic groups in England.

This is the second health survey in the series to focus on the health of minority ethnic groups, building on the information obtained in the 1999 survey. Additional households were included in the survey to increase the number of Black Caribbean, Indian, Pakistani, Bangladeshi, Chinese and Irish participants, as in 1999. For 2004, the representation of Black African informants was also increased. This report compares results for each of these groups with the general population in England.

The general household sampling method used in most years does not yield sufficient numbers of households from minority ethnic groups to analyse their responses separately. Therefore, only half of the usual sample number of adults and children was selected in the usual way. This provided a representative sample of the whole population (including members of minority ethnic groups who happened to be included in this general sample), with whom the specific minority ethnic groups could be compared. 6,552 addresses were selected in 312 wards, issued over twelve months from January to December 2004. Up to ten adults and up to two children in each household were interviewed, and a nurse visit arranged for those participants in minority ethnic groups who consented.

The other part of the sample for the 2004 survey was a 'boost' sample designed to include additional interviews with members of the seven largest minority ethnic groups in England: Black Caribbean, Black African, Indian, Pakistani, Bangladeshi, Chinese and Irish. 41,436 addresses were selected from another 483 wards, issued over the same 12 month period, January to December 2004. For these addresses, only those from the specified minority ethnic groups were eligible for inclusion: up to four adults and three children were included from each eligible household in the boost sample, with a random selection of participants if there was more than this number in an eligible household.

Interviews were held with 6,704 adults aged 16 or over, and 1,650 children from the general population, and 6,816 adults and 3,298 children from minority ethnic groups. Interviews were carried out at 72% of households in the general population, and at 69% of known eligible boost sample households. In both samples, 88% of adults in co-operating households were interviewed.

## Topics covered in the survey

The content of the survey (household interview, individual interviews, and height and weight measurements) was similar for both the core and the boost samples. The ethnic boost sample was asked additional questions about fungus, damp, and pets in the household; cardiovascular disease; country of birth, religion, languages, and cultural identity (adults aged 16+); and asthma and wheezing (children aged 0-15). Only informants in the seven target minority ethnic groups (in either the core or boost sample) had a nurse visit,

## Health Survey for England 2004: Contents

### Household data

Household size, composition and relationships	Type of dwelling and area
Accommodation tenure and number of bedrooms	Car ownership
Economic status/occupation of Household Reference Person	Heating/cooking appliances
Household income	Mould and dampness
Smoking in household	Household pets

### Individual level information

#### Age

0-1    2-3    4    5-6    7    8-10    11-12    13-15    16-64    65+

### Interviewer visit

General health, longstanding illness, limiting longstanding illness, acute sickness, fractures	●	●	●	●	●	●	●	●	●	●
CVD, including use of services									●●	●●
Rose Angina questionnaire									●●	●●
Physical activity		●	●	●	●	●	●	●	●	●
Smoking						● <sup>a</sup>	● <sup>a</sup>	● <sup>a</sup>	● <sup>b</sup>	●
Drinking (seven day period)						● <sup>a</sup>	● <sup>a</sup>	● <sup>a</sup>	● <sup>b</sup>	●
Respiratory problems	●●	●●	●●	●●	●●	●●	●●	●●		
Fruit and vegetable consumption				●	●	●	●	●	●	●
Complementary and alternative medicine									● <sup>d</sup>	● <sup>d</sup>
Economic status/occupation, educational achievement									●	●
Ethnic origin	●	●	●	●	●	●	●	●	●	●
Country of birth, religion									●●	●●
Parental health									●●	●●
Height measurement		●	●	●	●	●	●	●	●	●
Weight measurement	●	●	●	●	●	●	●	●	●	●
Reported birth weight	●	●	●	●	●	●	●	●		
Cycling safety						● <sup>a</sup>	● <sup>a</sup>			
Psychosocial health (GHQ12)								● <sup>a</sup>	● <sup>a</sup>	● <sup>a</sup>
Euroqol general health (EQ5D)									● <sup>a</sup>	● <sup>a</sup>
Social support, social capital									● <sup>a</sup>	● <sup>a</sup>
Use of contraceptive pill									● <sup>a</sup>	● <sup>a</sup>
Hormone replacement therapy									● <sup>c</sup>	● <sup>a</sup>

### Nurse visit

Prescribed medicines and vitamin supplements	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●
Nicotine replacements									●●	●●
Immunisations	●●									
Eating habits (fat, salt)									●● <sup>a</sup>	●● <sup>a</sup>
Strengths and difficulties			●● <sup>e</sup>	●● <sup>e</sup>	●● <sup>e</sup>	●● <sup>e</sup>	●● <sup>e</sup>	●● <sup>e</sup>		
Blood pressure				●●	●●	●●	●●	●●	●●	●●
Infant length	●●									
Waist and hip circumference							●●	●●	●●	●●
Lung function					●●	●●	●●	●●		
Blood sample – total & HDL cholesterol, glycated haemoglobin, haemoglobin, ferritin							●●	●●	●●	●●
Blood sample – fibrinogen, c-reactive protein									●●	●●
Blood sample – IgE, HDM IgE							●●	●●		
Saliva sample – cotinine			●●	●●	●●	●●	●●	●●	●●	●●
Fasting blood samples – triglycerides, LDL cholesterol, glucose									●●	●●
Urine sample									●●	●●

● Asked of general population and minority ethnic informants.

●● Asked of minority ethnic informants only.

<sup>a</sup> These modules were administered by self completion.

<sup>b</sup> This module was administered by self-completion for those aged 16-17 and some aged 18-24.

<sup>c</sup> 18+ only (there are no HRT questions in the young adult self-completion).

<sup>d</sup> This module was introduced in April to December points only.

<sup>e</sup> This module was administered by self-completion for parents of 4-15 year olds.

measuring infant length (aged at least six weeks and under two years), blood pressure (aged 5+), lung function (aged 7-15), and waist and hip circumference (aged 11+). Nurses also took a saliva sample for cotinine assay (aged 4-15), a non-fasting blood sample (aged 11+), a fasting blood sample (16+), and a spot urine sample (16+) for analysis. Nurses obtained written consent before taking samples from adults, and parents gave written consent for their children's samples, while children also signed consent for their blood samples. Consent was also obtained from adults to send results to their GPs, and from parents to send their children's results to GPs.

## Results

This booklet presents findings from the 2004 Health Survey for England. All 2004 data in this report are weighted. Data for the general population have been weighted to allow for non response and selection differences, and the minority ethnic boost sample has been weighted for selection probabilities. Both weighted and unweighted bases are given in each table. The unweighted bases show the number of participants involved. The weighted bases show the relative sizes of the various sample elements after weighting, reflecting their proportions in the English population.

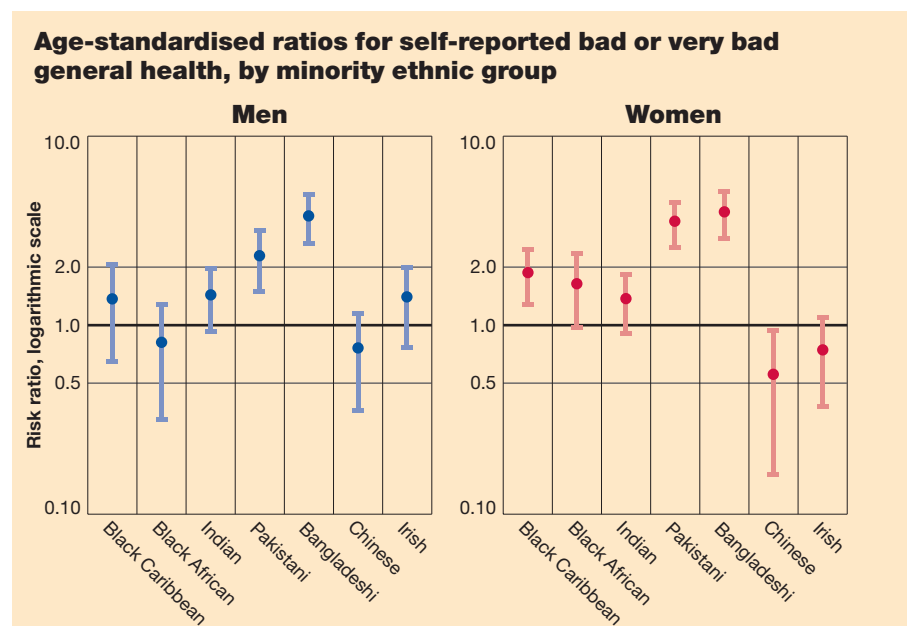
The full report consists of two volumes. Volume 1 shows the main findings on the health of minority ethnic groups, and volume 2 provides details of the survey methodology and response.

# Key findings

## Self-reported health and psychosocial well-being

### Self-reported general health

Informants assessed their general health using a five category scale. Very good or good general health was reported by 77% of men and 74% of women in the general population, while 6% of men and 7% of women reported bad or very bad general health. After adjusting for age, Bangladeshi and Pakistani men and women and Black Caribbean women were more likely to report bad or very bad health than the general population.



General population = 1.0. Error bars indicate 95% confidence limits.

### Longstanding illness and limiting longstanding illness

43% of men and 47% of women in the general population reported longstanding illness, and 23% of men and 27% of women reported a longstanding illness that limited their activities in some way. These were around the same prevalences as found in previous years. Pakistani women and Bangladeshi men were more likely than those in the general population to report a limiting longstanding illness. The levels of both longstanding illness and limiting longstanding illness were significantly higher for Pakistani women in 2004 than they were in 1999.

### Acute sickness

Among the general population, 14% of men and 19% of women reported that they had had an acute sickness in the past two weeks. Pakistani men (risk ratios 1.42) and women (1.39) were more likely to report acute sickness than the general population.

### GHQ12

Informants completed the GHQ12 questionnaire, a measure of psychological well-being. A score of 4 or more is considered indicative of psychiatric morbidity. Pakistani men and women and Bangladeshi men were more likely to have a high GHQ12 score than the general population. Among the general population, the prevalence of high GHQ12 scores was lower in 2004 (11% for men and 15% for women) than in 1999 (15% for men and 19%

for women). This was also true for Irish and Bangladeshi men and women, and Black Caribbean and Indian women.

### Social support

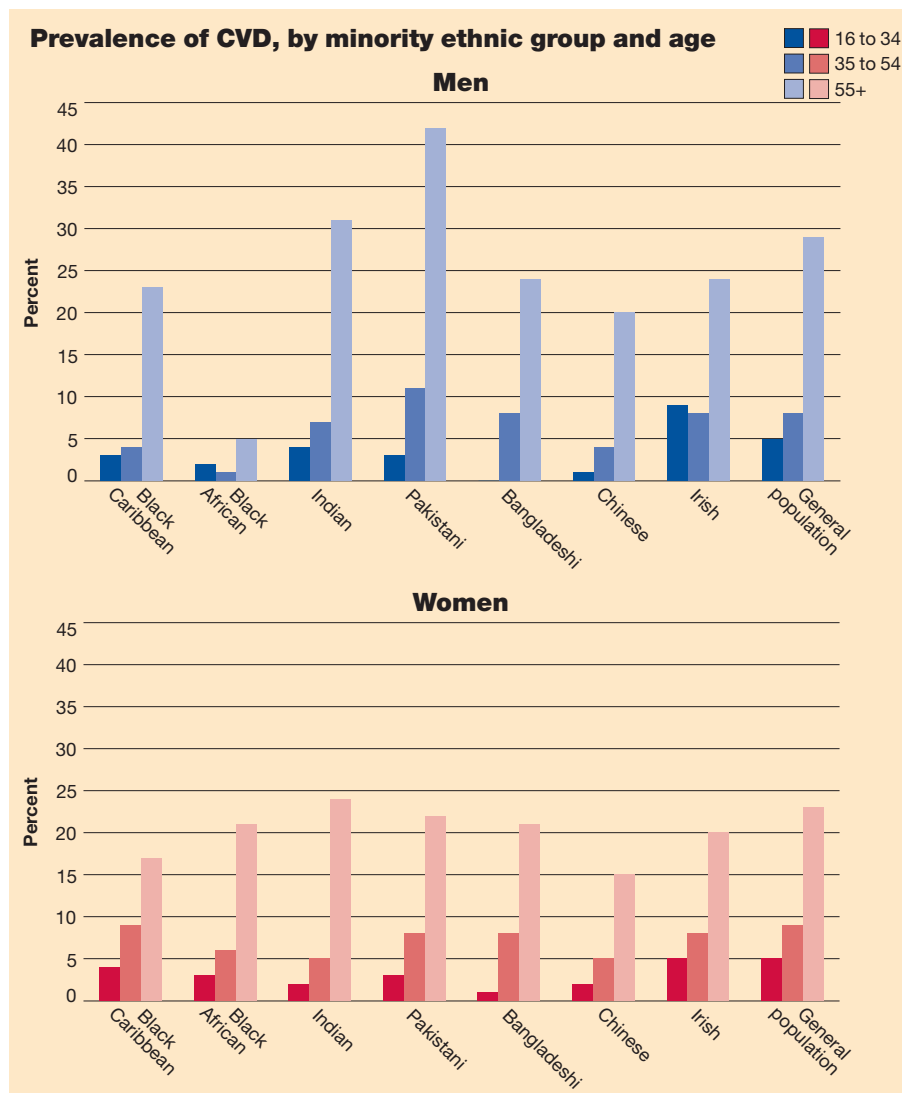
A minority of the general population (16% of men and 11% of women) reported a severe lack of support. Prevalence of severe lack of social support was much higher among men and women in each minority ethnic group, except Irish men and women. This was particularly marked among Pakistani men (38%) and women (30%), and Bangladeshi men (35%) and women (33%).

## Cardiovascular disease

The United Kingdom has one of the highest rates of death from cardiovascular disease. The government has set a target to reduce the death rate from coronary heart disease and stroke amongst people aged under 75 by at least two fifths by the year 2010.

For the purpose of this report, informants were classified as having a cardiovascular (CVD) condition if they reported having ever had any of the following conditions diagnosed by a doctor: angina, heart attack, stroke, heart murmur, abnormal heart rhythm, 'other heart trouble'.

Cardiovascular disorder diagnosed by a doctor was most prevalent among Irish men (14.5%) and among women in the general population (13.0%). Black African men and Chinese women were significantly less likely than the general population to have any CVD condition. The prevalence of any CVD condition increased markedly with age in all ethnic groups.



Ischaemic heart disease (IHD) was defined as a history of reported angina or heart attack: 6.4% of men and 4.1% of women in the general population reported IHD. The prevalence of IHD or stroke combined was 7.9% in men and 5.8% in women. In almost all ethnic groups the overall prevalence of ischaemic heart disease (IHD) and of IHD or stroke was higher in men than in women. Black African informants reported the lowest prevalence of IHD (0.7% men and 0.5% women) and of IHD or stroke (0.7% men, 1.0% for women).

Informants were grouped into three categories depending on their household income, adjusted for the number of people living in the household (equivalised household income). Irish informants, and those from the general population, showed significantly higher prevalence (and higher risk ratio) of CVD, IHD and IHD or stroke in the lowest income category than the highest income category. IHD and IHD or stroke were also more common in Black Caribbean women in the lowest income group than in the highest income group.

In addition to asking about doctor-diagnosed heart disease, the Rose Angina Questionnaire was used to identify individuals with symptoms of angina or previous myocardial infarction (heart attack). Black Caribbean women showed the highest rates of angina symptoms (3.9% Grade 1 and 2 angina combined) and Black Caribbean men showed the highest rates of symptoms of possible myocardial infarction (8.2%) based on this questionnaire.

The prevalence of CVD increased between 1999 and 2004 among Pakistani men, in whom the prevalence of CVD doubled between the two surveys (from 4.8% in 1999 to 9.1% in 2004), and among Indian women (from 2.3% in 1999 to 4.2% in 2004).

## Diabetes

Diabetes substantially increases the risk of cardiovascular disease (CVD) and increases the harmful effects of other CVD risk factors such as altered lipid (fat) levels in the blood, hypertension, smoking and obesity. Diabetes is characterised by high blood glucose levels which, if left untreated, can damage many organs, especially the eyes, kidneys, nerves, heart, and blood vessels. The two types of diabetes (type 1 and 2) have different causes and are treated differently.

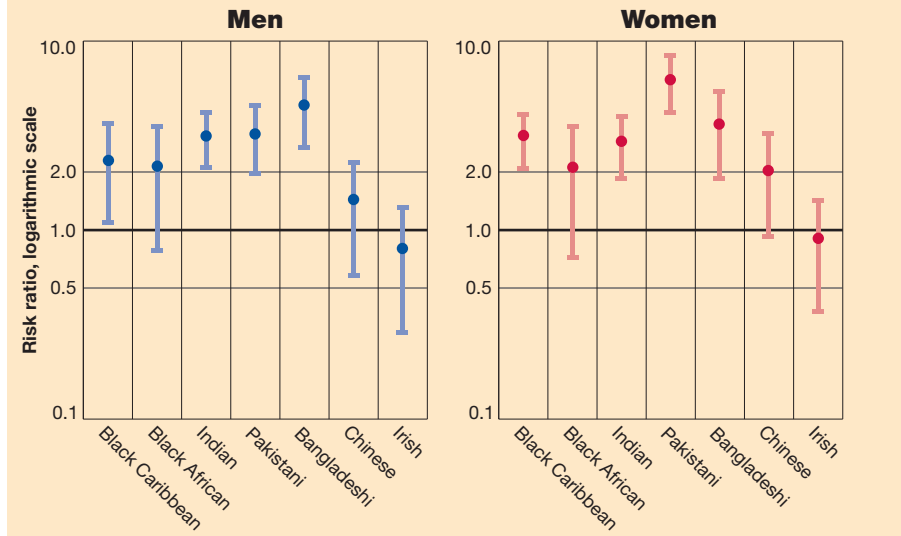
Informants who had been diagnosed by a doctor were classified as diabetic, except if first diagnosed when pregnant with no subsequent diagnosis. The questions made no attempt to distinguish between type 1 and type 2. For analysis, informants were classified as type 1 diabetics if they had been diagnosed before the age of 35 and were on insulin therapy at the time of the survey.

The prevalence of doctor-diagnosed diabetes increased markedly with age, in both men and women. It was more common in men than women for most ethnic groups and age-groups.

After adjusting for age, doctor-diagnosed diabetes was almost four times as prevalent in Bangladeshi men, and almost three times as prevalent in Pakistani and Indian men, as men in the general population. Among women, doctor-diagnosed diabetes was more than five times as likely among Pakistani women, at least three times as likely in Bangladeshi and Black Caribbean women, and two-and-a-half times as likely in Indian women compared with women in the general population. However, the prevalence of *undiagnosed* diabetes did not differ between different ethnic groups.

Type 2 diabetes accounted for the majority of cases. The risk ratios for type 2 doctor-diagnosed diabetes are shown in the chart. Black Caribbean, Indian, Pakistani and Bangladeshi men and women had higher risk of type 2 diabetes than the general population. Prevalence of type 2 diabetes increased with age among all groups. With the exception of the Chinese and the Irish, this increase with age was greater among minority ethnic groups than among the general population.

### Age-standardised ratios of doctor-diagnosed type 2 diabetes, by minority ethnic group



General population = 1.0. Error bars indicate 95% confidence limits.

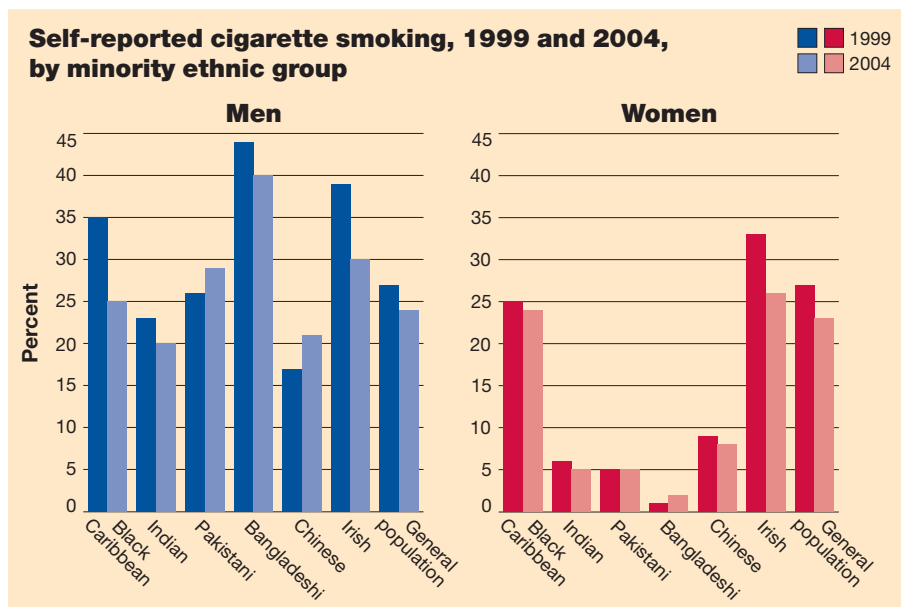
### Smoking and use of tobacco

Smoking is the single greatest cause of preventable illness and premature death in the UK, and is one of the main determinants of health inequalities. In 2004 the Public Service Agreement (PSA) set the objective of reducing adult smoking rates to 21% or less by 2010; with a reduction in prevalence among routine and manual groups to 26% or less.

Self-reported cigarette smoking prevalence was 40% among Bangladeshi, 30% Irish, 29% Pakistani, 25% of Black Caribbean, 21% Black African and Chinese, and 20% in Indian men, compared with 24% among men in the general population. After adjustment for age, Bangladeshi and Irish men were more, and Indian men less, likely to report smoking cigarettes than men in the general population.

Self-reported smoking prevalence was higher among women in the general population (23%) than most minority ethnic groups, except Irish (26%) and Black Caribbean women (24%). The figures for the other groups were 10% Black African, 8% Chinese, 5% Indian and Pakistani, and 2% in Bangladeshi women.

The proportion of cigarette smokers in the general population fell to 24% of men and 23% of women in 2004, from 27% for both in 1999. Among Black Caribbean men and Irish men and women, cigarette smoking was also less prevalent in 2004 than in 1999. The prevalence in Black Caribbean men fell to 25% in 2004 from 35% in 1999, in Irish men to



30% in 2004 from 39% in 1999, and in Irish women to 26% in 2004 from 33% in 1999. For all other minority ethnic groups no differences were observed.

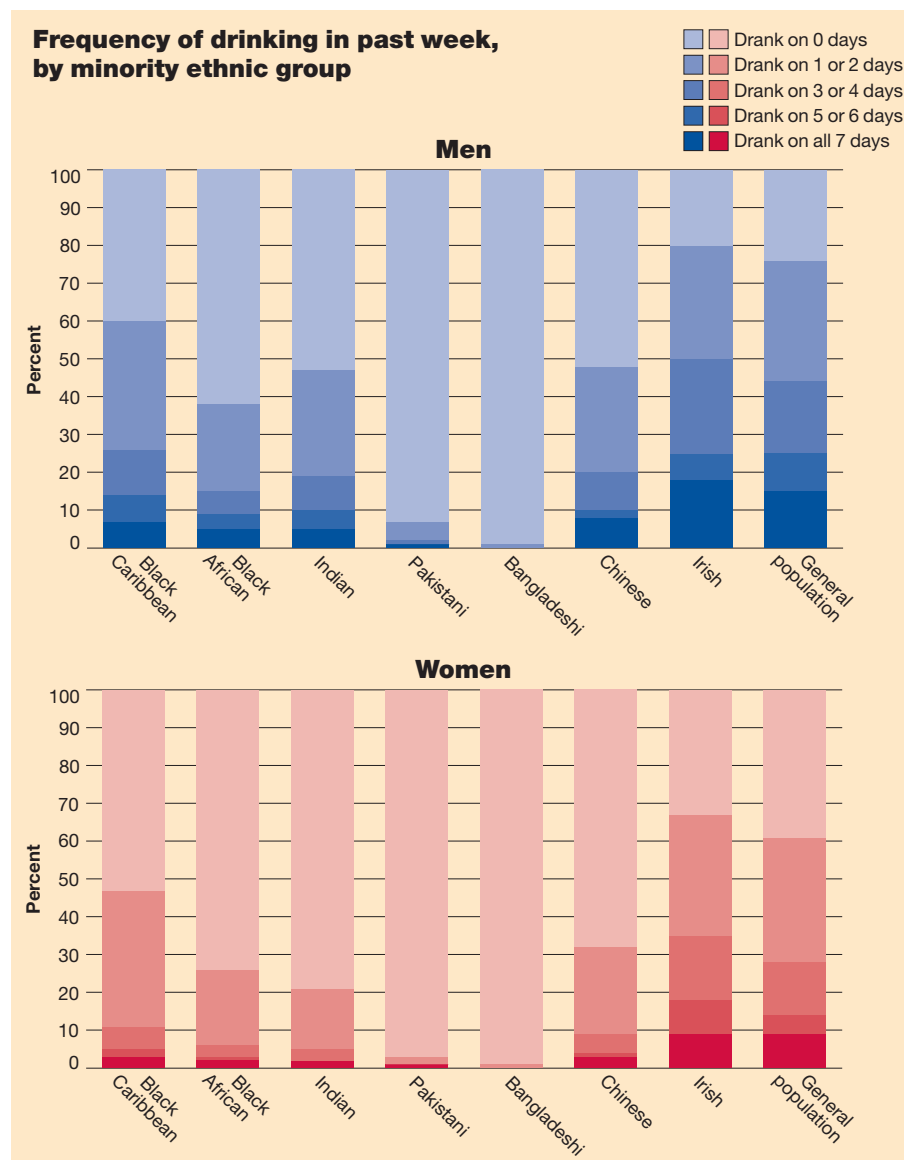
Questions about use of chewing tobacco were asked of South Asian (Pakistani, Indian, Bangladeshi) informants. Use of chewing tobacco was most prevalent among the Bangladeshi group, with 9% of men and 16% of women reporting using chewing tobacco. Among Bangladeshi women, use of chewing tobacco was greatest among those aged 35 and over (26%). Among men, there was no difference in use of chewing tobacco by age.

Saliva cotinine samples suggest that prevalence of tobacco use is greater than self-reported estimates. For example, self-reported use of tobacco products was 44% and 17% among Bangladeshi men and women, respectively. However, including informants with a cotinine level indicative of personal tobacco use (15 ng/ml or more), the estimates rise to 60% of men and 35% of women.

## Drinking

As in 2003, the survey provided information on daily alcohol consumption by asking about drinking in the week before the interview (with one question on usual frequency of drinking).

Pakistani adults (89% of men and 95% of women) and Bangladeshi adults (97% of men and 98% of women) were the most likely to be non-drinkers. In the general population, 8% of men and 14% of women were non-drinkers. Apart from the Irish, all minority ethnic groups were more likely than the general population to be non-drinkers and also to drink alcohol less often than the general population. Irish drinking habits were similar to the general population, except that the mean number of days in the past week when alcohol was consumed was higher, at 3.0 for men and 2.1 for women, than for the general population (2.7 for men, 1.8 for women).



Among those who had drunk alcohol in the week before the interview, 45% of men and 30% of women in the general population had exceeded the recommended daily limit (i.e. had drunk at least four units for men or three for women) on their heaviest drinking day in the last week. This was higher among Irish participants (56% of men, 36% of women), but lower for all other ethnic groups: Black Caribbean (28% of men, 18% of women), Indian (22% men, 8% women), Chinese (19% men, 12% women), Black African (17% men, 7% women), Pakistani (4% men, <1% women) and was lowest amongst Bangladeshi participants (1% of male and <1% of female drinkers).

'Binge' drinking, defined as drinking twice the recommended daily limit, was also relatively common: 25% of male and 14% of female drinkers in the general population. Except for the Irish (32% of men, 16% of women), the proportion of men and women who were binge drinking was lower for all the other minority ethnic groups than in the general population, ranging from 0.5% for Bangladeshi men to 12% for Black Caribbean men, and from <1% of both Pakistani and Bangladeshi women to 6% of Black Caribbean women.

## **Anthropometric measures, overweight, and obesity**

HSE 2004 reports on height, weight, body mass index (BMI), prevalence of overweight and obesity, waist-hip ratio and waist circumference. BMI, a generalised measure of obesity, is weight (kg) divided by the square of height (m<sup>2</sup>). BMI was grouped into:

18.5 kg/m<sup>2</sup> or less = underweight (current medical definition)  
over 18.5-25 kg/m<sup>2</sup> = desirable weight  
over 25-30 kg/m<sup>2</sup> = overweight  
over 30 kg/m<sup>2</sup> = obese.

Waist-hip ratio (WHR), an indicator of central obesity, was defined as waist circumference divided by hip circumference. A raised WHR was taken to be 0.95 or more in men and 0.85 or more in women. Waist circumference (according to some authors a better measure than BMI and WHR to identify those with a health risk from being overweight) is also described in this report. A raised waist circumference was taken to be 102 cm or more in men and 88 cm or more in women.

The thresholds for BMI categories, waist circumference and WHR are intended for white European populations. As there are no generally accepted cut-offs for specific minority ethnic groups, these thresholds were used for all informants in the survey.

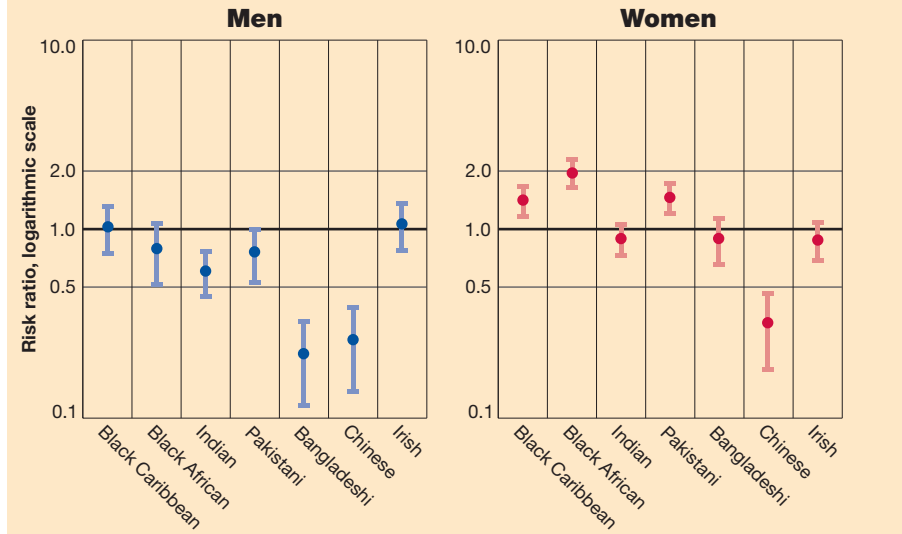
Mean BMI of Chinese, Bangladeshi, Indian and Pakistani men was lower than in the general population (27.1 kg/m<sup>2</sup>). Mean BMI in Chinese women was markedly lower, in Indian and Irish women was similar to, and in Black Caribbean and Black African women was higher than in women in the general population (26.8 kg/m<sup>2</sup>).

Black Caribbean and Irish men had the highest prevalence of obesity. Bangladeshi men were almost five times, and Chinese men almost four times, less likely to be obese than men in the general population. For women, risk ratios were higher for Black African, Black Caribbean and Pakistani women and lower for Chinese women than women in the general population.

Pakistani and Bangladeshi men and women, and Black Caribbean and Black African women were more likely to have raised WHR and raised waist circumference than informants in the general population; Chinese men and women and Black Caribbean men had a lower risk.

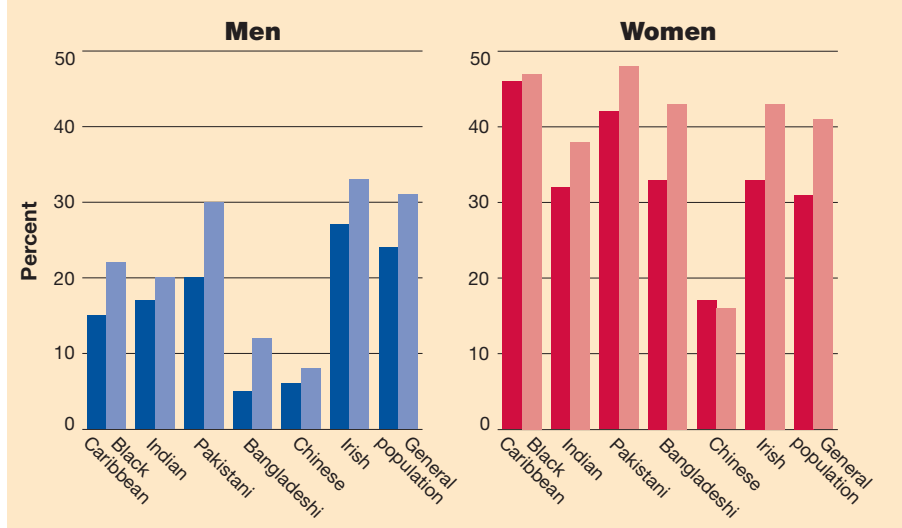
Overall, the patterns for BMI, overweight and obesity, WHR and raised waist circumference in HSE 2004 were similar to those in 1999, although for most groups the absolute levels of overweight and obesity, raised WHR and raised waist circumference increased between the years.

### Age-standardised ratios for obesity (BMI>30 kg/m<sup>2</sup>), by minority ethnic group



General population = 1.0. Error bars indicate 95% confidence limits.

### Prevalence of raised waist circumference (102cm+ in men and 88cm+ in women), 1999 and 2004, by minority ethnic group



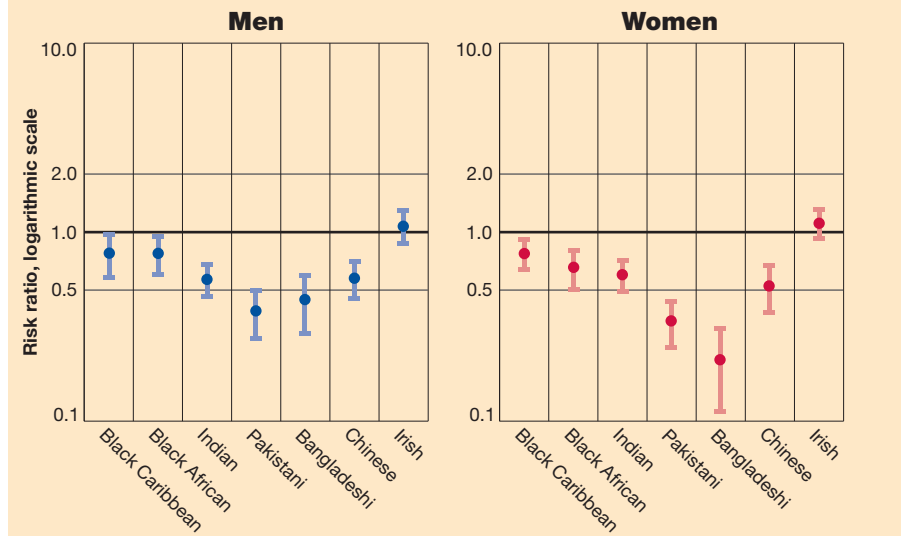
## Physical activity

Information was collected about four categories of activity in the four weeks before the interview: housework, manual/gardening/ DIY, walking, and sports and exercise. Analysis is based on sessions lasting 30 minutes or more. The level of intensity of the activity was also taken into account. The analysis in this report focuses mainly on activities of at least moderate intensity.

Three-quarters of men and women in the general population took part in some physical activity for at least 30 continuous minutes in the four weeks prior to interview. Apart from Irish men and women and Black Caribbean men, age-adjusted participation in any physical activity of at least moderate intensity was lower in minority ethnic groups than in the general population. Participation in any activity at least once a week increased among Bangladeshi and Chinese men, and for men and women in the general population, between 1999 and 2004, but a reduction in regular physical activity participation was found among Pakistani men.

Except for Irish informants, age-adjusted participation rates in brisk walking for at least 30 minutes in the four weeks prior to interview were lower in each minority ethnic group than in the general population (32% of men and 27% of women), with the lowest age-adjusted risk ratios among Asian men and women.

### Age-standardised ratios for participation in brisk walking, by minority ethnic group

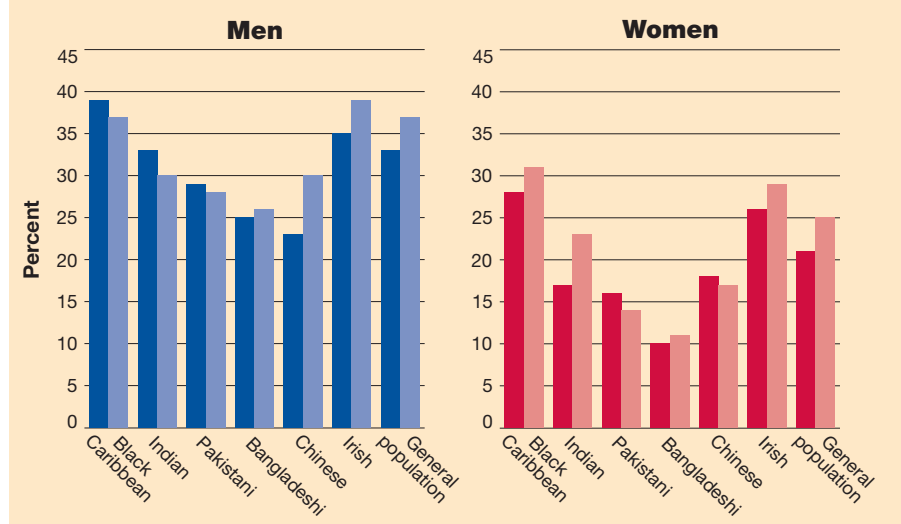


General population = 1.0. Error bars indicate 95% confidence limits.

Indian, Pakistani, Bangladeshi and Black African men and women were less likely to have participated in sports and exercise in the four weeks prior to interview than men and women in the general population (41% of men and 34% of women).

As in 1999, Asian (Indian, Pakistani, Bangladeshi and Chinese) men and women were less likely to meet the physical activity recommendations (of at least 30 minutes of moderate or vigorous exercise on at least five days per week) than the general population (37% of men, 25% of women). Age-standardised risk ratios ranged from 0.58 in Bangladeshi men to 0.75 in Indian men, and from 0.32 in Bangladeshi women to 0.81 in Indian women. Among the general population, activity levels and the proportion meeting the activity recommendations increased between 1999 and 2004. There was little change among minority ethnic groups in the proportion meeting the recommendations, apart from an increase among Chinese men and Indian women.

### The percentage meeting the physical activity recommendations in 1999 and 2004, by minority ethnic group

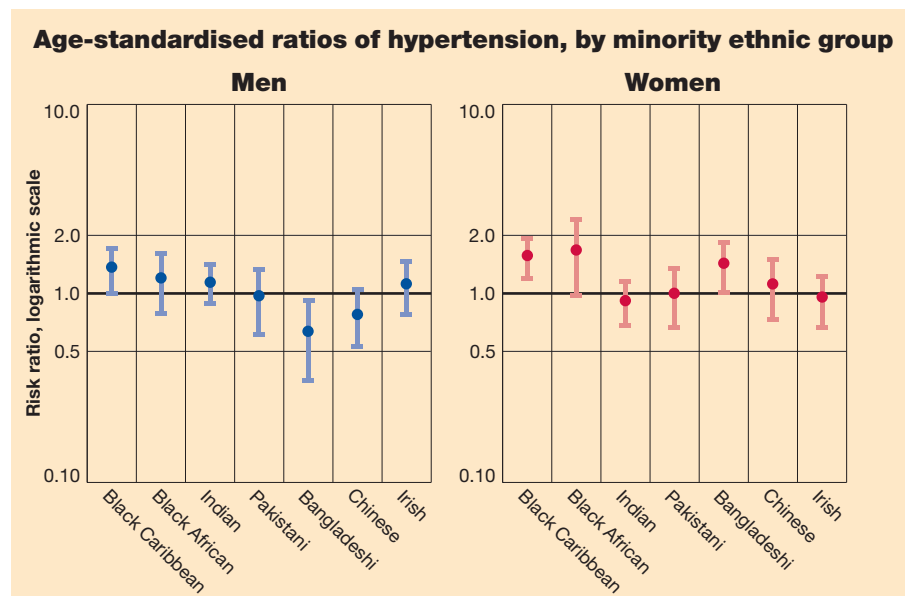


## Blood pressure

Using current guidelines, hypertension is defined as having a systolic blood pressure (SBP) of 140 mmHg or more, a diastolic blood pressure (DBP) of 90 mmHg or more, or taking drugs for high blood pressure. In 2003 a new automated device was introduced to measure blood pressure (Omron). Adjustments have been made to the results from 1999 to enable comparisons with 2004 results.

After adjustment for age, mean systolic blood pressure (SBP) was lower for Chinese and South Asian men, particularly Bangladeshi men, and higher for Black Caribbean men compared with men in the general population. It was also significantly lower among Indian women than among women in the other minority ethnic groups or women in the general population. In general, mean diastolic blood pressure (DBP) did not differ by ethnicity, but was slightly higher in Indian men and Pakistani women.

Bangladeshi men were significantly less likely to have high blood pressure (hypertension) than men in the general population. Prevalence did not vary significantly among men in other ethnic groups. However, Black Caribbean, Black African and Bangladeshi women were significantly more likely to have high blood pressure than women in the general population.



General population = 1.0. Error bars indicate 95% confidence limits.

Mean SBP was lower in 2004 than in 1999 in general but the decrease was not significant in some groups. Significant falls in SBP occurred in Indian men and women, Pakistani and Chinese women, and men and women in the general population. No significant differences were found in mean DBP between 1999 and 2004 except for among Pakistani women.

Compared with 1999, the largest increases in 2004 were in the prevalence of controlled hypertension, while the largest decreases were in the prevalence of untreated hypertension.

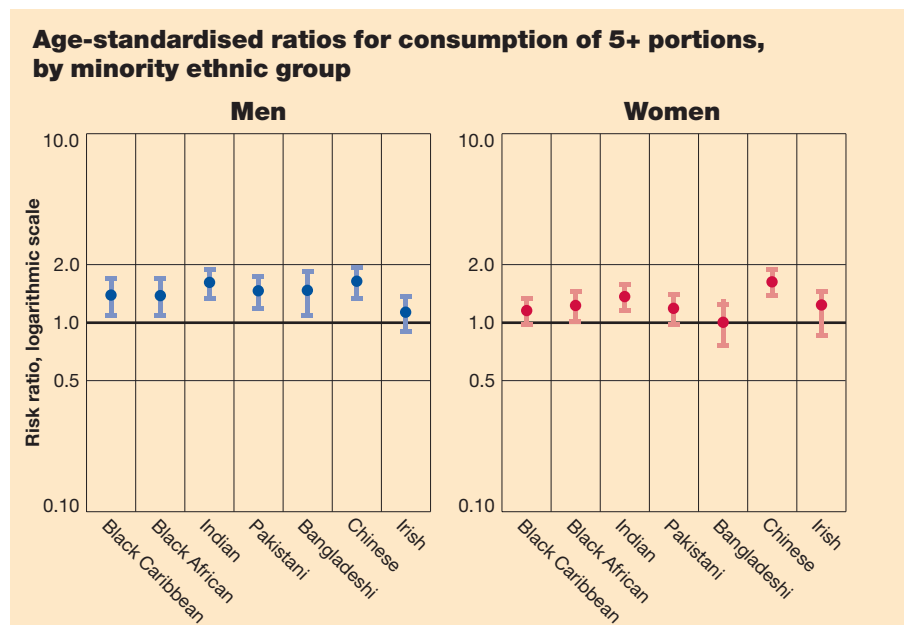
## Eating habits

### *Fruit and vegetable consumption*

Questions on fruit and vegetable consumption were introduced into HSE in 2001. The questions focus on consumption on the day before the interview, which was assumed to be a 'typical' day. A 'portion' of 80g was defined in terms of everyday measures, such as tablespoons, cereal bowls and slices. The analysis focuses on mean consumption and on the proportion of informants eating the recommended amount of five or more portions per day.

Over a third of Indian and Chinese men met the recommended guidelines of consuming five or more portions of fruit and vegetables a day (37% and 36%, respectively). With the exception of Irish men, the proportion of men meeting the '5 a day' guidelines was significantly higher among all minority ethnic groups than among men in the general population (23%). Women generally tended to eat more fruit and vegetables than men.

More women (27%) than men (23%) in the general population consumed the recommended amount of five or more portions of fruit and vegetables per day. Similarly to men, the proportion eating five or more portions of fruit and vegetables per day was highest among Chinese and Indian women (42% and 36%, respectively).



General population = 1.0. Error bars indicate 95% confidence limits.

### Fat intake

Fat intake among men in the general population was greater than for all the minority ethnic groups (with a mean fat score of 24.3). Irish men were the most similar to the general population, with a mean fat score of 23.5. Indian, Chinese and Black African men had the lowest fat intakes (mean fat scores between 18.6 and 20.4). These three groups also had the highest prevalence of low fat intake (89%, 86% and 86%, respectively), compared with 77% of Irish men and 72% of men in the general population.

Patterns of fat intake among women in the general population were different from men. In the general population the mean fat score for women (21.2) was significantly lower than for men (24.3) and 84% of women had a low fat intake compared with 72% of men. Irish women were the most similar to women in the general population, while women in all other minority ethnic groups apart from Pakistani women had lower mean levels of fat consumption, with the lowest fat intake among Indian (17.3) and Black Caribbean women (17.9).

### Use of salt

The pattern of salt use in cooking was similar in both men and women. Use of salt in cooking was higher in most minority ethnic groups than among the general population. The exception was the Irish group, with fewer using salt in cooking than in the general population.

There were more modest ethnic differences in salt use at the table, with men and women in the general population and Irish informants more likely to report that they generally add salt without tasting than other groups. More Chinese and Black Caribbean men and women said they rarely or never add salt at the table (50% and 49% respectively among men, 53% and 64% among women).

Between 1999 and 2004, there was a reduction in the proportion of Chinese and Irish men who used salt in cooking, though little change among other groups. The proportion of women who used salt in cooking decreased slightly over the same period in all minority ethnic groups, with the greatest falls among Chinese, Irish, Black Caribbean and Pakistani women.

Salt use at the table also decreased between 1999 and 2004 among adults in most minority ethnic groups, particularly in Irish and Indian men and women and Pakistani men. There was little change among Bangladeshi and Black Caribbean informants.

## Blood analytes

Non-fasting blood samples were tested for total and HDL- cholesterol, C-reactive protein, fibrinogen, haemoglobin, ferritin, and glycated haemoglobin. LDL-cholesterol, triglycerides, and glucose were measured on fasting blood samples. Blood samples were taken only from minority ethnic groups in HSE 2004, so comparisons with the general population are made with HSE 2003. However, as fasting blood samples were not taken from adults under 35 before 2004, summary results for LDL-cholesterol and glucose are those for adults aged 35 and over.

### Cholesterol

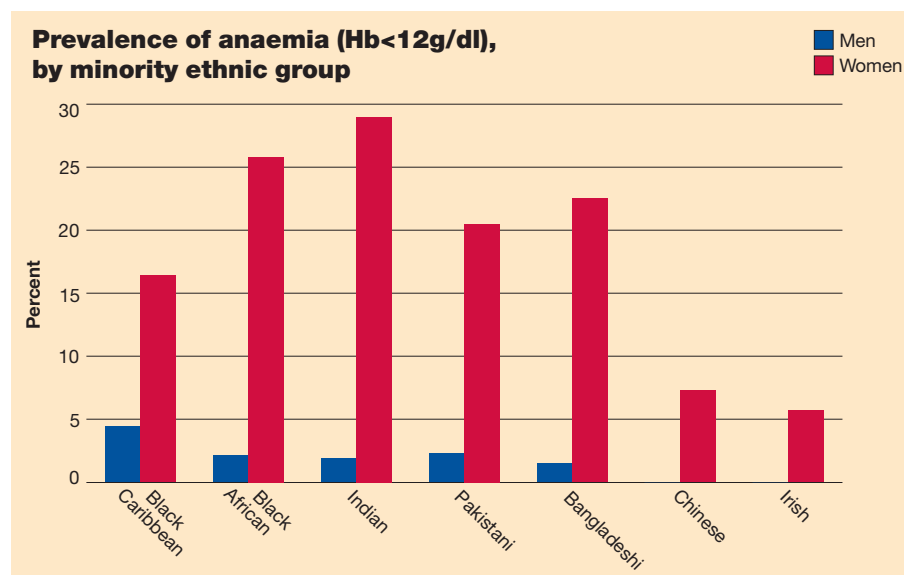
Treatment with drugs (statins) to reduce serum LDL- (low density lipoprotein) cholesterol significantly reduces morbidity and mortality in individuals with or at high risk of ischaemic heart disease (IHD). All results for LDL-cholesterol presented in this report include people on lipid-lowering drugs.

Among males aged 35 and over, no significant difference was found in age-standardised mean or prevalence of raised LDL-cholesterol ( $\geq 3.0\text{mmol/l}$ ) between minority ethnic groups and the general population. After adjustment for age, Chinese women had a lower mean LDL-cholesterol and lower prevalence of raised LDL-cholesterol. Black Caribbean women showed significant increases over time in both mean LDL-cholesterol, from 3.1mmol/l in 1999 to 3.4mmol/l in 2004, and in the prevalence of raised LDL-cholesterol, from 49% to 68%.

HDL- (high density lipoprotein) cholesterol is protective against cardiovascular disease. The prevalence of low HDL-cholesterol ( $< 1.0\text{mmol/l}$ ) was significantly higher than in the general population in Pakistani men and Bangladeshi men and women, and significantly lower in Black African men.

### Haemoglobin and iron-deficiency

The prevalence of anaemia (defined as haemoglobin  $< 12.0\text{g/dl}$ ) was very low among men, ranging from 0% in Chinese and Irish men to 4.4% in Black Caribbean men. Anaemia was more common among women: it was lowest in Chinese (7.3%) and Irish (5.7%) women but otherwise ranged from 16.4% in Black Caribbean women to 29.0% in Indian women. The prevalence of anaemia decreased between 1999 and 2004 in Black Caribbean and Pakistani women.



Low levels of ferritin, the main protein for the storage of iron, indicate iron-deficiency. The prevalence of low ferritin (levels between the cut-offs for the bottom quintile of the general population in 1998) was higher among Indian men than the other ethnic groups, with a low prevalence among Chinese men. Among women, prevalence of low ferritin was higher in South Asian groups than in Black Caribbean, Chinese or Irish women. Between 1999 and 2004, mean ferritin increased significantly in Pakistani and Irish men and in Black Caribbean and Bangladeshi women.

### ***Glycated haemoglobin and fasting glucose levels***

Glycated haemoglobin is circulating haemoglobin to which glucose is bound. Levels of glycated haemoglobin indicate the average blood glucose levels over the preceding three months. It is used to monitor control of blood sugar in diabetics: high levels indicate individuals at higher risk of micro- and macro-vascular complications. It has also been suggested as a screening test for diabetes. Raised levels are taken as 7% or above.

Age-standardised prevalence of high glycated haemoglobin ( $\geq 7\%$ ) was very considerably raised in Bangladeshi men and women and Pakistani women, and significantly lower in Irish men and women, compared with the general population. With the exception of Pakistani and Irish women, mean glycated haemoglobin was lower in 2004 than in 1999 in each minority ethnic group and in the general population.

Age-standardised mean fasting glucose levels were not significantly different between minority ethnic groups and the general population among male informants. Among women, Pakistani informants had a higher mean glucose level. There was a significant decrease in glucose levels from 1999 to 2004 in all ethnic groups in both sexes, except among Pakistani and Bangladeshi men and women, for whom the bases were too small to enable comparison.

### **Use of complementary and alternative medicine**

Among the general population in 2004, women were more likely than men to have ever used any of the 24 listed complementary or alternative medicines (51% of women compared with 40% of men). The most popular complementary or alternative medicines ever used were massage therapy (17% of women, 10% of men), aromatherapy (18% of women, 6% of men), acupuncture (13% of women, 9% of men) and osteopathy (11% of both women and men). The two most commonly used in the last 12 months were again massage therapy and aromatherapy, followed by relaxation techniques and herbal medicine.

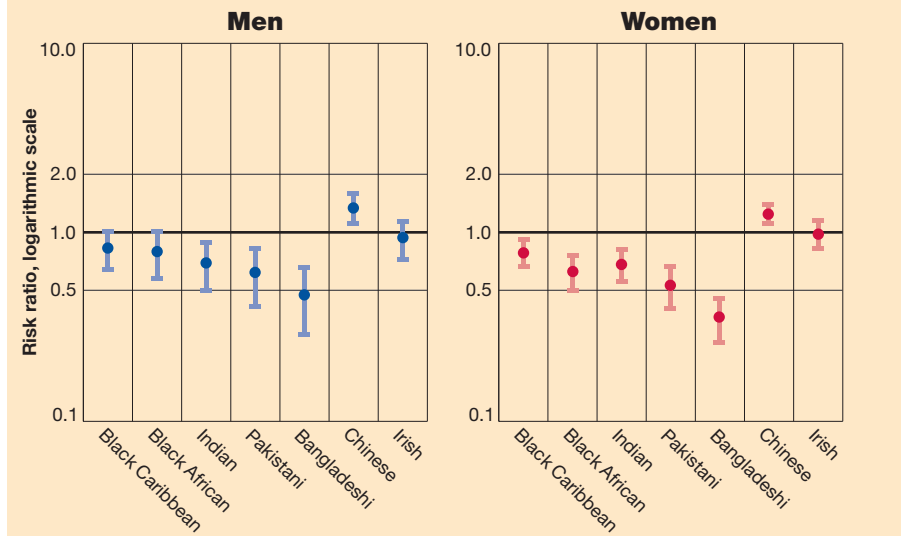
Use of complementary or alternative medicines varied substantially by ethnic group. Indian (29%), Pakistani (22%) and Bangladeshi men (14%) and Black Caribbean (40%), Indian (36%), Black African (32%), Pakistani (25%) and Bangladeshi (15%) women were less likely than those in the general population to have ever used complementary or alternative medicines: these differences were still significant after age standardisation.

Chinese men and women were the most likely ethnic group to have ever used complementary or alternative medicines (55% of Chinese men and 64% of Chinese women). These differences were mostly due to higher use of Chinese medicine and acupuncture among Chinese people. 44% of Chinese men and 52% of Chinese women had ever used Chinese medicine (compared with 3% of men and 4% women in the general population); 15% of Chinese men and 22% of Chinese women had ever used acupuncture (compared with 9% of men and 13% of women in the general population). Although levels of use were much lower, Chinese women and men were also more likely to have ever used Shiatsu than their counterparts in the general population.

Ayurvedic medicine was much more prevalent among Indian women and men than among any other ethnic group – 7% of Indian women and 10% of Indian men had ever used Ayurvedic medicine compared with less than 0.5% of men and of women in the general population.

Bangladeshi men and women were the least likely ethnic group to have ever used complementary or alternative medicines (14% of men and 15% of women). However, use of homeopathy was similar to the general population (8% of Bangladeshi men and women had ever used homeopathy, compared with 6% of men and 11% of women in the general population).

## Ever used any CAM, by minority ethnic group



General population = 1.0. Error bars indicate 95% confidence limits.

## Children's health

### General health (ages 4 to 15)

Children in all groups were very likely to rate their general health as 'good' or 'very good'. In most minority ethnic groups, the proportions who reported this were similar to the proportions in the general population (93% of boys and girls). Smaller proportions of Bangladeshi boys (86%) and Black Caribbean girls (89%) reported 'good' or 'very good' general health.

Irish and Black Caribbean children reported similar levels of longstanding illness to children in the general population (24% of boys and 20% of girls). Children in all other minority ethnic groups were less likely than the general population to report a longstanding illness, ranging from 11% of Black African boys to 18% of Indian and Pakistani boys, and from 7% of Black African girls to 13% of Pakistani and Chinese girls.

The prevalence of acute sickness within the past two weeks among Irish boys and girls and Pakistani boys was similar to the prevalence in the general population (13% of both boys and girls). Children in other minority ethnic groups were less likely to report acute sickness.

### Psychosocial health (ages 4 to 15)

The prevalence of emotional, behavioural or relationship difficulties, as indicated by a high Total Deviance score on the Strengths and Difficulties Questionnaire, was not significantly different among children in most minority ethnic groups and the general population. The exceptions were Chinese boys and Black African girls, who were less likely to score above the 'problem' threshold.

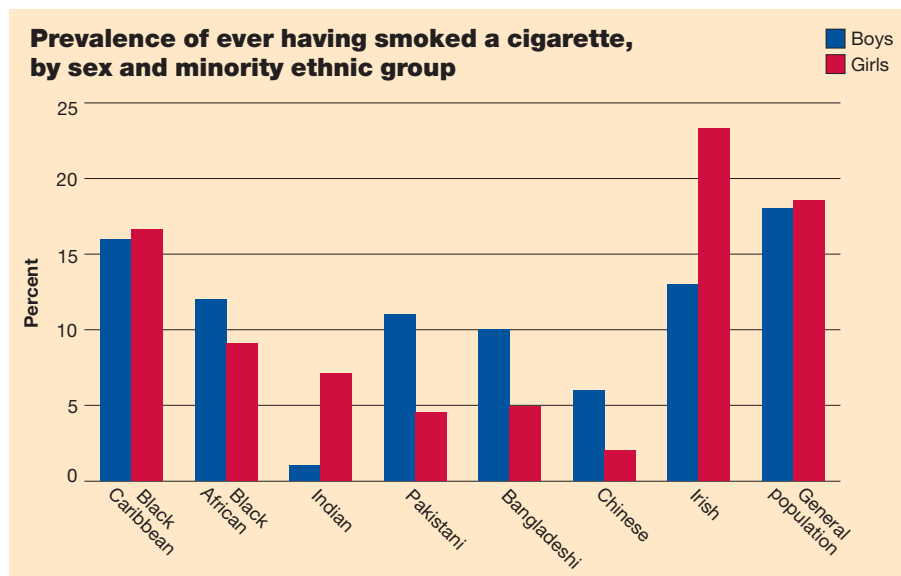
### Respiratory symptoms (ages 0 to 15) and lung function (ages 7 to 15)

The prevalence of having experienced respiratory symptoms (wheezing or whistling) among Black Caribbean, Irish and Chinese boys and Black Caribbean and Irish girls was similar to the prevalence within the general population (36% of boys, 29% of girls). Experience of wheezing was less prevalent among children in other minority ethnic groups. In all groups, boys were more likely than girls to have ever wheezed, although the difference was not significant for Black Caribbean, Indian and Irish children.

After controlling for age and height, mean FEV<sub>1</sub> (forced expiratory volume in the first second) was similar among Black Caribbean and Irish boys and boys in the general population. The mean FEV<sub>1</sub> for boys in other minority ethnic groups, and for girls in all minority ethnic groups, was lower than the mean for the general population.

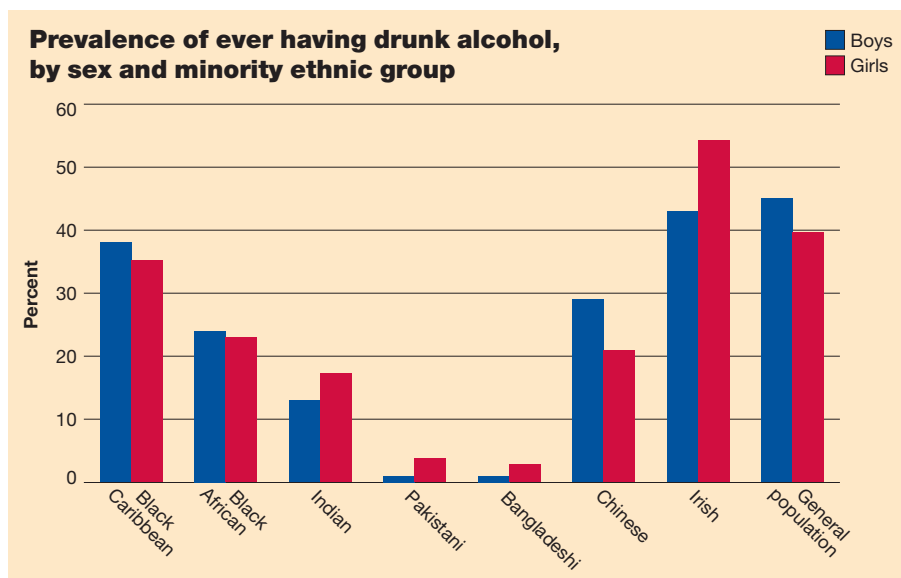
### Cigarette smoking (ages 8 to 15)

The chart shows prevalence of ever having smoked a cigarette, by ethnic group. After adjusting for age, Black Caribbean and Irish boys and girls, and Black African and Bangladeshi boys, were as likely to have smoked cigarettes as children in the general population. Children in other minority groups were less likely to have smoked.



### Drinking alcohol (ages 8 to 15)

45% of boys and 40% of girls in the general population had drunk alcohol at least once. Children in most minority ethnic groups were less likely than the general population to have ever had an alcoholic drink, particularly Pakistani and Bangladeshi boys (both 1%). The proportions of Black Caribbean and Irish boys and Black Caribbean girls who had tried alcohol were similar to the proportions in the general population. Irish girls (54%) were more likely than girls in the general population to have ever drunk alcohol.



### Anthropometric measures (ages 2 to 15)

Compared with boys in the general population, Black Caribbean boys were taller on average and Chinese boys were shorter than average. Black Caribbean and Black African girls were taller on average than girls in the general population, and Bangladeshi girls were shorter on average, after adjusting for age. Black Caribbean, Black African and Pakistani boys were heavier on average than boys in the general population. Black Caribbean and Black African girls were heavier on average than girls in the general population, after adjusting for age.

Black African boys (31%) were more likely to be obese than boys in the general population (19% in 2004). Otherwise, the prevalence of obesity among all minority ethnic groups was similar to that in the general population for both boys and girls.

#### ***Physical activity (ages 2 to 15)***

Pakistani boys and Irish boys and girls were as likely as children in the general population (69% of boys, 61% of girls) to have exercised at the levels recommended by government (at least one hour every day). Children in other minority ethnic groups were less likely than children in the general population to have been active at the recommended levels, particularly Chinese boys (38%) and Pakistani girls (36%).

#### ***Fruit and vegetable consumption (ages 5 to 15)***

The proportions of Chinese boys, Bangladeshi girls and Irish participants eating five or more portions a day of fruit and vegetables were not significantly different from the general population (11% of boys, 12% of girls). Children in other groups were more likely than the general population to eat the recommended five or more portions. The average daily consumption of fruit and vegetables among children in minority ethnic groups ranged from 2.8 portions for Irish boys to 3.6 portions for Chinese girls. Children in the general population ate fewer portions: boys ate an average of 2.5 portions, girls ate an average of 2.6 portions.

## Reports on the 2004 Health Survey

This booklet is a summary of the findings from the 2004 Health Survey for England:

Sproston K and Mindell J (eds) *Health Survey for England 2004. Volume 1: The Health of Minority Ethnic Groups*. The Information Centre, 2006

Sproston K and Mindell J (eds) *Health Survey for England 2004. Volume 2: Methodology and documentation*. The Information Centre, 2006

Full results are available in the survey report, and also in an anonymised data file lodged with the Data Archive at the University of Essex. Reports and data files from earlier surveys are similarly available.

For the general population, tables showing selected trends from 1993 to 2004 will be found on The Information Centre website (address below).

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### **National Centre for Social Research**

The National Centre for Social Research is the largest independent social research institute in Britain, specialising in social survey and qualitative research for the development and evaluation of policy. NatCen specialises in research in public policy fields such as health, housing, employment, crime, education and political and social attitudes. Projects include ad hoc and continuous surveys, using face-to-face, telephone and postal methods; many use advanced applications of computer assisted interviewing. NatCen has approximately 300 staff, a national panel of over 1,000 interviewers and 200 nurses who work on health-related surveys.

### **Department of Epidemiology and Public Health at the Royal Free and University College Medical School**

The Department houses over 160 staff, in 13 main research groups, including: the Joint Health Surveys Unit, part of the Health and Social Surveys Research Group; Cancer Research UK Health Behaviour Unit (including Weight Concern); Central and Eastern Europe Research Group; Dental Public Health; Healthcare Evaluation Group; Life Course Modelling Research Group (including the ESRC Priority Network: Capability and Resilience Research); MRC National Survey of Health and Development Unit; Psychobiology Group; Public Health Research Group; Social Epidemiology; and the Whitehall II Group. The Department also includes a Medical Statistics Unit. Joint posts link the Department to the Departments of Statistical Science and Economics and The Wolfson Institute for Biomedical Research at UCL, whilst a great deal of collaborative research is conducted through the International Centre for Health and Society, housed within the Department. Its research programme is concerned particularly with social factors in health and illness, including longitudinal studies of cardiovascular disease (Whitehall studies) and the English Longitudinal Study of Ageing (ELSA); international studies of cardiovascular disease and diabetes; the socio-dental indicators of need; and the socio-economic and policy implications of an ageing population.



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