research showing that genetic differences are greater within socially defined racial groups than between groups.⁸ The relation between features that traditionally define race and contribute to ethnicity, such as skin colour, and genetic differences has been found to be inconsistent.⁹ In addition, by focusing on biological factors as the explanation for differences in response to drugs, researchers risk ignoring other possible environmental, psychosocial, and economic factors, and lifestyle factors such as diet, that are important in producing illness.⁷ If important genetic variations exist between currently defined racial and ethnic groups, drug treatments may be tailored for greater effect.

In a review of the research on the effects of cardiovascular therapies carried out by Taylor and Ellis,¹⁰ the evidence for ethnic variations in response to such drugs seems modest—a conclusion we reached in our own review in July 2004 and presented at the conference in Brisbane.³ Diuretics were found to be beneficial for both black and white patients with heart failure. Black patients were found to respond equally well to angiotensin receptor blockers, spironolactone, digoxin, and carvedilol (β -adrenoceptor antagonists). Compared with white patients, black patients were found to respond less well to angiotensin converting enzyme inhibitors (enalapril),¹⁰ though this conclusion has been contested. Yu et al showed that Chinese patients required lower dosages of heparin and warfarin than those usually recommended for white patients.^{11 12}

The new genetics has reopened the debate on the biological basis of race and ethnicity. Pharmacogenetics is growing fast, and it will lead to a more refined understanding of ethnic and racial differences in drug response. Many claims and counterclaims will be made. Doctors need to take an open minded but critical stance. A historical perspective is likely to be helpful—

claims of a biological basis to racial or ethnic variations in health and disease, including therapeutics, have proved to be overstated.¹

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Prevalence of asthma

Is no longer increasing in some countries, but the reasons for this are unclear

A broad consensus exists that in most Western countries the prevalence of asthma increased over the last four decades of the 20th century. This is based largely on repeat studies of school age children. Evidence is emerging that in recent years this trend has flattened or fallen in some countries. For example, as part of the UK arm of the international study of asthma and allergies in childhood (ISAAC), repeat studies found that self reported symptoms of asthma in 13-14 year old children had fallen by about 20% in the United Kingdom between 1995 and 2002.¹ This trend was also observed in the health survey for England between 1996 and 2001.² Over the same period a similar fall in symptoms of asthma in 6-7 year old children reported by parents was seen in Melbourne.³ On the other hand, the only available repeat survey of preschool children noted a major increase in prevalence between 1990 and 1998.⁴ A global picture of recent trends in children will soon be provided by the results of ISAAC phase 3, which has obtained trends in prevalence between 1995 and 2002 in more than 100 centres in 58

countries.⁵ Little information exists about long term trends in adults, but recent trends in the UK seem to be flat.^{2 6}

These data are limited by the lack of an objective measure of asthma in large populations and the reliance on surveys to elicit symptoms of wheezy breathlessness, which are likely to represent a heterogeneous group of disorders.⁷ Questions about lifetime prevalence are subject to serious recall bias, and the usual compromise is to rely on the 12 month period of prevalence in an attempt to capture the intermittent nature of symptoms experienced by most people with asthma, while limiting the recall entailed and avoiding problems with labelling. Trends in the cultural perception and naming of symptoms might explain the trends observed in prevalence studies,⁸ and while it remains true that without objective measures we cannot be certain how much is real and how much is artefact it seems unlikely that artefact would completely explain the observed trends.

If the trend is indeed flattening or decreasing, might it be explained by trends in health care? The use

of inhaled corticosteroids, an effective treatment, has increased in most countries for which data are available. Over the 1990s, sales of inhaled corticosteroids in the UK increased from 1.9 to 4.3 patient months per 10 000 population and by the late 1990s about two thirds of patients with asthma treated by their general practitioner were receiving inhaled corticosteroids alone or in combination.⁹ This is one plausible explanation for the reduction in attacks of severe asthma as reflected in the fall in hospital admissions, primary care contacts for asthma attacks, and mortality that has occurred in the UK and some other Western countries over the past decade.¹⁰ Although this may also have had some effect on prevalence by affecting prognosis or severity, it is unlikely to explain the whole of the recent changes in prevalence, which have also been observed in milder cases and in associated atopic conditions such as hay fever and atopic eczema, which are not treated with inhaled corticosteroids.¹

More likely, the recent changes in the prevalence of asthma reflect changes in the underlying cause of asthma or its exacerbating factors. While theories abound, we must admit that neither the rise nor the recent flattening or fall in the prevalence of asthma can be explained on the basis of current knowledge. Any single explanation would need to account for both the rise and fall of the prevalence of asthma. A substantial change in prevalence would require a large change in an important risk factor to which a large proportion of the population was exposed.¹¹ Various explanations have been proposed to explain trends and geographical variations in asthma, including air pollution, tobacco smoke, aeroallergens, diet, and infections in early life, but none has been shown by epidemiological studies to fit the above requirements. At an individual level, the most powerful risk factor for asthma is a history of atopic disease such as atopic eczema or allergic rhinitis. However, one promising idea, the hygiene hypothesis, has not explained the epidemiology of atopy or asthma.¹¹ Since there is some evidence that

atopic diseases tend to track together over time in populations, trends in asthma may partly reflect changes in the incidence of atopy in the population; but since the proportion of asthma cases attributable to atopy is less than one half,¹² factors unrelated to atopy must also be important. Any advance in our understanding of trends is likely to depend on the development of new theories of causation together with better methods of measuring and classifying asthma in population studies.

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Coping with the aftermath of trauma

NICE recommends psychological therapy for post-traumatic stress disorder

Adequate survival behaviour is a crucial "gift of nature." Humans have been fairly successful in reducing the threat to life. Nevertheless, crossing a street or driving a car requires increased alertness in order to survive. Natural disasters such as the recent tsunami and man-made disasters such as war, terrorist attacks, killing, robbing, sexual and physical abuse, and plane crashes show how vulnerable we are. After surviving such an event, people need basics—food, shelter, medical care, and consolation. Nowadays psychological care has been added to this list of basic needs for some people.

Doctors ought to know whether and when psychological help is necessary. The new guideline on managing post-traumatic stress disorder in primary and secondary care from the National Institute for Clinical Excellence (NICE) excellently summarises the experiences of sufferers and carers and provides evidence

and advice on interventions for adults and children.¹ The guideline gives special attention to "disaster planning"; the needs of ex-military personnel, victims of domestic violence, and refugees and asylum seekers; and the role of the non-statutory sector, emphasising the broad impact of trauma in modern society. Giving more attention to the nature and meaning of post-traumatic stress disorder in a cultural and historical context would have made the guidelines complete.

When symptoms such as flashbacks, sleep problems, difficulty in concentrating, and emotional lability are mild and have been present for less than four weeks after traumatic events, the guidelines recommend initial watchful waiting. Behind this wise advice lies the evidence based conclusion that early psychological intervention, often called debriefing, has no effect in preventing post-traumatic stress disorder; indeed, despite reported high satisfaction, it might

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