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.

H Ross Anderson *professor of epidemiology and public health*

Division of Community Health Sciences, St George's Hospital Medical School, London SW17 0RE
(r.anderson@sghms.ac.uk)

Competing interests: None declared.

- 1 Anderson HR, Ruggles R, Strachan DP, Austin JB, Burr M, Jeffs D, et al. Trends in prevalence of symptoms of asthma, hay fever, and eczema in 12-14 year olds in the British Isles, 1995-2002: questionnaire survey. *BMJ* 2004;328:1052-3.
- 2 Joint Health Surveys Unit. Health survey for England. London: Stationery Office 2002.
- 3 Robertson CF, Roberts MF, Kappers JH. Asthma prevalence in Melbourne schoolchildren: have we reached the peak? *Med J Aust* 2004;180:273-6.
- 4 Kuehni CE, Davis A, Brooke AM, Silverman M. Are all wheezing disorders in very young (preschool) children increasing in prevalence? *Lancet* 2001;357:1821-5.
- 5 Ellwood P, Asher MI, Beasley R, Clayton TO, Stewart AW. The international study of asthma and allergies in childhood (ISAAC): phase three rationale and methods. *Int J Tuberc Lung Dis* 2005;9:10-6.
- 6 Barraclough R, Devereux G, Hendrick DJ, Stenton SC. Apparent but not real increase in asthma prevalence during the 1990s. *Eur Respir J* 2002;20:826-33.
- 7 Silverman M, Wilson N. Wheezing phenotypes in childhood. *Thorax* 1997;52:936-7.
- 8 Magnus P, Jaakkola JJ. Secular trend in the occurrence of asthma among children and young adults: critical appraisal of repeated cross sectional surveys. *BMJ* 1997;314:1795-9.
- 9 Hoare J, Bruce M, Majeed FA. Prevalence of treated asthma and its management in general practice in England and Wales, 1994-1998. *Health Stat Q* 2003;17:15-22.
- 10 Anderson HR, Gupta R. Trends in asthma. In: Partridge MR, Miles A, eds. *The effective management of asthma*. London: Aesculapius, 2002.
- 11 Strachan DP. Family size, infection and atopy: the first decade of the "hygiene hypothesis." *Thorax* 2000;55(suppl 1):s2-10.
- 12 Pearce N, Pekkanen J, Beasley R. How much asthma is really attributable to atopy? *Thorax* 1999;54:268-72.

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

BMJ 2005;330:1038-9

even be harmful.²⁻⁴ Clearly the standard practice of debriefing after disasters and catastrophes should end. But for managing the chaos, material losses, grief, and anger—for example, after a terrorist attack—no conclusive evidence is available yet on how a disaster stricken community regains control.

According to the NICE guideline, treatment is necessary when, in the aftermath of trauma, post-traumatic stress disorder, depression, suicidality, addiction, medically unexplained physical symptoms, or dissociative disorders arise. The risk of developing post-traumatic stress disorder after trauma is 8-13% for men and 20-30% for women,⁵ with a 12 month prevalence of 1.3% to 3.9%,⁶ creating a huge burden on society.

Post-traumatic stress disorder is primarily a deregulation of the fear system. Fear is a necessary emotion at times of danger, and is followed by a stress response—fighting, freezing, or fleeing. This survival system depends on appraising threats in order to initiate survival behaviour.⁷ Once the threat or trauma is over, the fear system normally calms down after a few days or weeks. In post-traumatic stress disorder this system fails to reset to normal, keeping the sufferer hyperalert, scanning for dangerous cues as if the event may happen again.

The disorder is thus characterised by involuntary, persistent remembering or reliving the traumatic event in flashbacks, vivid memories, and recurrent dreams. The individual tries to avoid recollecting the trauma, by avoiding its location or television programmes about it. Persistent symptoms of increased arousal, such as hypervigilance, exaggerated startle response, sleeping problems, irritability, and difficulty concentrating, are part of the disorder. Comorbidities such as depression, substance abuse, and other anxiety disorders are the norm rather than the exception. Emotional numbing, such as feeling detached from others, is also seen—for example in soldiers after peacekeeping missions.

The NICE guideline systematically reviews the evidence for both psychological and pharmacological interventions. As first line treatment NICE recommends trauma focused psychological therapy. Both published and unpublished data indicate only limited efficacy for a small number of pharmacological interventions, so NICE recommends not using drugs as first line treatment.

The most effective treatment for resetting the fear system is cognitive behaviour therapy.⁸ By imaginary exposure to the traumatic event the fear reaction will decrease in time. Concepts about the self that are prompted by the event, such as feeling “weak,” guilty, or invulnerable, are replaced by more realistic cognitions. The guideline also supports, albeit not as strongly,

treatment with eye movement desensitisation reprocessing, which uses a distractive manoeuvre of bilateral stimulation after exposure to decrease the emotional lability related to the trauma.

An unanswered question remains whether the heightened sense of fear in post-traumatic stress disorder is related to the event or to the suppression of unusually strong emotions of grief and aggression brought about by the traumatic experience.⁹ Like Summerfield we believe that more attention should be paid to the meaning of tragic experiences, shattering the sufferer's views about life,¹⁰ although evidence on this aspect is lacking. We also agree with the guideline about paying attention to the common comorbidities of post-traumatic stress disorder (such as depression and anxiety), though the evidence is still quite limited.¹

Despite the existence of effective psychosocial treatments, a third of patients will not recover fully.¹¹ Comorbidity, chronicity, and the accumulation of acute and chronic stress may explain the limited response to treatment. Also, from an evolutionary viewpoint one can see how “the gift of nature” of remembering and learning from danger may restrict what is attainable in treating post-traumatic stress disorder.¹² We cannot delete the memory of trauma.

Berthold P R Gersons *professor of psychiatry*

(b.p.gersons@amc.uva.nl)

Miranda Olff *associate professor of psychotraumatology*

Department of Psychiatry, Academic Medical Center, University of Amsterdam, 1105 BC Amsterdam, Netherlands

Competing interests: None declared.

- 1 National Institute for Clinical Excellence. *The management of post traumatic stress disorder in primary and secondary care*. London: NICE, 2005.
- 2 Rose S, Bisson J, Wessely S. Psychological debriefing for preventing post traumatic stress disorder (post traumatic stress disorder). *Cochrane Database Syst Rev* 2002; Issue 2:CD000560.
- 3 Gist R, Devilly GJ. Post-trauma debriefing: the road too frequently travelled. *Lancet* 2002;360:741-2.
- 4 van Emmerik AA, Kamphuis JH, Hulsbosch AM, Emmelkamp PM. Single session debriefing after psychological trauma: a meta-analysis. *Lancet* 2002;360:766-71.
- 5 Kessler RC, Sonnega A, Bromet E, Hughes M, Nelson CB. Posttraumatic stress disorder in the national comorbidity survey. *Arch Gen Psychiatry* 1995;52:1048-60.
- 6 Creamer M, Burgess P, McFarlane A. Posttraumatic stress disorder: Findings from the Australian national survey of mental health and well-being. *Psychol Med* 2001;31:1237-47.
- 7 Olff M, Langeland W, Gersons BPR. Effects of appraisal and coping on the neuroendocrine response to extreme stress. *Neurosci Biobehav Rev* (in press).
- 8 Foa EB, Keane T, Friedman M. *Effective treatments for post traumatic stress disorder: practice guidelines from the International Society for Traumatic Stress Studies*. New York: Guilford Press, 2000.
- 9 Gersons BPR, Carlier IVE, Lamberts RD, van der Kolk B. A randomized clinical trial of brief eclectic psychotherapy in police officers with posttraumatic stress disorder. *J Traumatic Stress* 2000;13:333-47.
- 10 Summerfield D. The invention of post-traumatic stress disorder and the social usefulness of a psychiatric category. *BMJ* 2001;322:95-8.
- 11 Bradley R, Greene J, Russ E, Dutra L, Westen D. A multidimensional meta-analysis of psychotherapy for post traumatic stress disorder. *Am J Psychiatry* 2005;162:214-27.
- 12 Le Douarin JE. *The emotional brain*. New York: Simon and Schuster, 1996.

Management of chronic kidney disease

Primary and secondary care need to set up a model of combined care

Epidemiological studies have shown that renal disease is common. In the United States, the third national health and nutrition survey (Nhanes III) has shown that 4.3% of the population has

chronic kidney disease with a glomerular filtration rate of 30-59 ml/min/1.73 m², and 0.2% has chronic kidney disease with a glomerular filtration rate of less than 15-29 ml/min/1.73 m².¹ In the United Kingdom,