efficient early warning system for asthmatic patients and those treating them.

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Asthma in runners

EDITOR,—Larsson *et al* reported that out of 42 Swedish elite cross country skiers, 23 had asthma and 31 asthma-like symptoms.¹ In 1984, 11.2% of the athletes in the United States' Olympic team had asthma induced by exercise.² Thus, in elite athletes and especially in skiers symptoms of exercise induced asthma are common.¹ Running is the most effective way to provoke such asthma,³ and bronchoconstriction in connection with exercise is exacerbated by inhalation of cold dry air or allergens.^{4,5} However, exercise induced asthma has not yet been thoroughly studied in runners. During winter in countries with four distinct seasons runners train outdoors in cold temperatures or indoors, where air quality may be poor. During spring and summer they are exposed to many pollen allergens.

We studied the occurrence of asthma, asthma-like symptoms, and allergy in elite athletes. Volunteer subjects were 103 runners from the Finnish adult and junior national teams. Their main event ranged from the 400 m to the marathon, and they had run a mean distance in training in the previous year of 4140 km (range 1500-8500 km). Their mean age was 22.9 (SD 5.5) years, and they had been active competitors for a mean of 9.3 (4.5) years. They completed questionnaires about allergies, asthma, and asthma-like symptoms connected with exercise (cough, breathlessness, or wheeze) and their relation to training and environmental conditions.

Sixteen of the runners had asthma documented by a physician. Twenty four of the 87 remaining runners (28%) had allergies. All 16 runners with asthma and 14 of the 24 runners with allergies (58%) reported having symptoms like exercise induced asthma. However, 23 of the 63 runners without asthma or allergies (37%) reported having such symptoms occasionally. Thus asthma-like symptoms were strongly associated with allergies as 75% (30/40) of the runners with allergies had symptoms compared with 37% (23/63) of the runners without allergies (χ^2 test, $P < 0.01$). Indoor training caused symptoms like exercise induced asthma in 41 of the 103 runners (40%), and outdoor training in cold air caused such symptoms in 31 (30%).

Asthma and symptoms like exercise induced

asthma adversely affect not only cross country skiers¹ but also middle and long distance runners, with over half of the runners in our study (52% (53/103)) being affected. In countries with four distinct seasons the circumstances of training may stress the airway mucous membranes to induce exercise induced asthma and symptoms like it in elite athletes, who use large ventilation volumes and train intensively all year round. In runners cold weather may be a minor problem, but allergy and exposure to aeroallergens during the pollen season in spring and indoor training in winter may be important factors in provoking asthma-like symptoms.

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Serum C4 concentration and risk of atherosclerosis

EDITOR,—Judith Kramer and colleagues report a high prevalence of the C4B*Q0 allotype in patients with myocardial infarction.¹ Muscari *et al* showed a significant association between serum C4 concentrations and the presence of severe atherosclerosis.² We have studied, in our paediatric lipid research clinic, 243 children aged 2.0 to 15.9 years. We determined serum C4 concentrations in 107 children from 79 families who were referred to our clinic from 1990 to 1992 because serum total cholesterol concentrations exceeded the 75th centile for local data (5.17 mmol/l)³ in at least one child. At the time of diagnosis we analysed the serum lipoprotein profile and C4 fraction with commercially available kits.

The children were divided into three age groups: 2.0-6.9, 7.0-10.9, and 11.0-15.9 years. They were also divided according to atherosclerotic risk, which depended on their concentration of low density lipoprotein cholesterol in comparison with values obtained in the healthy Spanish population: normal risk (values between the 5th and 75th centiles (1.29 and 3.23 mmol/l)); moderate risk (values between the 75th and 95th centiles (3.23 and 3.88 mmol/l)); and high risk (values above the 95th centile (3.88 mmol/l)). Two way analysis of variance with sex and age groups as dependent variables showed a significant effect only for sex. Comparisons between low density lipoprotein cholesterol groups were made by one way analysis of variance (Fisher's test); post hoc testing was done with Scheffe's S test.

We observed significant differences between boys in the high risk group and those in the two other groups (table). The relation between serum C4 concentrations and the risk of atherosclerosis agrees with that previously reported in adults.² Despite the high degree of variability in the expression of C4 genes in normal subjects,⁴ the association between serum concentrations of C4 or its isotypes and atherosclerosis could be related to the C4B*Q0 allotype. From our data we conclude

Serum C4 concentration (g/l) in children according to risk of atherosclerosis

	Normal risk	Moderate risk	High risk
Boys:			
No	24	14	19
Mean (SD)	0.19 (0.05)	0.18 (0.04)	0.23* (0.08)
Girls:			
No	17	14	19
Mean (SD)	0.18 (0.04)	0.18 (0.06)	0.17 (0.04)

*Boys at high risk v boys at normal risk, $P < 0.05$; boys at high risk v boys at moderate risk, $P < 0.05$.

that monitoring of the C4 fraction and other atherosclerotic risk factors⁵ could be useful in diagnosing and evaluating the atherosclerotic process. Now we must investigate the precise relation between all these findings and the pathogenic sequence of the formation of atherosclerotic plaques, which begins in childhood.

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Emergency transport for neonates after home deliveries

Expectations of flying squads are too high

EDITOR,—Northern region has had a centralised neonatal flying squad for many years, but we agree with Carol Sullivan and colleagues that the title is misleading.¹ It causes confusion and results in an instant response being expected. Such a response has become impossible with the reduction in junior doctors' hours and has always been problematic if the squad is already attending a call.

Community midwives may well have the expectations outlined by the authors,¹ and these should be dispelled. A neonatal flying squad could never, however, react sufficiently quickly to fulfil a primary role in neonatal resuscitation. Northumbria ambulance authority has one of the best response times but would not be able to move a squad from hospital to a patient at home in less than 15 minutes from receipt of a call. In the few cases in which neonatal resuscitation is required² it is needed in the first minutes after delivery. Therefore establishing a separately funded flying squad is an inadequate solution. An alternative is to improve the training of the people who deliver babies in the community. If we are able to train

neonatal nurse practitioners there should be no barrier to teaching neonatal resuscitation to all midwives. In the northern sector of the North Eastern and Yorkshire region a day of training in neonatal resuscitation has been run four times a year for many years.³ The initial impetus for this was the need to train new senior house officers, but midwives have always been welcome and several have attended each course. Recently we have been asked to run the course separately for 80 midwives a year.

The baby, however, is not the only potential patient. Maternal problems also occur, and obstetric flying squads have all but died out. In this region we are piloting a course in advanced life support in obstetrics, which is designed to cover these aspects. It is aimed mainly at midwives, general practitioners, obstetricians, and paramedics, but others may find it appropriate. At present we are seeking primary funding, but if this is achieved the first course should be run next year; it would then be self funding. Such courses will not provide emergency care in the community to the level of that expected in hospital but should narrow the present gap. We suggest that such an approach is more effective than maintaining a fully staffed flying squad sitting idle, awaiting the relatively few calls from the community.²

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Midwives can cope with home confinements

EDITOR,—Carol Sullivan and colleagues correctly highlight the delays inherent in calling a neonatal flying squad to assist in the management of emergencies outside hospital.¹ Nottingham City Hospital is probably not alone in taking a median of 45 minutes to mobilise such a flying squad, and whether these squads have any place in the management of such emergencies is doubtful.

The authors seriously underestimate the skills of midwives and paramedics in providing the necessary basic life support in such situations. All midwives are trained in neonatal resuscitation, and the skills of many who undertake home confinements extend to intubation. Under normal circumstances two midwives attend at each home confinement, preventing conflicts of interest between the mother and baby. A report on obstetric flying squads by the Royal College of Obstetricians and Gynaecologists recommended their replacement with specially trained paramedics.² Although not yet fully implemented in all parts of the country, the NHS Training Directorate's paramedic training course includes a module on the emergency care of newborn infants, written by experts.³ The module makes the valid point that drugs have a relatively small role in early neonatal resuscitation and emphasises basic resuscitation, rapid transport, and communication with specialist staff in the receiving hospital to arrange reception.

It is sad that doctors should continue actively to dissuade mothers from choosing a home confinement and to put pressure on midwives not to offer this choice because of the non-availability of high technology.

We are sure that the debate on the place of confinement will go on for many years, but as a couple we were sufficiently confident of the capabilities of our midwives to opt for our three children being born at home. We would not wish other medical parents to be put off by inadequate or misleading information.

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Depression and the desire to die

EDITOR,—Peter Madeley is right to point to the role of depressive disorders in people who express the desire to die.¹ However, he is wrong to suggest that people expressing such a desire necessarily merit psychiatric examination. Those of whom I wrote in my Personal View were positive about their lives and mainly fun to visit.² They expressed a sense of completion or fulfilment. They therefore did not want their lives to be extended by medical means. They did not, however, mention euthanasia. They wanted to be allowed to "die naturally." They would probably figure among the 88.5% of elderly patients admitted to hospital for medical reasons who do not exhibit depressive disorders.³

The nurse who called a chaplain rather than a psychiatrist in the first instance to see the patient expressing a wish to die may have been on the right track. Chaplains have a greater experience of the whole range of humanity as they give attention to all patients and are not confined as is a psychiatrist largely to those who are mentally sick. An experienced chaplain knows when to suggest referral to a psychiatrist.

Those who automatically assess an expressed wish to die as a symptom of depressive disorder leave us with a question. As all human beings have to die at some time, at what stage is it healthy to wish to do so? Or must we fight death to the end?

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Prevention of suicide

Depressed patients need more choices

EDITOR,—The prevention of suicide may be controversial, but does it really warrant the pessimism expressed recently? David Gunnell and Stephen Frankel provide a comprehensive review of the prevention of suicide, but their conclusions seem unduly negative.¹ Jennie McCarthy and Ian Davidson rightly see problems with the use of suicide as an indicator for the performance of mental health services.² However, "health of the nation outcome scales" to measure improvements

in the health and social functioning of mentally ill people should be available soon.

Suicide is an important cause of death (5542 suicides occurred in 1992, including death of undetermined cause) and is more common than deaths from road traffic accidents (3814 occurred in 1992) and from cervical cancer (1532), yet the attention paid to it is far less. Perhaps it is still viewed as a choice that should not be constrained. Yet most people who commit suicide are seriously depressed,³ believing that they have no or little choice other than to kill themselves.

The prevention of suicide thus aims at making choices available. Paradoxically, this means making suicide harder to commit through detection and the management of risk—just as the prevention of accidents aims at making it more difficult for accidents to happen. Community measures to reduce the availability of lethal substances—for example, carbon monoxide and paracetamol—can either directly prevent suicidal acts or allow time for interventions so that impulsive acts in response to anger or depression are not fatal.

The management of depression by trained staff can allow balanced choices to be made and reduce the likelihood of suicidal intent emerging in the first place. Not all suicides are preventable, and people may still choose to commit suicide—for example, in the course of a terminal illness—but at least they should be given the right, and access to the reasoning capacity, to consider all alternatives (including adequate pain relief when relevant).

Further research is being commissioned by the Department of Health and the Medical Research Council. Above all, though, we need a change in attitude by doctors and the general public to appreciate the importance of relieving the distress caused by and leading to suicide.

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Suicide may not be preventable

EDITOR,—Greg Wilkinson alludes to an important principle that needs to be highlighted—namely, that suicide is often not preventable.¹ The public, politicians, and some doctors seem to perceive that if a patient commits suicide there has been a failure of care. Few other specialties are constrained by this doctrine. When a patient dies of cancer or a heart attack the doctors involved are rarely blamed.

Why are doctors commonly regarded as culpable if a patient commits suicide? There may be a fundamental lack of understanding of the nature of the condition or, because suicide is self inflicted, a need to ascribe blame. It is now, thankfully, unacceptable to hold the patient responsible, and therefore the doctor is blamed instead. Another factor may be the pernicious culture of self blame that arises within the medical profession because expectations outstrip reality. H G Morgan perpetuates this ethos and diminishes the fact that mental illness is potentially fatal despite intervention.¹

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