arguments apart, the tragedy of, for example, mental handicap in a child or blindness in an adolescent due to toxoplasma should not be allowed to happen in a society which has the means to prevent it.

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CYANIDE AND FIRE VICTIMS

SIR,—The knowledge that fire victims sometimes have toxicologically significant levels of cyanide in their blood[1-3] has stimulated discussion on whether it would be beneficial to give prophylactic cyanide antidotes to individuals affected by the products of pyrolysis. A reasoned argument suggesting that emergency service personnel be equipped to give such prophylaxis is presented by Dr Jones (Aug 20, p 457). However, before such an approach is recommended we must consider the work of Moore et al,[3] who measured the efficacy of antidotal treatment on mice dosed with potassium cyanide and exposed subsequently to carbon monoxide. Mice treated with amyl nitrite had a mortality 43–59% greater than that of non-treated controls. The increased mortality rate for sodium nitrite was 25% while dimethylaminophenol did not have a measurable positive or negative effect. These data suggest that the administration of any methaemoglobin-forming agent to presumably oxygen-deprived victims of the products of combustion has not been shown to be of benefit in the laboratory, and a recommendation that humans be treated in this manner must be questioned. The same laboratory approach should be used to evaluate sodium thiosulphate in this context before this agent is promoted for human use. We have had difficulty maintaining a supply of sodium thiosulphate because the recommended shelf-life is only one year.

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SIR,—Dr Jones highlights the dangers of cyanide inhalation from combustion of polymers in household furnishings. However, we are concerned over several of his conclusions about the diagnosis and treatment of cyanide poisoning in this context. We treat a large number of fire survivors and do not agree that loss of consciousness implies cyanide inhalation. The statement that the "victim of carbon monoxide poisoning does not become unconscious even at levels of 40–55%," applies to pure CO poisoning and not smoke inhalation where a variety of interrelated insults, including oxygen deprivation in the fire environment, may result in loss of consciousness. In our experience fire victims who require resuscitation following removal often have negative cyanide blood measured subsequently.

The fact that cyanide antidotes are not used routinely for smoke inhalation victims is not through oversight but because of serious questions about safety and efficacy.[1,2] The most effective antidote, cobalt edetate, has major side-effects if given to patients wrongly suspected of poisoning and it would be unacceptable to administer this agent to all unconscious fire victims. Of the remaining antidotes thiosulphate is not very effective when used alone because it penetrates cell membranes more slowly than cyanide and it is difficult to achieve high tissue concentrations, hence the usual recommendation of combination with sodium nitrite which is a much more toxic compound when used in therapeutic dosage. Furthermore, it has been suggested[3] that individuals who survive any form of cyanide exposure for the time necessary to begin parenteral therapy are likely to have survived without such therapy, which is primarily indicated for exposures where absorption may occur over a prolonged period (eg, swallowed cyanide salts or severe dermal or ocular exposure). Our own experience would tend to confirm this. In a study of factors influencing mortality in fire survivors[4] we could not demonstrate an independent contribution of cyanide poisoning to outcome.

The recommendation that "spring-loaded hypodermics containing thiosulphate should be administered to fire victims" by firemen and ambulancemen cannot be accepted. This practice raises major medicolegal issues and is clearly impracticable with the current state of training of such personnel.

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INFANT FEEDING AND CHILDHOOD CANCER

SIR,—Dr Davis and colleagues (Aug 13, p 365) suggest that termination of breastfeeding within 6 months of birth may be related to childhood cancer through deprivation of immunological benefits of breast milk. The finding of a borderline significant two-fold increase in risk of acute lymphocytic leukaemia (ALL) prompted us to investigate the association of duration of breastfeeding with childhood ALL and with infections in the first year of life in a Dutch population-based case-control study on childhood leukaemia.

All white children (below 15 years) diagnosed in 1973–79 and on the national registry of the Dutch Childhood Leukaemia Study Group[1] were matched for age (within 3 months) and sex with controls randomly drawn from local municipal registries. The data were collected by questionnaires mailed to the parents. The response rate was 88% for patients and 67% for controls. As in Davis' study, infants with ALL were excluded, resulting in 492 ALL patients and 480 controls. We controlled simultaneously for potential confounders by logistic regression.

TYPE OF INFANT FEEDING AND CHILDHOOD ALL AND INFECTIONS IN FIRST YEAR OF LIFE

	Artificial feeding	Breastfeeding	
		≤6 mo	>6 mo
ALL cases (n = 492)	171 (*35%*)	290 (*59%*)	31 (*6%*)
Controls (n = 480)	178 (*37%*)	266 (*55%*)	36 (*8%*)
Odds ratio*	..	1·15 (0·80–1·67)	0·83 (0·48–1·43)
Risk (odds ratio) of hospital admission for infections† in first year of life for:			
ALL cases	..	1·05 (0·53–2·06)	0·37 (0·05–2·90)
Controls	..	0·80 (0·44–1·45)	1·20 (0·43–3·35)

*Odds ratio with 95% confidence interval corrected for age, sex, birth order, social class, maternal education, and age, smoking, and alcohol use of mother during pregnancy.
†Most frequently reported: pneumonia, bronchitis, meningitis, otitis, tonsillectomy, skin infections, urinary tract infections, diarrhoea, and unspecified fever or viral infections.

The risk of childhood ALL was not associated with breastfeeding (table). In patients with childhood ALL, hospital admissions for serious infection during the first year of life were similar for children fed artificially or breastfed. Among the healthy controls there was also no relation between type of infant feeding and early infections.

Thus, our data, representative for the Dutch community, do not support an association of breastfeeding with childhood ALL or with serious infections in infancy. Moreover, a previous analysis of our study[2] showed that fewer ALL patients than age and sex matched controls had been admitted to hospital for infections in the first year of life, making a relation between artificial feeding and childhood ALL through impaired immunological response or serious infections in early life unlikely.

In the interpretation of these contradictory findings the high percentage of children breastfed over 6 months in the Denver population (35% versus 8% in the Dutch population) is noteworthy.

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THROMBOEMBOLISM AND AIR TRAVEL

SIR,—Dr Cruickshank and colleagues (Aug 27, p 497) emphasise the thromboembolic hazards of long-distance air travel in their report on six cases. This hospital has treated similar unfortunate travellers.

Of 250 cases of thromboembolism managed in a three-year period 8 had recently arrived in Australia after long flights while a further 5 had completed lengthy trips by road. The air travellers had arrived from Europe (6), Africa (1), and Asia (1). 6 were female and the mean age was 61 years (range 38–80). Risk factors identified were malignancy (1), previous leg-vein thrombosis (1), obesity (1), and cigarette smoking (3). The diagnoses were confirmed by radioisotope or radiocontrast studies. There was 1 death.

The above 8 cases represent only 3·2% of the total number of patients with thromboembolism whose medical records were examined. Is it reasonable to hold world airlines responsible for making travellers aware of what seems to be a small risk, as suggested by Cruickshank and colleagues? Leg exercises, frequent walks, and attention to hydration are harmless but can we honestly suggest prophylactic aspirin for even high-risk travellers when we do not even know the frequency of the condition and can only goggle at the immense numbers necessary to attempt a trial aimed at demonstrating benefit from prophylaxis?

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SIR,—Dr Cruickshank and colleagues state that long air trips are associated with profound inertia and apathy of the passengers, with consequent venous stasis, and also with dehydration due to low cabin humidity and excess alcohol intake. They suggest that these changes may produce deep-venous thrombosis and pulmonary embolism. The prevention they propose includes frequent leg and body exercises, avoidance of alcoholic drinks, refraining from smoking, intake of regular non-alcoholic drinks, and, in high-risk patients, low-dose aspirin.

We agree with all these recommendations except of the last one. Indeed, the use of aspirin in the prevention of deep-venous thrombosis has been discouraged by an international panel of experts because of its lack of efficacy.[1] High-risk patients would probably be best to wear elastic stockings and inject themselves with 5000 IU of heparin subcutaneously 2 h before a long flight and then 12-hourly for 1 or 2 days. If they are US physicians they might take low-dose aspirin[2] as well—but this would be to prevent myocardial infarction rather than deep vein thrombosis.

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HYPOVITAMINOSIS A AND ACNE

SIR,—Dr Kealey (Aug 20, p 499) proposes that localised hypovitaminosis A of the follicular duct is the cause of acne vulgaris. Vitamin A (retinol) is an anti-keratinising agent that can prevent plugging of the follicular orifice, a hallmark of comedogenesis. Kealey hypothesises that seborrhoea, intimately associated with the onset of acne, depletes the follicular epithelium of vitamin A and thus elicits hypercornification of the duct which ultimately results in comedogenesis. The hypothesis is not, however, supported by any firm evidence—indeed some published data contradict it. Comedones, for example, are rich in vitamin A, rather than poor as the hypothesis implies. They contain on average 2 μg retinol/g, 0·3 μg/g being the content of normal epidermis.[1] Skin surface lipids (mainly sebum) collected from the back of normal individuals contain 0·6 μg/g.[1] Patients sometimes complain of severe seborrhoea yet lack all signs of ductal hyperkeratinisation. This implies that the two processes of sebum excretion and follicular cornification are under independent control and that sebum excretion does not regulate vitamin A content of the follicular epithelium.

There are, however, other ways in which vitamin A may be incriminated in the pathogenesis of acne. Despite adequate vitamin intake, acne patients have significantly lower serum vitamin A levels than age and sex matched healthy controls.[2-4] Similarly, acne patients have depressed concentrations of vitamin A in unaffected epidermis.[5] During successful treatment of nodulocystic acne with oral isotretinoin the concentration of retinol increases more than two-fold in epidermis[6] and almost five-fold in pilosebaceous units (A. V. and W. J. Cunliffe, unpublished), without a concomitant increase in serum retinol.[6] Retinoic acid is a natural metabolite of vitamin A that cannot be reconverted to retinol. One possible interpretation of these data is that acne patients have an as yet unidentified defect in vitamin A metabolism and that isotretinoin treatment restores normal vitamin A levels in the epithelium by feedback inhibition of retinol oxidation. A direct role for retinol in the mechanism of action of isotretinoin is also suggested by the fact that etretinate, an aromatic derivative of retinoic acid, lacks both anti-acne activity and any ability to raise epidermal retinol levels.[7] Further experimental evidence is required before any final decision as to the exact role of vitamin A in the pathogenesis of acne vulgaris can be made.

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