

from all the risks of their natural environment? Is it necessary to take all the fun out of play? Such questions help us to place in perspective the considerable economic cost of major modifications to the environment.

The ultimate recipe for pedestrian safety is total segregation of pedestrians from traffic, and successful attempts in this direction have been made in new towns such as Stevenage. But what happens when children protected in this way are eventually exposed to traffic? The solution to the problem must lie in creating an environment in which the child can adapt gradually to its surroundings through progressive stages of its development. It is the unnecessary hazards that should be removed—and modern domestic architecture is a chief offender. Architects frequently fail to appreciate dangers to children, and when rules have been drawn up to avoid dangers they are widely ignored. Furthermore, devices such as safety window catches last for only a fraction of the expected life of the building. Dr W R Sinnott, from Warley College of Technology, told the conference that he had had no difficulty in collecting examples of the highly dangerous aspects of much modern domestic architecture: he had simply made slides of some of the prize winning designs illustrated in our architectural journals. Official advice seems of little help here. One booklet issued by the Department of the Environment recommends a design incorporating features expressly identified as dangerous to children in another booklet issued by the same department.

Road traffic is the child's most complex and most challenging environment, and it is not surprising that road accidents are the chief cause of serious injury to children. Some 80% of all recorded injuries to children in road accidents occur while the child is crossing the road, and a quarter occur in the road where the child lives. Parents generally overestimate the ability of their children to cope. A recent survey² showed that 19% of mothers with children aged 2 years considered it safe for their children to cross what they admitted to be a very busy road without supervision. The behaviour of adults themselves in crossing roads often sets a deplorable example to children. One-third of the preschool children injured crossing the road are in the charge of an adult at the time of the accident. In another recent study in Hampshire³ four out of five children were running across the road when hit, and three out of five did not look before crossing. Only 11% of children both looked before crossing and saw the vehicle which hit them.

Britain has the worst child pedestrian casualty rate in western Europe,⁴ so that it might have been expected that our primary schools (which include the age group at highest risk) would pay close attention to prevention. In practice, only 38% of primary schools in England and Wales have a planned system of road safety instruction in their curricula, and very little information is available to the teachers concerned about the most important aspects of child pedestrian safety. Last month the Department of the Environment⁵ announced a five-week campaign costing £880 000 to reduce child casualties on the road, timed to coincide with return to school. The campaign includes motivational posters warning motorists to watch out for children, though it is known that such messages are largely ineffective. Why does the Government still put its faith in propaganda rather than in effective legislation? Britain is almost alone in Europe in allowing pedestrians to cross the road when and where they like.

Why, indeed, has so little been done in Britain about childhood accidents? Perhaps, as Professor Donald Court suggested when summing up at the end of the conference, there is something inevitable and unpredictable inherent in the term

"accident" which discourages effective action being taken. Only epidemiological studies can disprove this misconception, and far too few have been carried out. Nor is there much prospect of them being carried out so long as the Government bodies with control of funds for research such as the Transport and Road Research Laboratory obstinately refuse to consider a public health approach to the problem. Meanwhile, there is little evidence of effective liaison in accident prevention between the five Government departments and some 300 national organisations concerned with child welfare. There was therefore considerable support at the conference for the setting up of a national joint committee on accident prevention in childhood, such as has existed for many years in Sweden, where it has achieved impressive results.

¹ Department of Prices and Consumer Protection, *Collection of Information on Accidents in the Home*. London, HMSO, 1976.

² Sadler, J, *Children and Road Safety: A Survey Amongst Mothers*. London, HMSO, 1972.

³ Grayson, G B, *The Hampshire Child Pedestrian Accident Study*. Growthorne TRRL Laboratory Report 668, 1975.

⁴ European Conference of Ministers of Transport, *Report on Recent Trends in Road Accidents*. Paris, 1972.

⁵ Department of the Environment, *Press Notice No 784*, 1 September, 1976.

Washing away at acne

Compelled to brood on any flaw, imaginary or real, in their own state of health the obsessional are unable to relax. Convinced that they must do something to overcome any "disease" that besets them, they fill their medicine cupboards with pills and mixtures and ointments, they purge themselves, they submit to colonic lavage and strange diets and psychoanalysis, and they may traipse from doctor to doctor and clinic to clinic, perpetually unsatisfied by the cool way in which they feel that their problems are viewed. They can be guaranteed to take themselves seriously: and when they get acne they set to work with a will.

The yardstick that the obsessional uses for his comparison is perfection, which in the case of the skin means that it must be totally immaculate—what is commonly called "that school-girl complexion," though if the introducer of that term had had a dermatologist's familiarity with the complexion of schoolgirls he might have had second thoughts. There is a general theory, regarded as axiomatic by the obsessional, that skin diseases are due to dirt—a belief fortified by the greasiness and the black-heads present in acne. In addition, acne is regarded as an outward sign of moral defilement, the telltale mark left by all those unhealthy sexual thoughts that well up into the minds of adolescents (and without which we might think that they could scarcely be called adolescent). The inevitable consequence of the obsessional attitude of mind faced with acne is to wash. Washing cleanses physically and morally. The act of washing is also a ritual of purification.

Unfortunately, contrary to the simple rationale based on this assumption, acne is a complicated disease; nor is washing entirely straightforward, for it may have the unexpected effect of aggravating acne, an effect that is magnified and becomes manifest if the washing is done obsessively. Mills and Kligman¹ have described this effect and called it *acne detergenticans*, claiming that the harm results from the effect of certain soaps and shampoos in actually producing comedones. It came to light when they saw first one young man and then another who washed themselves vigorously, up to eight times

daily, one with a bacteriostatic detergent and the other with a shampoo. They tested the comedogenic effect of soaps and shampoos on rabbits' ears and found that seven out of 21 soaps and 10 out of 18 shampoos had some effect, usually slight. They did not produce acne experimentally in man, and they acknowledge that the rabbit's ear may not reflect accurately what happens in patients, but nevertheless they believe on clinical grounds that acne detergent exists as a rare phenomenon among obsessional washers. They also suggest that washing may play an important part in aggravating acne vulgaris in the less obsessional. In any case, they argue, washing does little to help acne vulgaris and it is not an important part of treatment—an opinion with which not all dermatologists would agree. Be that as it may, their suggestion needs to be taken seriously, since it is clearly undesirable to recommend any form of treatment in acne vulgaris that can give rise to comedones. We should, perhaps, advise washing in acne vulgaris only in moderation and tell our patients to avoid soaps and other detergents that contain halogenated bacteriostatic agents, especially hexachlorophane, which the authors found to be more comedogenic than the other bacteriostatics tested.

¹ Mills, O H, and Kligman, A M, *Archives of Dermatology*, 1975, **111**, 65.

Diagnosis of Down's syndrome at birth

Down's syndrome may be difficult to diagnose at birth, and normal babies may have some of the features (the term mongolism is now thoroughly outmoded and should be replaced by Down's syndrome¹). In his thesis on newborn infants with the syndrome Hall² selected ten cardinal features. The most constant of these were flat facial profile, abundant neck skin, dysplastic ears, muscle hypotonia, and radiological evidence of a dysplastic pelvis. These signs are usual in affected babies and unusual in normal newborns, and they are relatively easy to assess. Other typical features are a round head, protruding tongue, iris spots, blunt inner eye angle, and a short broad hand and incurving little finger with a short middle phalanx. The skin is pale, the cry weak, the Moro reflex depressed, and characteristically spontaneous movement is reduced. Some features are less prominent at birth than in infancy—the epicanthic folds, high palate, plantar furrow, and widely spaced first and second toes. Congenital heart lesions are present in about 40% of children with Down's syndrome. Most have atrial or ventricular septal defects or endocardial cushion defects. Affected infants born preterm present a greater diagnostic problem, because features such as hypotonia, loose pale skin, and the rounded head are absent.

Selective antenatal screening by chromosome analysis of amniotic fluid cells should greatly reduce the numbers of infants born with Down's syndrome. Nevertheless, meanwhile, despite the advances made in cytogenetics since the first demonstration of trisomy 21 by Lejeune *et al*³ in 1959, clinical diagnosis needs to be improved, especially in the newborn. Paediatricians and general-practitioner obstetricians require, firstly, simple criteria for the decision to request chromosome analysis, especially when only one or two features are present; and, secondly, a reasonably confident clinical diagnosis while awaiting the results. This is most important in the early

supportive management of the parents of a child with Down's syndrome, who need to be told the diagnosis as soon as the physician is convinced of its reliability.⁴ The particular problem of duodenal atresia in a child suspected of having Down's syndrome is best managed at a centre where bone marrow aspiration for chromosome examination of mitotic cells can give a rapid diagnosis⁵ and a balanced paediatric surgical decision be made.

Dermatoglyphic analysis is objective and probably more accurate than any list of loosely defined physical features. Reed *et al*⁶ devised a diagnostic nomogram based on the palmar triradius. Unfortunately these palm prints and ridge patterns are difficult to obtain in newborns and are therefore not ideal for general use. With practice, triradii and ridge patterns can usefully be observed with an auroscope, but accuracy in the use of a nomogram depends on angle measurement and ridge counts from prints.

Recently Jackson *et al*⁷ formulated a check list of the ten most discriminating signs in cases of suspected Down's syndrome under the age of 2 years. With computer analysis weighted correlation coefficients were given to the signs, and summation allowed a positive diagnosis if the cut-off figure was exceeded. The accuracy claimed—93%—compares well with dermatoglyphic methods. Nevertheless, the list still included some signs which are open to wide subjective interpretation, such as flat nasal bridge, incurved fifth finger, and short neck, and others which are not very prominent in the newborn, such as narrow palate, nystagmus, and separation of the first and second toes. A check list more appropriate to newborns is needed. If one could be devised with similar accuracy and reproducible in normal practice an important advance would be made in clinical diagnosis.

¹ Allen, G, *et al*, *Lancet*, 1961, **1**, 775.

² Hall, B, *Acta Paediatrica Scandinavica*, 1964, **suppl 154**.

³ Lejeune, J, Gauthier, M, and Turpin, R, *Comptes Rendus de l'Académie des Sciences*, 1959, **248**, 602.

⁴ Øster, J, and Van den Tempel, A, *Acta Paediatrica Scandinavica*, 1975, **64**, 505.

⁵ Smithies, A, and Valman, H B, *Lancet*, 1974, **1**, 1056.

⁶ Reed, T E, *et al*, *Journal of Pediatrics*, 1970, **77**, 1024.

⁷ Jackson, J F, North, E R, and Thomas, J G, *Clinical Genetics*, 1976, **9**, 483.

Latent schistosomiasis

Tropical diseases may sometimes stay latent for months and even years after a traveller's return to his temperate homeland. Their presentation may then be perplexing, and a timely reminder has come from the USA of the many ways in which infection with schistosomiasis can become manifest. Both aspects of the problem were presented in the single case of a man who developed paraplegia and skin lesions some seven years after his last possible exposure to infection, the parasite being *Schistosoma mansoni*.

The longevity of the schistosomal worm in the human host is well documented^{2,3} and may certainly be over 20 years. What is less well known, however, is that during these 20 years the patient may be substantially free of symptoms and physical signs. After the end of a prolonged latent period neurological complications may develop—both paraplegia and deposits of eggs in the brain (especially with *S japonicum*) which may mimic a cerebral tumour; while in the case of *S mansoni* and *S japonicum* prolonged and symptomless egg