death, usually because small numbers have made this impossible. Until this has been done, however, it is hard to see a logical application for the at-risk scoring concept proposed by the Sheffield group.12 A further problem with the Sheffield system is that in its existing form it does not seem to predict death as accurately in other cities.13

What, then, are the current prospects for preventing cot deaths? For the first group—those who die from rapidly progressing and inadequately recognised infective illness—there are clear preventive possibilities in improving the accessibility of health services for young children and in better training for doctors and nurses in recognising life-threatening paediatric conditions. Lasting progress seems more likely to come from organisational and training changes, embodying the spirit if not the letter of the Court proposals,14 than from specific measures directed at families with multiple “risk factors.” If minor illnesses are important triggers of sudden death in the second group of cot deaths then improvements in general living conditions may be more important than health services. A large part of the explanation for the low incidence of cot death in countries such as Sweden may be related to housing, population density, and other special factors. Babies in the third group, who die without any observable illness, remain the most difficult problem. We have growing evidence that the mechanism of death may be apnoea similar to that seen in premature babies,15–20 but even on the rare occasions when it has been possible to identify babies at risk death cannot always be prevented.16,20

More encouraging is the fact that cot deaths may already have become less frequent very recently in Britain, a judgment based on postneonatal mortality rates,21 22 the best available measure. During the 1960s, in sharp contrast to the previous two decades, the postneonatal mortality rate in England and Wales fell only slowly. In the 70s there has already been a 25% reduction, most of it since 1974. In Scotland the improvement has been even more striking: a 40% reduction between 1969 and 1976. This welcome trend is hard to explain at a time when the economic climate has been at its worst since the war. Future historians may point to NHS reorganisation, but contemporary observers would give them little support. Comparison with rates in other countries, however, indicates plenty of room for further improvement: the 1976 rates of 4.4/1000 live births for England and Wales23 and 4.5/1000 live births for Scotland24 are still twice the Swedish rate25 of 2.2 in 1975.

The DHSS multicentre study of postneonatal mortality—with its painstaking, detailed clinical and pathological investigation of about 1000 deaths by 1979—should provide the first opportunity to assess the relative numerical importance of the different categories of cot death. There is real hope that this study will enable us to identify avoidable factors in the first category and aetiological leads for those cot deaths which are still difficult to explain.

3 McCweeney, P M, and Emery, J L, Archives of Disease in Childhood, 1975, 50, 191.
6 Emery, J L, Swift, P G F, and Worthy, E, Archives of Disease in Childhood, 1974, 49, 686.

Mobility and the disabled

Recent publications in that excellent series “Equipment for the Disabled” on outdoor transport1 and wheelchairs have once again highlighted the problems of mobility, particularly for patients who are paraplegic or otherwise unable to walk. Since the Government bowed to the widely publicised campaign against the motorised three-wheeler these vehicles are no longer being supplied to the newly disabled. Indeed, the machine will be phased out of existence sooner or later—though later may mean up to 20 years from now.

Unfortunately, the mobility allowance—even with its recent increase—does not provide independence for all disabled people for whom a special vehicle would be appropriate. So we need to take a fresh look at the concept. Ideally two types of vehicle should be available. The premature withdrawal of the “Noddy” tricycle has left a need for a cheap, highly modifiable car—possibly something based on one of the hatchbacks. Most disabled people, however, need a safe, reliable weatherproof, solo vehicle that is closer to a motorised wheelchair than a pseudocar. A battery-propelled all-weather chair would be stable, safe to control, and cheap—all features which should make it very appealing to the DHSS.

Transport alone is not, however, enough. Architects, local authorities, and especially clerks of works should take note of the new edition3 of Selwyn Goldsmith’s Designing for the Disabled. Mobility depends on access, and far too many of our public buildings and facilities are still not available to the disabled without (at times heroic) physical effort by them or their attendants. By now it should be possible to combine access for the disabled with aesthetic design without excessive expenditure.

Another neglected group are the elderly disabled, most of whom hardly use wheelchairs or powered transport. Many of them live at home, often effectively housebound because of unsuitability of public transport and lack of local shopping and other facilities. The primary problem may be difficulty in actually getting in and out of the house because of unsuitable steps and entrances. Stairs are difficult, if not impossible, for these patients; yet downstairs lavatories and bedrooms are exceptions in typical houses in industrial cities. The upstairs part is rarely used, and, while redundant, is often badly maintained. The elderly patients, mostly women, depend on neighbours and relatives for shopping, visiting, and social contact.

Thirty years after the start of a comprehensive social welfare system surely these people’s circumstances should be seen as
Fasting and obesity

Fasting was probably first described as a treatment for obesity in 1915,¹ and has been much investigated in recent years. There is a lot of current interest in “supplemented fasting,” in which small dietary supplements are prescribed rather than total starvation. These treatments are being widely promoted and discussed; but they may cause distress and possibly some danger to patients, and they may prove very expensive.

Obese people who fast completely lose some 800–900 g a day over the first 10 days, about 50–70% of this being water.² By the end of a month the loss of weight has declined to half this rate; the negative water balance is largely eliminated; the basal metabolic rate falls, the energy cost and amount of physical activity decrease; and more of the energy requirement is derived from energy-dense triglyceride.³ About 5 kg of wet lean tissue may be lost during the first month of a fast and about 2–8 kg in the second month.⁴

Several deaths have been reported during or after a total fast, but this outcome is unlikely if the patient stops fasting well before he attains his so-called “ideal” body weight. More common complications are nausea, postural hypotension, arrest of hair growth and alopecia, skin dryness, muscle cramps, fatigue, depression, inability to concentrate, halitosis, loss of libido, anovulation, decreased spermatogenesis, persistent vomiting, ketosis, hyperuricaemia, deranged liver function, and slow denitrogenation of bone.⁵

The incidence and severity of these complications may be reduced by giving low-energy supplements—for example, carbohydrate/protein supplements providing 200-300 kcal per day—⁶ and pure protein supplements with about twice this energy content.⁷ The protein component is given to minimise nitrogen losses, though this need should not be overstated, since the obese have an excess of supportive lean tissue as well as fat. The carbohydrate component is intended to reduce ketosis, but Blackburn and his colleagues⁸ believe that ketosis tends to depress the appetite and that the absence of carbohydrate minimises insulin secretion and thereby depresses gluconeogenesis from body protein. These advantages of a ketogenic diet have not, however, been confirmed; and no more than about 30 kcal per day can be lost in the urine as ketones.⁹ Vitamins and unrestricted non-caloric fluids and potassium and some other minerals are normally given in the supplement—as they are in total starvation.

In a series of 519 patients with a mean initial body weight of 113 kg Verdes and Genuth⁴ achieved a mean weekly weight loss of 1.5 kg during supplemented fasting for periods of up to 92 weeks—a rate that compared favourably with total fasting. Nearly 80%, of the patients had lost at least 18 kg by the end of their fast. Fasting supplemented in this manner appears to be accepted better by patients and to reduce side effects to an acceptable minimum. The most important advantage over total starvation, however, is that the patients—if they are carefully selected and rigorously monitored by a doctor every week—can apparently continue their normal life and work in safety. There is one caveat: people should be warned that as a do-it-yourself procedure fasting, supplemented or otherwise, may be disastrous⁷ or even lethal.

Total fasting as a treatment for obesity does sometimes have immediate advantages. Munro and his colleagues in Edinburgh found that, of 75 patients who had undergone prolonged starvation as inpatients, 10 could undergo elective surgery, nine married, and 11 could take jobs.¹⁰ In terms of weight loss, however, the long-term results were disappointing: during follow-up over a third of Munro’s patients regained all their lost weight.

The outcome of supplemented fasting may be improved by giving patients at the same time a well-supervised regimen of nutrition education, exercise, and behaviour modification.¹¹ But it is not time that we diverted to preventing obesity much of the effort and resources we expend on such heroic procedures as starvation, ileal bypass surgery, hypothalamic ablation, and gagging of the jaws? Should we not be investigating more intensively the feeding and exercise patterns that should be encouraged in childhood and infancy—and educating people accordingly?

⁵ Cahill, G F, Clinics in Endocrinology and Metabolism, 1976, 5, 397.