

Both the chair and the seat to which it is attached must be securely anchored. A crotch strap is recommended, to prevent the lap belt of the harness riding up over the abdomen—the iliac crest, which secures the lap belt in adults, is not sufficiently developed in children. Americans seem to prefer rearward facing chairs or devices incorporating padded shields in front of forward facing children. They can be obtained in Britain, but there is some consumer resistance from children, who like to see where they are going. Later on, a child safety harness can be used without a special chair, but again care has to be taken to ensure that the lap belt does not ride up. A high lap belt angle can be obtained by seating the child on a hard cushion, which has the added advantage of enabling the child to see more easily.

In the past 12 years, since the first British standard was introduced, over half a million approved child restraint systems have been sold here. Yet a random survey carried out in 1974 of 4466 children travelling in cars showed that only 12% under the age of 13 were wearing a restraint.<sup>2</sup> As only 5% of children injured as passengers in 1973 and 1974 were found to have been restrained there is some evidence that wearing a restraint does reduce the risk of injury. In fact, only five children killed as passengers in 1974 were wearing approved restraints. Where protected and unprotected children were travelling in the same car the unprotected child was generally found to have been more severely injured. Most of the moderate or severe injuries sustained by children wearing restraints were not caused by any shortcomings in the device used.

In the United States it has been claimed that the use of proper restraints for children under 5 would save the lives of 91% of children killed in car accidents and reduce injuries by 78%. The corresponding figures for older children if they wore seat belts are 81% and 64%.<sup>3</sup> Yet only 15% of children in the States are protected in this way. "Preventive counselling" of pregnant women in infant travel safety has been suggested as an important role for the paediatrician in the United States. When expectant mothers were given a fact sheet and shown a five-minute film it almost doubled their use of restraints, as compared with controls.<sup>4</sup>

More and more young children are travelling in cars. Their safety is a matter that should be drawn to the attention of the motoring public, and reliable information should be made available on the best ways of protecting them. The Government has proposed that persons under five feet tall should be exempted from legislation enforcing the wearing of safety belts. But in countries which have accumulated experience of compulsory seat belt wearing there are plans to remove the exemption for children in the hope of reducing mounting child casualty figures.<sup>5</sup> Indeed, 70% of the child road accident casualties admitted to the Royal Children's Hospital in Melbourne were below the age of 8—when seat belts become compulsory in the State of Victoria—and children under 8 were found to have a higher incidence of major injury than those over that age.

## Laetrile: quacks and freedom

Quack cancer cures have been around for a long time. Sooner or later each one is exposed as worthless and is then forgotten, after a period of notoriety in which the gullible and desperate may have been cheated out of their money and seen their soaring hopes dashed. So long as conventional medicine cannot cure all patients with cancer some will be willing to try anything that they think might help. This grasping at thin straws is more part of the American medical scene than the British, though the episodes of Naessens's serum for leukaemia and the Issels clinic showed what can happen when the machinations of obscure men are given enough publicity by the media, driving innocent people to acts of sheer folly against the best advice of the medical profession.

In America medicine for the paying patient is in an unhappy state. "Do you really trust your doctor?" is the name of the game, and the size and numbers of the law suits show the level at which it can be played. In these circumstances it is hardly surprising that Laetrile, a compound of no proved value in the treatment of cancer, is having such a long run in the public eye and is such a source of anger and embarrassment to the Food and Drug Administration, who want to stamp out its use in the United States.

Laetrile is extracted from apricot pits (pips or stones in English usage). It was thought to be the glucuronide of L-mandelonitrile, but in fact the commercial product is amygdalin (the  $\beta$  glucoside). Its promoters claim Laetrile will bring relief from pain, prolong survival, and sometimes cause complete remission of cancer. The theory is that the compound will release cyanide in cancer cells, but there is no evidence that this is true. Mandelonitrile is a highly toxic compound, while amygdalin is fairly safe even in large doses—no doubt one of the factors that has kept the makers in business.

A few years ago, at the request of Beno Schmidt, one of the President's advisers on cancer, the Sloan-Kettering Institute in New York became concerned in an assessment of Laetrile; but, apart from a leaked, unconfirmed, internal report that it appeared to show some activity in mouse lung tumours, the results of all investigations were negative. Fortunately the leak occurred when some doctors were standing trial in California for illicitly prescribing Laetrile.<sup>1</sup> In September this year there was still enough mileage in the story for *Science* to carry a long article by Constance Holden,<sup>2</sup> and there are signs that the affair is far from closed.<sup>3-5</sup>

Laetrile production is centred in Tijuana, Mexico, where the going rate of an injection is \$9; but with an average mark up of 600% in the United States tablets sell for about \$1 each. The Contreras clinic in Tijuana is estimated to treat about 600 Americans a year at a cost of about \$2000 for a course lasting one month. Several American organisations promote the idea that cancer is a deficiency disease, and they are powerful forces for keeping quack cures in the limelight. Laetrile fulfils their criteria, for its promoters say it is vitamin B<sub>17</sub>—and the fact that no such vitamin is known to biological science seems to be immaterial. The largest of these outfits is the Committee for Freedom of Choice in Cancer Therapy, with a membership of 23 000, including 800 doctors, some of whom have been indicted for Laetrile smuggling via the Mexican connection—there is nothing like a few martyrs. The Food and Drugs Administration have tried to control the sale of Laetrile by going to law, but its efforts are being threatened. The Governor of Alaska recently decided to veto the anti-Laetrile legislation in his state, which has opened up the way

<sup>1</sup> Lowne, R W, *Aspects of Car Design and Child Restraint Systems*. Paper read at the International Conference on Children, the Environment and Accidents, Newcastle upon Tyne, September 1976. Pitman Medical, in press.

<sup>2</sup> Farr, B F, *Safety Belts and Child Restraints—the proportion of cars fitted and of occupants using them*, TRRL Laboratory Report No 644. Department of the Environment, Transport and Road Research Laboratory, 1974.

<sup>3</sup> Reichelderfer, T E, *Pediatrics*, 1976, **58**, 307.

<sup>4</sup> Allen, D B, and Bergman, A B, *Pediatrics*, 1976, **58**, 323.

<sup>5</sup> Trinca, G W, *The Influence of Seat Belt Restraint on Injury Patterns—The Victorian Experience*. Paper read at the Fifth International Congress of the International Association for Accident and Traffic Medicine, London, September, 1974.

for test cases in other states. The lawyers will become richer, the patients poorer, and the law an ass.

All this has brought the whole mess out of the lunatic fringe into the battleground of American politics as defending the freedom of choice of the citizen—red hot stuff at election time—and even the John Birch Society has been championing the cause. George Crile,<sup>4</sup> a well-known surgeon at the Cleveland Clinic, with somewhat Irish logic, would like to see the use of Laetrile legalised coupled with a campaign to say it was useless; he believes that this would keep the patients away from quacks. Another authoritative medical view<sup>5</sup> has urged the FDA to stand firm and in no way legitimise Laetrile as part of cancer treatment: by all means let the patients buy apricot kernels at their health food stores and use them as they wish, but it would be wrong to couple this caper with serious medicine.

The whole amazing brouhaha goes to show that victims of serious diseases who believe in miracles and seek the philosopher's stone are open to manipulation in ways far more subtle than used by the travelling medicine men of the last century. The lessons from this tragicomic tale of contemporary American manners should not be missed by British doctors.

<sup>1</sup> Culliton, B J, *Science*, 1973, **182**, 1000.

<sup>2</sup> Holden, C, *Science*, 1976, **193**, 982.

<sup>3</sup> Jukes, T H, *Nature*, 1976, **263**, 543.

<sup>4</sup> Crile, G C, *New England Journal of Medicine*, 1976, **295**, 116.

<sup>5</sup> Baker, J J, et al, *New England Journal of Medicine*, 1976, **295**, 679.

## Bed wetting

A school child in Australia or North America is three times more likely to wet the bed than a child in Sweden,<sup>1</sup> where the prevalence is about 8% at age 5. Bed wetting may seem common in Britain, but studies here have suggested that our prevalence is nearer to that of Sweden than to the bed-sodden states of America. The recently published findings of the National Child Development Study confirm this.<sup>2</sup> Of 12 000 children throughout England, Scotland, and Wales, 10.7% had nocturnal enuresis between the ages of 5 and 7 and 4.8% at age 11. The report also confirms many of the other epidemiological factors in enuresis. These are important both because bed wetting is a common cause of misery and also because consideration of the factors associated with it offers some chance of successful treatment or, better still, prevention.

Bed wetting is commoner in social classes 4 and 5 and in overcrowded homes. But not all the factors are environmental: there is certainly a genetic predisposition as well.<sup>3,4</sup> Thus a history of bed wetting in either the parents or siblings is usual, while careful genetic studies confirm that nocturnal enuresis is often familial. The sex incidence is curious. It is twice as common in 11-year-old boys than girls, and yet there is little difference in the sex incidence at the age of 6. This is difficult to explain unless there are some adverse factors which preferentially affect boys earlier in life.

Most children become dry at night between the ages of 2 and 4 years. Dryness is a natural development which emerges in the absence of any training. But adverse factors during this period may impair the acquisition and security of subsequent dryness.<sup>5</sup> Separation from the mother, prolonged hospital admission, broken homes, and other stressful events in the second and third year are associated with an increased incidence of enuresis in later life.<sup>6</sup> An additional stress may arise when the mother responds with anxiety or coercive

toilet training to a child who by his genetic makeup simply is not ready to be dry until after the age she regards as normal. The range of development for most skills and functions is wide: some children reach the maturational state for dryness much later than others. Doctors are well aware of the tension that arises when parents suspect that the child is abnormally slow at acquiring a skill, and sadly this anxiety may itself prevent normal acquisition of dryness by the child.

In later years there is an established association between behaviour disturbance and bed wetting, but in the schoolchild such mild psychiatric disturbances are just as likely to be the result of the wetting as the cause of it.<sup>7</sup> Such considerations do not explain easily the known differences in the prevalence of enuresis in different countries. Is it because of the genetic differences, the environment, or because of different cultural practices related to toilet training? There must be some genetic differences. Interestingly enough, however, only 1.5% of one large group of children<sup>8</sup> in the United States were wetting the bed at the age of 5, or in other words 98.5% were dry. Carefully planned support had been given to ensure that the maturation of bladder control was allowed to result in dryness. The parents had discussed their children's bladder control with the paediatrician from infancy, but they had been persuaded to postpone starting toilet training until after the age of 2.

So, it seems, alteration of parents' attitudes and child management may prevent enuresis. Child rearing practices have altered greatly in the past 30 years, and even in the last 10, but have the attitudes to toilet training? The prevalence of nocturnal enuresis does not seem to have altered much.<sup>2,9</sup> Among British children born in 1946 the rate was 5.3%, and for children born in 1958 it was 4.7%.<sup>2</sup> The difference is disappointingly small, and surveys of children born in the last decade do not suggest significant improvement.

<sup>1</sup> de Jonge, G A, in *Bladder Control and Enuresis*, eds I Kolvin, R C MacKeith, and S R Meadow, p 39. London, SIMP with Heinemann, 1973.

<sup>2</sup> Essen, J, and Peckham, C, *Developmental Medicine and Child Neurology*, 1976, **18**, 577.

<sup>3</sup> Hallgren, B, *Acta Psychiatrica et Neurologica Scandinavica*, 1957, suppl 114.

<sup>4</sup> Bakwin, H, in *Bladder Control and Enuresis*, eds I Kolvin, R C MacKeith, and S R Meadow, p 73. London, SIMP with Heinemann, 1973.

<sup>5</sup> MacKeith, R C, Meadow, S R, and Turner, R K, in *Bladder Control and Enuresis*, eds I Kolvin, R C MacKeith, and S R Meadow, p 3. London, SIMP with Heinemann, 1973.

<sup>6</sup> Douglas, J W B, in *Bladder Control and Enuresis*, eds I Kolvin, R C MacKeith, and S R Meadow, p 109. London, SIMP with Heinemann, 1973.

<sup>7</sup> Shaffer, D, in *Bladder Control and Enuresis*, eds I Kolvin, R C MacKeith, and S R Meadow, p 118. London, SIMP with Heinemann, 1973.

<sup>8</sup> Brazelton, T B, *Pediatrics*, 1962, **29**, 121.

<sup>9</sup> Blomfield, J M, and Douglas, J W B, *Lancet*, 1956, **1**, 850.

## Sick sinus syndrome

The sick sinus syndrome is a chronic disorder characterised by sinus bradycardia with or without episodes of sinus arrest or sinoatrial block. The bradycardia may be intermittent or persistent. In many patients the condition is further complicated by rapid supraventricular arrhythmias.

The incidence of this syndrome is difficult to establish since it may be intermittent, and patients may be free of symptoms for many years. Moreover, even when they do have symptoms these may be attributed to some other cause. Nevertheless, improved diagnostic methods and greater awareness of the syndrome will probably lead to its recognition more frequently. In one recent series the sick sinus syndrome was the reason for 15% of pacemaker implantations.<sup>1</sup>