Injuries sustained on "bouncy castles"

SIR,—We wish to report the dangers of playing on "bouncy castles." A bouncy castle is an inflatable children's playground, consisting essentially of a rubber mattress inflated with air. Three walls generally surround the castle, with the fourth side open to allow entry and exit, but some castles are open on all four sides. They are popular in fairgrounds and recreational halls. During last summer five children and one adult were treated at Northwick Park Hospital for injuries sustained while they were playing on bouncy castles. All injuries were to the arm or neck.

Three supracondylar fractures of the humerus occurred. Two of these required open reduction and internal fixation with Kirschner wires. The third was managed with a collar and cuff support. A girl aged 6 sustained a fracture of the mid-shaft of the humerus, which was managed with a hanging cast support. The neck injuries occurred in a 52 year old man and a 12 year old boy. These were both soft tissue injuries caused by flexion and were managed conservatively.

The hazards of playgrounds to young children are well recognised, and, among other measures, absorbent surfaces have been recommended to help reduce the severity of injuries.¹ The injuries that we report are due to the unpredictable nature and power of the bounce of these castles—part of their fun. Most injuries occur when those playing on the mattress fall off it; the surrounding surface is firm rather than cushioned. The weight of the body on an outstretched hand accounts for the frequency of supracondylar fractures.² To our knowledge injuries from playing on bouncy castles have not been reported previously, though many injuries, particularly to the arm, have been reported in people playing on giant inflated cushions without surrounding walls.³

The risk of sustaining serious injury, particularly to the arm, while playing on bouncy castles could be reduced by providing a cushioned landing around the open side of the castle. Avoiding overcrowding and setting an age limit may also help, and supervision by a responsible adult should be mandatory.

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Self poisoning by adolescents

SIR,—L McGibben and colleagues' short report on the relation between school attendance and deliberate self poisoning by adolescents¹ prompted me to examine our records of deliberate self poisoning by adolescents in Bradford. A preliminary study confirmed the authors' finding that the rate of self poisoning is lower during school holidays than during school terms.

In Bradford 321 adolescents aged 12-16 were

referred for a child psychiatric assessment after admission for deliberate self poisoning in the four years 1988-91. Bradford's education department supplied me with the dates of school terms and numbers of schoolchildren aged 12-16 for each of the four years studied. The average number of schoolchildren in schools covered by Bradford Health District during the four years was 22 950.

The rate of admission per 1000 schoolchildren aged 12-16 was 4.00 a year during school terms (95% confidence interval 3.37 to 4.64) and 2.12 a year during school holidays (1.68 to 2.56). I was not able to show any significant difference between rates for different holidays.

Clearly, school attendance as a factor in deliberate self poisoning by adolescents warrants further attention.

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The cholesterol controversy

SIR,—Michael F Oliver's editorial on the failure of intervention programmes to prevent heart disease highlights the need to change the emphasis of prevention away from screening for so called risk factors towards promoting the positive, healthy aspects of every situation and making change relevant to people's priorities.¹

Only one such intervention programme has ever shown a beneficial effect in terms of years of life saved when the intervention group was compared with a control group. Other studies show that men may feel worse three months after a well man check than they did before;² people labelled as hypertensive may develop symptoms of depression and have an increased rate of absenteeism from work;^{3,4} patients are more concerned with having a listening doctor than with a clinic's facilities;⁵ and "at least half (of the working class women under study) hold fatalistic views about illness causation."⁶ The message is clear: our present health promotion strategies may well change behaviour, but not necessarily in a healthy direction.

The exception to these intervention programmes has been one in North Karelia, where between 1974 and 1979 age standardised mortality fell by 22% in the intervention group compared with 12% in the control group.⁷ The programme was also unique for one other reason: it was the only one that happened because it was demanded by the public.

If strategies to prevent heart disease are under scrutiny so must be our understanding of what causes the disease. Except with smoking, no cause and effect has ever been proved between the variables that people like to call risk factors and the disease itself. We have to reconcile our understanding of the causes of heart disease with the results of research done in Roseto, Pennsylvania, exposed by the *Horizon* programme "Sudden Death" (7 January 1991). A group of fat, smoking Italians in America were investigated because of their unusually low incidence of heart disease. The younger generation developed the American

lifestyle of not smoking, taking a low fat diet, holding fast track jobs, and breaking from community ties; their incidence of heart disease increased.

Health promotion means promoting health. To most people health means believing that they are worth while and have enough control over their lives to be able to achieve things and be creative. This must be our goal. Health promotion strategies must decrease their emphasis on the individual and be "owned" by communities and families acting on their health priorities. Professionals must be used as a resource—a partnership—to enable realistic action plans to develop the positive aspects of people's lives and their society. In this way we can be sure of catching what motivation to change there is and work towards the real goal, health. With this approach we should also reduce the levels of heart disease.

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SIR,—George Davey Smith and Juha Pekkanen take meta-analysis of primary prevention trials for coronary heart disease a stage further¹ by adding three trials to the six considered by Muldoon *et al*² and then grouping dietary trials separately from drug trials. The disturbing excess of non-coronary mortality is then confined to the drug trials. In addition to these single factor trials, total mortality was lower in the intervention groups in each of three major multiple risk factor primary prevention trials in which diet lowered plasma cholesterol concentration but drugs were not used.^{3,5} Thirdly, in the three largest trials of secondary prevention which included effective diet but not drugs mortality was also lower in the intervention groups.^{6,8} When these nine trials (with 72 000 participants) are put together the total number of deaths was 1581 in the combined intervention groups—that is, 93% of the 1693 deaths in the control groups. Total mortality was lower in the intervention groups in eight of the nine trials.

The prevention trials for coronary heart disease were designed to show a significant reduction in coronary events, not mortality. Many more subjects, a longer duration, and greater expense would be needed to test this.

There is a growing body of information that Michael F Oliver did not consider: the changing patterns of mortality in different countries. In the past 30 years the number of age standardised deaths from coronary heart disease has fallen considerably in the US, Australia, and Canada and