

It is true that these have been a recurrent, and clearly as yet unresolved, point of debate at the meetings of the REVES network, but in the peer reviewed international literature the problem has only been mentioned, albeit insufficiently and not quite correctly explained, by Robine and Ritchie.<sup>1</sup> Other researchers apparently prefer to ignore it. In a comprehensive overview of the Dutch population health status, aimed squarely at policy makers, an interesting section, written by Van de Water, Boshuizen, and Perenboom, is devoted to health expectancy and its trends in The Netherlands.<sup>2</sup> Although the trend analysis is based on the Sullivan method, no mention is made that there might be a problem with the results. This can hardly be considered as giving the full story to policy makers.

And lastly, "pooh-poohing" the problems of health expectancy trend estimation from cross sectional data is a self defeating strategy. What policy maker worth his salt is going to endorse the large chunks of taxpayers' money needed for longitudinal studies when the researchers themselves say cheap cross sectional data will do fine? If the policy makers take the word of Van de Water *et al* for it, we will never be able to find out how wrong we are.

JAN J BARENDREGT  
LUK BONNEUX  
PAUL J VAN DER MAAS  
*Department of Public Health,  
Erasmus University,  
PO Box 1738,  
3000 DR Rotterdam,  
The Netherlands*

- 1 Robine JM, Ritchie K. Healthy life expectancy: evaluation of global indicator of change in population health. *BMJ* 1991;302:457-60.
- 2 RIVM. *Volksgezondheid toekomst verkenning: de gezondheidstoestand van de Nederlandse bevolking in de periode 1950-2010*. Den Haag: Sdu Uitgeverij, 1993.

## Socioeconomic factors and injuries

SIR - The conclusions stated in the article by Petridou *et al*<sup>1</sup> seem a little confusing. Their multiple logistic regression-derived odds ratio estimate for paternal schooling is 0.66 (95% CI=0.44, 0.99). It is then concluded that low socioeconomic status (SES), as reflected by paternal education, increases the risk for school related injuries. An odds ratio of less than 1, however, suggests there is a protective effect against school injuries for paternal schooling. Unfortunately, since the authors did not provide sufficient information on how paternal education was defined in this study, their conclusion seems to contradict their data. It is likely that the authors' data reflect a protective effect against injuries for some degree of paternal schooling, but the reader is left to infer just what this may be.

These results, along with their reported significance for school injuries to children from single parent homes, are contradictory to our case-control study of Ghanaian childhood burns<sup>2</sup> and our prospective study of the incidence and determinants of all-cause injury in adolescents in the United States.<sup>3</sup> There are other examples of discrepancies in the literature for both SES as an injury risk factor<sup>4,5</sup> and in the reported incidence of injury in developing and developed countries.<sup>6</sup> Comparisons of injury data are most often impeded by two factors: a lack of a consistent case or attribute definition and variations in

case ascertainment rate. We have been advocating the use of standardised terminology in injury research including demographic descriptors to permit valid comparisons of injury research. With the growing interest in risk factors for injuries in childhood and adolescence, including school injuries, it is important to present concise and thorough information as a guide to researchers so that comparisons can be made across studies.

SAMUEL N FORJUOH  
STEPHEN R DEARWATER  
*Center for Injury Research and Control,  
Division of Emergency Medicine,  
University of Pittsburgh,  
Pittsburgh, PA, USA*

- 1 Petridou E, Kouri N, Trichopoulos D, Revinthi K, Skalkidis Y, Tong D. School injuries in Athens: socioeconomic and family risk factors. *J Epidemiol Community Health* 1994;48:490-491.
- 2 Forjuoh SN, Guyer B, Strobino DM, Keyl PM, Diener-West M, Smith GS. Risk factors for childhood burns: a case-control study of Ghanaian children. *J Epidemiol Community Health* 1995;49:189-93.
- 3 Anderson R, Dearwater SR, Olsen T, Aaron DJ, Kriska AM, LaPorte RE. The role of socioeconomic status and injury morbidity risk in adolescents. *Arch Pediatr Adolesc Med* 1994;148:245-9.
- 4 Pless IB, Verreault R, Tenina S. A case-control study of pedestrian and bicyclist injuries in childhood. *Am J Public Health* 1989;79:995-8.
- 5 van Rijn OJL, Bouter LM, Kester ADM, Knipshild PG, Meertens RM. Aetiology of burn injuries among children aged 0-4 years: results of a case-control study. *Burns* 1991;17:213-19.
- 6 Chiu W, Dearwater SR, McCarty DJ, Songer TJ, LaPorte RE. Establishment of accurate rates for head and spinal cord injuries in developing and developed countries: a capture-recapture approach. *J Trauma* 1993;35:206-211.

## Reply

SIR - We appreciate the interest of Drs Forjuoh and Dearwater on our paper,<sup>1</sup> but we are mystified by their concern over our results concerning socioeconomic class as reflected in paternal education. Our data show that an increased paternal schooling by 3 years, that is higher socioeconomic status, is associated with significantly reduced risk for school injuries by 34% (odds ratio 0.66; 95% confidence interval 0.44, 0.99). Obviously, lower socioeconomic status increases this risk, which is exactly what we have reported. We find it hard to further simplify the expression "3 more years of paternal schooling".

We agree with Forjuoh and Dearwater that there are discrepancies in the literature concerning risk factors for childhood injuries but editorial policies of the *Journal* with respect to short reports did not allow us to expand on this issue. We also agree with Forjuoh and Dearwater that standardised terminology is needed in this as in any other field. Whether their approach, ours, or that of another group should be the basis of an eventual consensus cannot be ascertained at the present time.

E PETRIDOU  
N KOURI  
D TRICHOPOULOS  
K REVINTHI  
Y SKALKIDIS  
D TONG  
*Center for Research and Prevention of Injuries,  
Athens University Medical School and  
Department of Epidemiology,  
Harvard School of Public Health.*

- 1 Petridou E, Kouri N, Trichopoulos D, Revinthi K, Skalkidis Y, Tong D. School injuries in Athens: socioeconomic and family risk factors. *J Epidemiol Community Health* 1994;48:490-491.

## NOTICE

The 11th International Conference on Pharmacoepidemiology (ICPE), sponsored by the International Society for Pharmacoepidemiology (ISPE), will be held from Sunday, August 27, 1995 to Wednesday, August 30, 1995, in Montréal, Canada. The conference focusses on global public health issues, including a session devoted to issues from developing countries. For further information, contact Dr Stanley A Edlavitch at the ISPE office, University of Kansas Medical Center, Department of Preventive Medicine, Robinson 4040, 3901 Rainbow Blvd, Kansas City, Kansas 66160-7313. Tel: 913-588-2790; fax: 913-588-2791; e-mail: ISPE@UKANVM.CC.UKANS.EDU.

## BOOK REVIEWS

**Physical Activity and Health.** Society for the Study of Human Biology Symposium 34. Ed N G Norgan. (Pp 262; price not stated.) Cambridge: Cambridge University Press, 1992. ISBN: 0-521-41551-9.

This is an up to date and wide ranging account of the key issues of the biology of physical activity and health. Its six chapters are presented by different contributors and cover comparative and temporal activity in humans, the concept and methodology issues associated with activity, exercise, health, and fitness (as well as their inter-relationships) and an overview of current and future lifestyles.

Metabolic rates, speeds, and geographical ranges of activity are compared with those of animals. People are neither remarkably active nor remarkably inactive for mammals of our own size. The problems associated with health measurements are discussed. It is argued that value judgements are implicit in the definition of health. The best that can be achieved is to make the value judgements used explicit so that those with other value systems can interpret the data. An account is given of both the Allied Dunbar fitness survey and the Welsh heart health survey. Studying childhood activity shows that the percentage of body fat in the early teenage period seems to be the most important coronary disease indicator in predicting risk levels. This indicates a need for increased activity and weight reduction. Retirement from full time employment can potentially result in a reduction in activity resulting in a vicious circle of declining function and further reduction in activity. In general, it seems that older people are not very active and become less so prematurely. It is confirmed that exercise seems to play an important role in the prevention of weight gain.

Children are more likely to stick to physical activity if they enjoy it and feel a sense of achievement. They are less likely to understand the long term consequences of preventative health actions than adults. It is argued that public health statements based on the physical effects of exercise fail to address the fundamental issue of how the behaviour can be sustained long enough to achieve the desired physical and mental benefits. There continues to be a great deal of concern for the health of women and young children in rural third world communities where sustained physical effort is a way of life. A study in Nepal is described, which showed that behavioural techniques were as important as mechanical or physiological adaptations.

It is stated that improved cardiorespiratory fitness is the main consequence of aerobic exercise and it does have a positive long term effect on mood and psychological well being. It appears that very light exercise programmes are not sufficient and that intensive conditioning programmes may confer less benefit than moderately intensive schedules. Recent studies have re-affirmed the difficulty of getting people to continue in sporting activities once they have stopped. Policy makers would therefore, it is claimed, achieve more by preventing drop out in young adults than by promoting take up among middle aged and elderly non-participants.

The message given is clear; teach children to enjoy physical exercise so that they continue to participate as adults and they will benefit in later life from health gain.

This is a useful book for public health physicians and health promoters generally as well as clinicians and scientists interested in physical activity.

PETER GRIME  
Department of Public Health  
and Epidemiology,  
Medical School,  
Manchester

**Food Poisoning and Food Hygiene.** B C Hobbs and D Roberts. (Pp 402; £16.95.) London: Edward Arnold, 1993. ISBN: 0-340-53740-X.

This is the sixth edition of a text book by the former director and the present deputy director of the Food Hygiene Laboratory of the Central Public Health Laboratory, London. Although written for a wider audience, this book is a useful aide memoire for any public health physician who is involved with food poisoning, whether in investigating or controlling an outbreak, advising the public generally, or maintaining standards in health care premises.

The epidemiology of the principal food poisoning micro-organisms are considered in some detail. It is salutary to be reminded that microbiology is in a state of constant change. Before the late 1970s campylobacter was not referred to. Now it is known to be responsible

for many incidents of gastroenteritis affecting both children and adults. It was not until the mid 1980s that it became apparent that the serotype *Salmonella enteritidis* was becoming increasingly involved in cases of food poisoning. In 1986, 27% of all reported cases of Salmonella infection were caused by *S enteritidis*. There was a continuous increase to 63% in 1991. Warnings about the use of inadequately cooked eggs has not reduced the incidence of food poisoning from this source. Only relatively recently was it recognised that listeriosis after infection with *Listeria monocytogenes* had increased significantly for the fetus, newborn baby, and adult. The national warnings in the UK regarding the association of soft mould-ripened cheese with listeriosis was followed by a significant drop in cases in the UK in 1990 and 1991.

The incidence of outbreaks and sporadic cases of food poisoning generally continues to increase. Epidemiological accounts of outbreaks illustrating the role of the principal pathogens concerned are given. There is evidence that anxiety and stress in animals during transport and in strange surroundings, together with deprivation of food and water before slaughter, predispose the animals to enhanced excretion and infection. For example stress and cross infection can be important factors in *S typhimurium* infection in calves and veal. The view is taken that without international cooperation between the disciplines responsible for animal care and hygiene the intestinal disease of salmonellosis will persist and continue to rise.

In examining food hygiene in the prevention of food poisoning four main aims of food hygiene are dealt with, namely: the initial safety of raw animal products before entry to the food industry; the hygiene and care of food handlers; food storage conditions; and the general design and cleanliness of kitchens and equipment. Factors contributing to 1479 outbreaks of food poisoning were studied and the conclusions reached were that for all types of food poisoning the factors which were recorded as most commonly contributing to outbreaks included: preparation of food more than half a day in advance of needs; storage at ambient temperature; inadequate cooling; inadequate reheating; use of contaminated processed food (cooked meats and poultry, pies and take away meals prepared in premises other than those in which the food was consumed); undercooking; and cross contamination from raw to cooked food. The work concludes by giving a synopsis of UK and EU food legislation and a section on the importance of education.

I found this book a useful and authoritative presentation of key facts about food poisoning and its prevention presented in a readily accessible format.

PETER GRIME  
Department of Public Health  
and Epidemiology,  
Medical School,  
Manchester

## SHORT REVIEWS

**Methodological Issues in AIDS Behavioural Research.** Ed D G Ostrow, R C Kessler. (Pp 373; \$49.50) New York: Plenum Press, 1993. ISBN 0-306-44439-9.

Presents a selection of methodological issues of interest to both experienced and new researchers together with examples that illustrate innovative methodological approaches relevant to persons working with the diverse populations affected by AIDS.

**The Role of the Public Health Nurse: A Review of the International Literature.** M Khan, R Landes. (Pp 18 price not stated). Salford: Public Health Research and Resource Centre, 1993.

A review of the international literature focussing on the role of the public health nurse as it relates to needs assessment.

**Human Population Genetics: A Centennial Tribute to J B S Haldane.** Ed. P P Majumder. (Pp 357 \$85.00) New York: Plenum Press, 1993. ISBN 0-306-44572-7.

Incorporates the proceedings of an International Conference on Human Genetics, held in Calcutta, India, to bring together geneticists, anthropologists, clinicians, and statisticians to evaluate the impact of Haldane's contribution to various areas of human genetics and also to review recent developments in the subject.

**Young People, Health and Family Life.** J Brannen, K Dodd, A Oakley, P Storey. (Pp 237; £12.99) Buckingham: Open University Press, 1994. ISBN 0-335-19097-9.

Analyses the results of a questionnaire survey of over 800 young people aged 15 to 16 years in a borough in the west of London and an intensive interview survey of a subsample of 64 households randomly selected from the survey participants.

**Tuberculosis: Back to the Future.** Eds J D H Porter, K P W J McAdam. (Pp 303 £14.95) Chichester: John Wiley, 1994. ISBN 0-471-94346-0.

In this publication, international participants in a London School of Hygiene and Tropical Medicine Public Health Forum summarise the current state of the art of tuberculosis research and control.

PETER GRIME