CORRESPONDENCE

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Vaccinations and professional confusion

SIR,—One of the greatest impediments to high rates of vaccination uptake is the conflicting and incorrect advice given to parents by health professionals. This has received much publicity recently,[1] and action is being taken to rectify the problem. An issue that has received less attention is the conflicting advice given to the professionals.

The entries in the Association of the British Pharmaceutical Industry *Data Sheet Compendium* for 1990-1 that relate to the only available pertussis containing vaccines state[2]:

The administration of pertussis-containing vaccines is contraindicated in children with a personal or family history in parents or siblings of idiopathic epilepsy or other familial or hereditary diseases of the central nervous system. Administration of pertussis vaccine is also contraindicated in children with a history of seizures, convulsions, cerebral irritation in the neonatal period, developmental neurological defect or other disorder of the central nervous system.

In 1988 the Department of Health and Social Security advice was that in children with "problem histories" "The balance of risk and benefit should be assessed in each case."[3] The groups listed were children with a documented history of cerebral damage in the neonatal period; children with a history of convulsions; and children whose parents or siblings have a history of idiopathic epilepsy. The document said that such children may be at risk of developing a similar condition irrespective of vaccine. This advice was reiterated in 1990.[4]

The advice in the *Data Sheet Compendium* is now out of date and much too conservative. The advice in the *Monthly Index of Medical Specialities (MIMS)* is even worse[5]: it states that a history of severe allergy is also a contraindication. Is it any wonder that some doctors are denying children protection against this potentially fatal disease?

It is not difficult to find other examples of such contradictions. The recommended interval for tetanus boosters is now 10 years,[4] whereas the manufacturer recommends five to 15 years[2] and general practitioners will be remunerated if they give boosters every five years.[6]

Smallpox vaccination will attract a fee if given to a person travelling to a country requiring an international certificate of vaccination against smallpox.[6] In the past decade no country has made such a requirement. In the same publication paratyphoid vaccine is listed, whereas it has not been recommended by the Department of Health for some years.

As is to be expected, advice in the *British National Formulary*[7] is consistent with that of the Joint Committee on Vaccination and Immunisation.[4] As many doctors use publications such as the *Data Sheet Compendium* and *MIMS* is there nothing that can be done to make the advice from such sources more compatible? It is only in this way that consistent advice will be given to parents, so avoiding the present all too common confusion.

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1 Peckham C, Bedford H, Senturia Y, Ades A. *The Peckham report.* London: Action Research for the Crippled Child, 1989.
2 Association of the British Pharmaceutical Industry. *ABPI data sheet compendium.* London: Datapharm Publications, 1990.
3 Department of Health and Social Security. *Immunisation against infectious disease.* London: HMSO, 1988.
4 Department of Health. *Immunisation against infectious disease.* London: HMSO, 1990.
5 Anonymous. Vaccines and immunoglobulins. *Monthly Index of Medical Specialities* 1990;July.
6 Department of Health, Welsh Office. *Statement of fees and allowances payable to general medical practitioners in England and Wales from 1 April 1990.* London: HMSO, 1990.
7 British Medical Association and Royal Pharmaceutical Society of Great Britain. *British national formulary.* Bath: Bath Press, 1990.

Fetal and placental size and risk of hypertension in adult life

SIR,—Professor D J P Barker and colleagues found that low birth weight and high placental weight independently predicted increased risk of hypertension in adulthood and suggest that this is related to intrauterine malnutrition.[1] Though low birth weight may indicate intrauterine malnutrition, it may also be a consequence of genetic factors.[2,3] Placental weight, however, is positively associated with both birth weight and enhanced intrauterine nutrition[4,5] and thus almost certainly does not indicate intrauterine malnutrition.

An alternative explanation for the findings is that genetic predisposition to being overweight is protective against cardiovascular disease whereas being overweight from overeating increases the risk.[6,7] Although studies on twins show that genetic factors influence weight between the ages of 12 months and 7 years, they have been less helpful with respect to birth weight because monozygotic twins commonly have unequal access to the placenta.[8] In 20 000 singleton births, however, weight at 7 years was highly correlated with birth weight,[9] indicating that genetic factors considerably influence birth weight in singleton pregnancies.

Abraham *et al* found that the incidence of hypertensive vascular disease was 75% in overweight men who had been underweight in childhood but only 20% in overweight men who had been overweight in childhood.[10] Similarly, the incidence was 20% in underweight men who had been underweight in childhood but zero in underweight men who had been overweight in childhood. Thus the effect of adult body mass index on blood pressure varies according to the person's weight in infancy. This compounding effect is the basis of the artefactual association between placental weight and adult hypertension.

The real importance of placental weight is that it is a marker for maternal weight.[6,11] Babies born with large placentas are likely to have fat mothers. Maternal weight in turn influences subsequent changes in children's weight: in a Western society lean children of fat mothers tended to grow up fatter and fat children of lean mothers tended to grow up leaner.[12]

Acquired obesity and its consequences, diabetes and cardiovascular disease, are increasing in developing countries. I believe that the apparent protective effect of heaviness in infancy is genetically based and is specific to certain European populations. Any attempt to emulate this by the injudicious overfeeding of lighter infants in developing countries would increase not decrease the incidence of cardiovascular disease.

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1 Barker DJP, Bull AR, Osmond C, Simmonds SJ. Fetal and placental size and risk of hypertension in adult life. *Br Med J* 1990;**301**:259-62. (4 August.)
2 Wilcox AJ, Russell IT. Birthweight and perinatal mortality: III. Towards a new method of analysis. *Int J Epidemiol* 1986;**15**: 188-96.
3 Khoury MJ, Cohen BH. Genetic heterogeneity of prematurity and intrauterine growth retardation: clues from the old order Amish. *Am J Obstet Gynecol* 1987;**157**:400-10.
4 McKeown T, Record RG. The influence of placental size on foetal growth in man, with special reference to multiple pregnancy. *J Endocrinol* 1952;**9**:418-26.
5 Garn SM, McCabe KD. Maternal fatness and placental size. *Am J Clin Nutr* 1977;**30**:277-9.
6 Bradley PJ. Is obesity an advantageous adaptation? *Int J Obes* 1982;**6**:43-52.
7 Bradley PJ. Weight in infancy and death from ischaemic heart disease. *Lancet* 1989;ii:985.
8 Wilson RS. Concordance in physical growth for monozygotic and dizygotic twins. *Ann Hum Biol* 1976;**3**:1-10.
9 Garn SM, Shaw HA, McCabe KD. Birth size and growth appraisal. *J Pediatr* 1977;**90**:1049-51.
10 Abraham S, Collins G, Nordsieck M. Relationship of childhood weight status to morbidity in adults. *Health Services and Mental Health Administration Health Reports* 1971;**86**:273-84.
11 Garn SM, Hoff K, McCabe KD. Effect of placental size on the progeny of obese women. *Ecology of Food and Nutrition* 1979;**8**:67-9.
12 Garn SM, Cole PE, Bailey SM. Effect of parental fatness levels on the fatness of biological and adoptive children. *Ecology of Food and Nutrition* 1977;7:91-3.

AUTHORS' REPLY,—In stating that placental weight is simply a marker for maternal fatness Dr Bradley overlooks the strong relation between placental weight and maternal anaemia.[1] We think that discordance between placental and fetal weight reflects poor maternal nutrition. We do not agree that the lower rates of cardiovascular disease associated with greater fetal and infant growth are best explained by a hypothetical gene.[2] Evidence is rapidly accumulating that they are part of the long term benefits of a favourable environment in early life.[3]

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