Table 1—*Number of subjects in each category of body mass index (calculated from self reported weights and heights*) when different and common thresholds were used for men and women†*

	Men (n = 1536)		Women (n = 1864)		Total (n = 3400)	
	Different threshold	Common threshold	Different threshold	Common threshold	Different threshold	Common threshold
Underweight	114	114	60	210	174	324
Normal weight	781	781	1008	1069	1789	1850
Overweight	536	536	560	417	1096	953
Obese	105	105	236	168	341	273

*Not all responses were usable.
†Thresholds when different values were used for men and women were: underweight, <20.0 (men) and <18.6 (women); normal weight, 20.0-24.9 (men) and 18.6-23.8 (women); overweight, 25.0-29.9 (men) and 23.9-28.5 (women); and obese, ≥30.0 (men) and ≥28.6 (women). Common thresholds were: underweight, <20.0; normal weight, 20.0-24.9; overweight, 25.0-29.9; and obese, ≥30.0.

mass index of >30.0 for both men and women.[3] Alternative definitions have been used elsewhere.

In Somerset some health targets were monitored by postal questionnaire surveys in 1987 and 1992. In 1987 a systematic random sample of 5000 residents of Somerset health district aged 16-64 was taken from the family practitioner committee's register, and in 1992 a sample of 6009 such residents was used. The same questions on self reported height and weight were included in both questionnaires, and the response rate was 58.3% (2915/5000) in 1987 and 57.6% (3463/6009) in 1992.

Table 1 shows the distribution of the respondents among the categories of body mass index in 1992. Using common thresholds greatly reduces the proportion of women categorised as obese (from 12.7% to 9.0%) and overweight (from 30.0% to 22.4%) and increases the proportion categorised as underweight (from 3.2% to 11.3%). These changes affect the distribution of obesity in the whole population, reducing the figure from 10.0% to 8.0%. Although the differences seem quite small, in terms of the Health of the Nation targets that focus specifically on obesity such a change in definition has profound consequences. In 1987, when thresholds that differed between the sexes were used in the survey in Somerset, 10.5% of women were found to be obese. This was the base from which the local target was set in 1992, requiring a reduction to 7.0% of women. Had thresholds been used that were the same in both sexes, the base figure in 1987 would have been 7.3% and the corresponding target for the year 2005 would have become 4.9%.

Health targets such as those associated with the Health of the Nation strategy require clear definitions, an understanding of the basic scientific problems underlying the targets, and regular review to take account of a changing knowledge base.

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Prevalence of obesity is low in people who do not eat meat

EDITOR,—Britain is failing to meet targets that have been set for reducing obesity.[1] One of the aims of the Health of the Nation strategy is to reduce the percentages of men and women who are obese to 6% and 8%, respectively, by 2005,[2] but the *Health Survey for England 1994* shows that the prevalence of obesity had increased to 13.2% among men and 16.0% among women by 1994.[3] This increase is probably partly due to a reduction in physical activity; the importance of the composition of the diet is not clear.[4]

We used data collected for the European prospective investigation into cancer and nutrition to examine the relation of obesity with meat consumption.[5] A total of 3947 men and 17 158 women aged ≥20 were recruited during 1994 and 1995 through vegetarian and health food societies, shops, and magazines. Subjects were classified as meat eaters if they ate any meat, as fish eaters if they did not eat meat but did eat fish, as vegetarians if they did not eat meat or fish but did eat dairy products or eggs, and as vegans if they did not eat any of these four categories of food.

The mean ages of the men and women were 42.9 and 39.7 years respectively. Among both men and women, mean body mass index was highest among the meat eaters, lowest among the vegans, and intermediate among the fish eaters and vegetarians (fig 1). These differences in body mass index are equivalent to mean differences in weight between meat eaters and vegans of 5.9 kg in men and 4.7 kg in women. In the groups that did not eat meat, mean body mass index was lower among those who had adhered to their diet for five or more years than among those who had adhered to their diet for a shorter period. This association with duration of diet suggests that the differences in body mass index are largely due to the qualitative differences between the diets of the four groups.

Among the meat eaters, after adjustment for age 6.4% of the men and 9.2% of the women were clinically obese (body mass index >30); these figures are well below the national averages but fail to reach the targets set in the Health of the Nation (fig 1). In contrast, the prevalence of obesity was well within these targets in all the groups that did not eat meat. These data suggest that a meat free diet is associated with a low prevalence of obesity.

This research was supported by the Imperial Cancer Research Fund and the Europe Against Cancer Programme of the European Commission.

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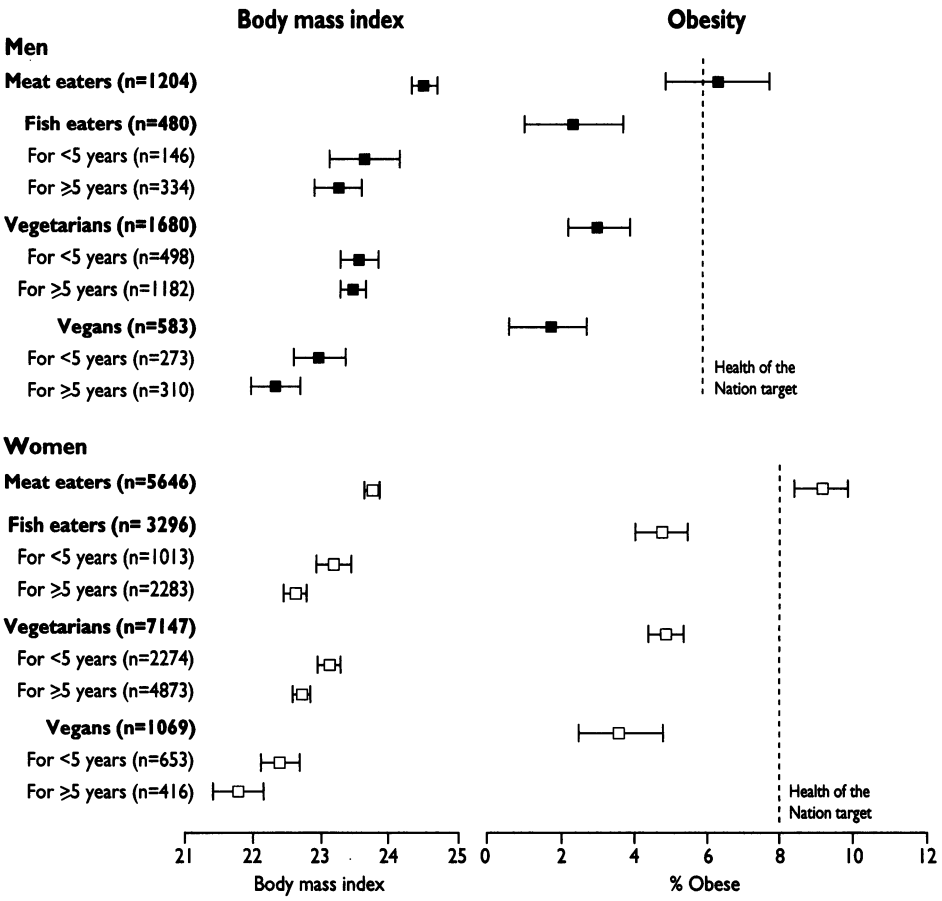

Fig 1—*Mean (95% confidence interval) body mass index and percentage of subjects who were obese by type of diet (values are adjusted for age)*

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Long term outcome by method of delivery of fetuses in breech presentation

Policy of planned caesarean section could have appreciable costs

EDITOR,—P J Danielian and colleagues contend that a policy of vaginal breech delivery in selected cases of breech presentation is as safe as elective caesarean section with respect to long term disability.[1] In their editorial in the same issue M Hannah and W Hannah point out the need for a large randomised prospective trial to answer this question but assert that a policy of planned caesarean section for all breech deliveries would not only limit women's choices but give rise to substantial costs.[2]

Unfortunately, in our litigious society and with claims for compensation for severe disability regularly exceeding £1m when avoidable obstetric causes are found to have occurred, the situation may be murkier. According to Danielian and colleagues' study, one out of 1645 babies (that is, 0.0006 babies) presenting by the breech was born with severe disability "possibly attributable to delivery." A study to detect an increase in possibly avoidable causes of disability (the critical issue) at this level—say, 0.000 in the planned caesarean group versus 0.0006 in the intended vaginal delivery group—with 80% power and 5% significance would require over 26 000 breech births, and so the question remains unanswered. Given the numbers required, it may remain so. It might be argued that this proportion is an unreasonably low one to study, but, as such claims for compensation seem to go in favour of the plaintiff when doubt exists, the extra indemnity premium for a policy of selective vaginal breech delivery could be as much as £900-1000 for each intended vaginal breech delivery. This needs to be borne in mind when the financial costs of a policy of planned caesarean section are considered.

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External cephalic version at term should be considered

EDITOR,—P J Danielian and colleagues report a 20% rate of long term disability among fetuses delivered by the breech, irrespective of mode of delivery.[1] This raises the key issue of whether there is an inherent abnormality associated with such fetuses. Braun *et al* initially suggested that fetuses with a wide range of morphological and functional damage more commonly present by the breech.[2] Hyten postulated that neurological deficit in the fetus disrupts normal muscular control, allowing for persistent extension of the legs and preventing the assumption of a normal fetal attitude.[3]

If it is presentation by the breech in utero or at delivery that puts the infant at greater risk of long term morbidity then external cephalic version at term might be considered. The literature suggests that this has a 65% success rate and significantly reduces the caesarean section rate (37%, compared with 83% in controls).[4] The procedure is also cost effective and safe, with a perinatal mortality of <1% and risks of fetomaternal transfusion and entanglement in the cord of 3% and 1%, respectively.[4] Data suggest that, regardless of birth weight and gestation, fetuses presenting by the breech have a higher perinatal mortality and morbidity rate than fetuses with cephalic presentation.[5] Furthermore, there are no published data comparing short and long term morbidity between infants delivered by the breech and those delivered by the vertex after spontaneous version or external cephalic version at term.

What is needed, therefore, is a prospective randomised study comparing morbidity rates in infants delivered by the breech and infants delivered by the vertex after external cephalic version at term, irrespective of the mode of delivery. Such a study would help address the important issue of whether the raised morbidity rate is an inherent problem with fetuses that present by the breech at term or purely a function of malpresentation at delivery.

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Outcomes of breech presentations not diagnosed until labour need to be studied

EDITOR,—P J Danielian and colleagues report the long term outcome among infants delivered by the breech at term by the intended mode of delivery.[1] I was surprised that the authors do not mention the group of fetuses in which breech presentation was not diagnosed until the women presented in labour.

The proportion of breech presentations diagnosed in labour varies in the published literature between 9% and 33%[2 3] and is therefore not insignificant. As the paper does not describe this group separately it can be assumed only that most of the breech presentations that were diagnosed in labour were included in the "intended vaginal delivery" group and therefore that intended vaginal delivery is not the same as planned vaginal breech delivery.

A generally accepted aim of antenatal care is to detect malpresentation in order to offer external cephalic version and to assess the mode of delivery, the commonly held belief being that excess perinatal mortality and morbidity is associated with undiagnosed breech presentation. This belief has been challenged, but only short term outcomes were described.[4] A study such as that by Danielian and colleagues looking at the long term outcomes in this group is therefore needed.

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Evaluation should have included long term follow up of the mothers

EDITOR,—We agree with the recommendations in P J Danielian and colleagues' paper and the accompanying editorial that a large randomised controlled trial is required to determine which is the safest and most acceptable mode of delivery in breech presentation at term.[1 2] We are concerned, however, that the discussion, particularly in the editorial, does not mention the need for long term follow up of the mother.

The authors of the editorial state that "increased maternal morbidity is an inevitable consequence of abdominal delivery" on the basis of evidence from the Cochrane meta-analysis of two randomised controlled trials that compared the policy of planned caesarean section with that of planned vaginal birth. Both of these trials measured maternal morbidity by short term variables such as blood transfusion, headache after spinal anaesthetic, wound infection, febrile morbidity, and length of stay in hospital.[3 4] These measures are extremely important, but longer term measures of maternal morbidity, such as urinary incontinence, faecal incontinence, and dyspareunia, should also be included (along with measures of infant morbidity) to evaluate modes of delivery comprehensively.

Few studies have investigated the long term health problems of women after childbirth. Our study of 1010 members of the National Childbirth Trust focused on postnatal sexual health and showed high levels of morbidity up to two years after the birth.[5] This was significantly associated with the mode of delivery: dyspareunia was most common in women who had had assisted vaginal deliveries and least common in those who had had a caesarean section (table 1). Nearly all the women who had an assisted delivery had an episiotomy (93%); this compared with a rate of episiotomy of 20% in those who had unassisted vaginal deliveries.

Table 1—*Number (percentage) of women who had dyspareunia after childbirth by mode of delivery*

	Vaginal unassisted delivery (n = 743)	Forceps or ventouse delivery (n = 143)	Caesarean section (n = 122)
Dyspareunia	144 (19)	75 (52)	16 (13)
No dyspareunia	599 (81)	68 (48)	106 (87)

$\chi^2 = 81$, df = 2, P<0.0001.

Vaginal deliveries of babies presenting by the breech are rarely straightforward and therefore may result in considerable maternal morbidity. Any evaluation that does not include long term follow up of the mother will give only a partial perspective on the effect of breech delivery on mothers and children.

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