breast-feeding in an atmosphere of apparent disinterest or mismanagement, both by GPs and by hospital clinics despite the well-publicised advantages of breast-feeding. Some of her experiences seemed only too familiar.

Attitudes encouraging breast-feeding could be more positive. Continuity of care in the approach to breast-feeding with perhaps a personally supportive contact throughout and after pregnancy might go a long way towards correcting present deficiencies. Who better to do this than the health visitors? Success established by the National Childbirth Trust in its approach to breast-feeding may be through its personal sponsorship scheme whereby a recently lactating member of the trust adopts a local antenatal member and offers support in the perinatal and postnatal period. Unfortunately, the National Childbirth Trust has a rather middle-class appeal.

In this group practice responsibility for establishing contact lies with our practice-attached health visitors. All expectant mothers, whether booked for hospital or for GP antenatal care, are visited by them at home in the seventh month of pregnancy to discuss and, hopefully, influence the choice of infant feeding. Following delivery the same health visitor continues supportive care at home and in the practice's well-baby clinics. We recently analysed the feeding patterns of all 107 babies in the practice who arrived in the period August 1977 to August 1978 and whose mothers were given this support. Sixty per cent were breast-fed at birth, falling to 59% at six weeks and 36% at seven months. Seventy per cent of these babies were born into social classes III and IV. These results are not as depressing as those quoted by Dr Bolton-Maggs for a national survey. As was to be expected, bottle-feeding was the norm in social classes IV and V.

In an attempt to redress the balance in favour of the lower socioeconomic groups, our health visitors suggested more intensive domiciliary visiting to women in classes III-V. These mothers not only are less determined to succeed with breast-feeding but also have a lower attendance rate at antenatal classes. Encouragement to attend such classes could be given in the first trimester, perhaps even when the result of the pregnancy test is given, and some antenatal classes arranged during the first four months of pregnancy in the evenings, at a time when the NHS has little antenatal care to offer.

An integrated care scheme within a general practice setting can prove more supportive than the often impersonal approach of hospital clinics.

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SIR,—Following Dr Paula H Bolton-Maggs's paper on breast-feeding (11 August, p 371) and Anne Chase's reply (25 August, p 492), I feel that I must redress the balance by describing my own experience of feeding my four-month-old firstborn son. At the age of 36 (Mrs Chase's midwife, please note!), not only did I have no problem establishing breast-feeding but I found it one of the most pleasurable and rewarding experiences of my life.

Much of the credit for this must go to St Mary's Hospital, Manchester, where mothers were actively encouraged to breast-feed. During the parentcraft classes not only did

we see films on breast-feeding, but a young mother also gave us a practical demonstration. Pregnant women wishing to feed were examined and counselled by a specialist midwife, and after the delivery were given free access to their babies; members of the nursing staff were only too willing to help with the first feeds. Problems of perineal soreness were overcome by the provision of a rubber air ring; but it was also possible to feed the baby lying on one's side, "face to face," a position that I still adopt for night feeds.

I do agree with Dr Bolton-Maggs that the positive aspects of breast-feeding should be more publicised—for instance, the delightful sensation of the baby sucking and his small hands on one's skin, accelerated weight loss (a fact I can confirm), and the convenience of carrying a food supply around with one. To those mothers who are really embarrassed about feeding in public to the extent of this being a deterrent I would suggest the purchase of a Kaneson breast pump¹—milk can be expressed at home and given to the baby at leisure. (The pump is designed like a syringe, the outer part doubling as a feeding bottle; and is very easy to use.) However, I have found that any loose blouse or smock enables one to feed quite discreetly; and nursing bras with a zip under each cup, as designed by Balance Maternities, enable one to manoeuvre without fumbling.

I hope this encourages would-be breast-feeders to take heart—it really can be a trouble-free and marvellous experience.

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¹ Supplied by Kimal Scientific Products Ltd, Kimal House, Uxbridge Road, Hillingdon Heath, Uxbridge, Middx UB10 0PW.

*.*This correspondence is now closed.—ED, *BMJ*.

Fetal malnutrition—the price of upright posture?

SIR,—Professor John Dobbing (25 August, p 492), in his criticism of my paper (4 August, p 317), is perfectly right when he says that a longitudinal measurement cannot be assimilated to a curve of weight which is related to volume. However, instead of modifying biparietal diameter curves by a fourth-degree polynomial or considering a plot of necropsy data as he suggests, I think it is preferable to compare growth of the same parameter prenatally and postnatally.

In this respect measurements of head circumference are very appropriate and confirm my assertion that growth falters slightly before term. Campbell¹ showed that its velocity decreased from 11.5 mm per week at the beginning of the third trimester of pregnancy to 1.8 mm per week towards term, which is indisputably lower than the average of 4 mm per week deduced from the standards of head circumference between birth and 3 months.² This makes Professor Dobbing's statement that brain growth accelerates at the end of intrauterine life rather surprising, even though the relation between head circumference and brain weight is not linear. One becomes even more confused if by "accelerating" he means "increasing velocity" as generally accepted: in that case his assertion

is in conflict with the data of an article of his to which he referred.³

Professor Dobbing may, however, have other data supporting this new point of view. Before accepting them, I would like to have some reassurance: is he sure that his samples are not biased by an excess of newborn babies with relatively big heads towards term when mechanical problems of delivery become more complicated? Has he taken into account the opposite possibility, that he may have an excess of small-for-dates babies with a reduced head volume for shorter gestational period? Does he believe that necropsy data are more representative of what happens in utero to a normal fetus than ultrasound studies or even cross-sectional surveys of liveborn babies?

Finally, I wonder if Professor Dobbing really considers that his data prove that biparietal diameter is not an indicator of head growth. This could be established only by demonstrating that head volume and biparietal diameter can vary independently, which he has not done. At all events, this would imply that the head grows more like a cylinder of increasing diameter than like a sphere. Personally, I believe that this is not supported by everyday observation, and Professor Dobbing should agree on this point at least: his mathematical model of head growth is based on the assumption that its shape is roughly spherical.³

Can I ask him to solve the contradictions of his different interpretations of head growth before further questioning the conclusions of the ultrasonographers? This should help him to find the solution of his dilemma about fetal growth faltering in late pregnancy.

A BRIEND

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¹ Campbell, S, in *Fetal Physiology and Medicine*, ed R W Beard and P W Nathanielsz, p 271. London, W B Saunders, 1976.

² Vaughan, W C, and McKay, R J, *Nelson Textbook of Pediatrics*, 10th edn. London, W B Saunders, 1975.

³ Dobbing, J, and Sands, J, *Early Human Development*, 1978, 2, 81.

Hats for the newborn infant

SIR,—We were interested to read the paper by Dr Chaput de Saintonge and others (8 September, p 570) on the effect of Gamgee-lined hats in reducing heat loss in infants immediately after birth. Their results are the opposite of those that we obtained in a similar study of the stockinette hats which are more commonly used in this country.

We studied the effects of these hats and of overhead heating lamps in preventing a fall in body temperature in the first hour of life. We used a randomised study of factorial design with 20 full-term newborn infants allocated to one of four groups: hat and lamp, hat but no lamp, lamp but no hat and neither hat nor lamp. Initial (1-minute) rectal temperature and birth weight were similar in the different groups. The average fall in temperature in the first hour is given in the table. The stockinette hats did not reduce the fall in temperature, there being a small effect in the opposite direction. The effect of the overhead heating lamp in reducing cooling was, however, statistically significant ($P < 0.05$).

It seems therefore that the stockinette hats