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SUPPLEMENT

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CORRESPONDENCE

We may return unduly long letters to the author for shortening so that we can offer readers as wide a selection as possible. We receive so many letters each week that we have to omit some of them. Letters should be typed with double spacing between lines and must be signed personally by all their authors, who should include their degrees. We cannot acknowledge their receipt unless a stamped addressed envelope or an international reply coupon is enclosed.

Correspondents should present their references in the Vancouver style (see examples in these columns). In particular, the names and initials of all authors must be given unless there are more than six, when only the first three should be given, followed by et al; and the first and last page numbers of articles and chapters should be included. Titles of papers are not, however, included in the correspondence section.

Maternal nutrition, breast-feeding, and contraception

SIR,—The recent leading article by Professor John Dobbing (12 June, p 1725) seems to us to confuse what is biologically obvious. The situation is really simple. All mammals have evolved appropriate spacing mechanisms for their offspring depending on the species' mode of life and the needs and maturity of their young; and these mechanisms are capable of responding to severe local food shortages. In most wild primates lactation anoestrus is mainly responsible.[1] Similarly in humans lactation amenorrhoea is the ancestral endocrinological means of child spacing.[2 3] However, and this is the point, effectiveness varies with the pattern of breast feeding, or more correctly the *cumulative sucking stimulus* as measured by the length of nursing, the vigour of the baby, and, probably most importantly, the number of times the infant takes the breast[4] *minus* deviation of sucking stimulus (complementary bottle feeds, pacifiers) or blunting of appetite (early introduction of semi-solids).

For 99% of human existence as gatherer-hunters the dyadic closeness of mother and young child was accompanied by extremely frequent sucking throughout the 24 hours. Few such societies exist today, but these show highly effective and prolonged child-spacing. The !Kung are classical, with mean birth intervals of about four years.[5] With the development of agriculture and village settlements (and the availability of cereals and animal milk)[4] and of early urbanisation, and especially with current technological urbanisation, the amount of sucking, the length of lactation amenorrhoea, and hence the effectiveness of biological child spacing declined, so that its existence was denied by modern medicine until very recent years.

Maternal malnutrition plays only a very small part in this postpartum amenorrhoea.[6–8] In severe food shortages, however, as in famines, menstruation ceases in all females as a form of nutritional and biological protection for women and for the community.[9] Conversely, well nourished women in the UK and USA who breast-feed frequently without supplements do not menstruate for well over two years after delivery.[10 11]

General public health guidelines accepted by current international consensus are straightforward for many developing country circumstances[3 12] and are similar nutritionally to those suggested in WHO publications 27 years ago[13]: (1) Ensure as good a diet as possible for mothers in pregnancy (lactation stores of subcutaneous fat, fetal stores, avoidance of low-birth-weight neonates) and in lactation—often feasible, but economically and culturally difficult because of restrictions on readily available foods. (2) Breast-feed alone on an unrestricted 24-hour schedule for at least four to