weight; for maintenance or resumption of cycles in older women, the minimum weight represents 22% fat as a percentage of body weight. The weights are indicated by a body composition fatness indicator, total body water as a percentage of body weight (1). A ratio of lean to fat is involved; no prediction can be made from fat as a percentage of body weight.

The nomograms on which these weights are indicated are used clinically for the evaluation of hypothalamic amenorrhea due to dieting or exercise, or both (1, 2). We have also studied ballet dancers (3), college runners and swimmers (4), and rowers (5, 6). The observations of others on amenorrhea in dieting and athletic women (2, 7, 8) are in accord with our experimental data (9) and other aspects of the "critical fat" hypothesis presented in review papers (10) and my book (11). I have also related food intake and physical activity to the level of fertility of populations (12).

I did not say the statement attributed to me in direct quotes. What I did say was that the most important supporting evidence for the critical fatness hypothesis is the data of Vigersky et al. (8). These data show that simple, moderate weight loss results in abnormal function of the hypothalamus, the part of the brain which controls the pituitary-ovary axis and hence reproductive ability (8).

> Rose E. Frisch Harvard Center for Population and Development Studies, Harvard School of Public Health, Cambridge, MA 02138

References

- 1. R. E. Frisch and J. W. McArthur, Science 185, 949 (1974).2. S. J. Nillius, in Understanding Anorexia Nervosa
- and Bulimia (Report of the 4th Ross Conference on Medical Research, Ross Laboratories, Columbus, OH, 1983), pp. 77-81.
- R. E. Frisch, G. Wyshak, L. Vincent, N. Engl. J. Med. 303, 17 (1980).
- 4. R. E. Frisch et al., J. Am. Med. Assoc. 246, 1559 (1981).
- R. Snow, R. Barbieri, R. E. Frisch, J. Clin. Endocrinol. Metab. 69, 369 (1989).
- 6. E. L. Gerard et al., Am. J. Roentgen. 157, 99 (1991); R. E. Frisch et al., Metabolism 41, 191 (1992)
- 7. J. W. McArthur et al., Mayo Clin. Proc. 51, 657 (1976); D. Dale, D. H. Gerlach, A. L. Wilhite, Obstet. Gynecol. 54, 47 (1979); M. Warren, J. Clin. Endocrinol. Metab. 51, 1050 (1980); B. Schwartz et al., Am. J. Obstet. Gynecol. 141, 662 (1981); J. C. Prior, Sem. Reprod. Endocrinol. 3, 27 (1985); B. B. Green, N. S. Weiss, J. R. Daling, *Fertil. Steril.* **50**, 721 (1988).
- R. A. Vigersky, A. E. Anderson, R. H. Thompson, L. Loriaux, N. Engl. J. Med. 297, 1141 (1977).
- R. E. Frisch, D. M. Hegsted, K. Yoshinaga, Proc. Natl. Acad. Sci. U.S.A. 72, 4172 (1975); ibid. 74, 379 (1977)
- 10. R. E. Frisch, Biol. Rev. Cambr. Philos. Soc. 59.

161 (1984); Sem. Reprod. Endocrinol. 3, 45 (1985); Perspect. Biol. Med. 28, 611 (1985); Sci. Am. 258, 88 (March 1988); Human Reprod. 2, 521 (1987); Trends Endocrinol. Metab. 2, 191 (1991); in The Induction of Ovulation, Baillières's Clinical Obstetrics and Gynecology, P. G. Crosignani, Ed. (Baillière Ltd., Harcourt Brace Jovanovich, London, 1990), pp. 419-439.

- 11. R. E. Frisch, Ed., Adipose Tissue and Reproduction (Karger, Basel, 1990).
- 12. R. E. Frisch, Soc. Biol. 22, 17 (1975); Science 199, 22 (1978); in *Malthus: Past and Present*, J. Dupaquier, A. Fauve-Chamoux, E. Grebinik, Eds. (Academic Press, London, 1983), pp. 393-404.

Response: Reporter Mike May interviewed Frisch twice. Her disputed statement, "I feel that we have very good, documented evidence for what we've published," appears in his notes as it was printed in Science.—Eds.

Corrections and Clarifications

In the last paragraph (p. 1909) of the article "Tropical deforestation and habitat fragmentation in the Amazon: Satellite data from 1978 to 1988" by D. Skole and C. Tucker (25 June, p. 1905), "(~15,000 km²)" should have been "(~16,000 km²)." The last sentence of note 24 of the same article should have read, "Additional ground checking and verification were done in eastern Para state, north of Manaus and along the Rio Negro, both in Amazonas.'

SYNTHESIS

ner hase

plus setup

