

deficiency in patients with cystic fibrosis, which can easily be performed in the home.

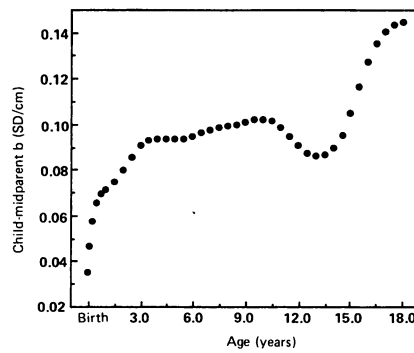
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- 1 David TJ. Cystic fibrosis. *Arch Dis Child* 1990; 65:152-7.
- 2 Hughes RL, Sahgal V, Craig R. Potential effects of nutritional state on pulmonary function in cystic fibrosis. In: Neijens HH, Sinaasappel M, eds. Gastro-intestinal and nutritional aspects in CF and its relation with the respiratory system. *Acta Paediatr Scand* 1985;suppl 317:42-7.
- 3 Shepherd RW, Holt TL, Thomas BJ, et al. Nutritional rehabilitation in cystic fibrosis: controlled studies of the effects on nutritional growth retardation, body protein turnover, and course of pulmonary disease. *J Pediatr* 1986; 109:778-94.
- 4 Dowd PS, Heatley RV. The influence of under-nutrition on immunity. *Clin Sci* 1984;66: 241-8.

Parent-specific evaluation of growth

SIR,—We have read with interest the recent paper by Dr Sorva and colleagues, concerning reference data for stature of children conditional upon the statures of parents and that of the child at 1 year of age.¹ We are troubled by the use of data of unknown validity and reliability as the basis of reference data. Common protocols were not used for measuring children, it is unknown whether recumbent length or erect stature was measured at the youngest ages, and all parental and some of the child statures were self reported rather than measured. Each of these deficiencies will, to an unknown degree, add random error and perhaps bias. We and others have documented appreciable bias as well as increased random error when using reported statures.² More practically, the added random error will attenuate correlations and regression coefficients that are the bases of the equations estimating standard deviation scores for children. While the authors acknowledge their less than perfect data, there remains concern over the validity of the findings.

The final equations for children (their table 2) are to be applied irrespective of the age of the child. In our investigations on the Fels Longitudinal Study, we found that the pattern of parent-child relationships for stature changed so greatly across age that it was necessary to consider age.³ This can be appreciated from the figure, which presents the regression coefficients (b) of standard deviations in length (birth to 2.5 years) and stature (3.0 to 18 years) of boys, relative to the mid-



Regression coefficients (b) of standard deviations in length and stature relative to midparent stature.

parent stature (average of maternal and paternal statures). Clearly, there is systematic and non-linear age covariance in the midparent-child statural relationship scaled according to standard deviation scores in child stature. Unfortunately, Dr Sorva and colleagues do not provide any conventional summary or diagnostic statistics allowing evaluation of the adequacy of fits for the equations in their table 2 across the entire age range; those relating to final stature in their table 3 are insufficient for this purpose.

We have provided previously a method of adjusting recumbent length or stature of children (birth to 18 years) according to parental statures.³ All measurements of children and parents were taken under standardised research conditions. The parent-specific adjustments were specifically normed relative to the internationally recommended reference data from the US National Center for Health Statistics, and US national estimates of parental statures. Exact estimation equations, computer programs,³ and simplified tables for clinical ready reference⁴ have been presented. We agree with Dr Sorva that a valid method of parent-specific evaluation of stature in children provides an important clinical tool to separate the normal genetic contribution of parental stature to stature of children from other factors that affect stature such as malnutrition and disease.

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- 1 Sorva R, Tolppanen E-M, Lankinen S, Perheentupa J. Growth evaluation: parent and

child specific height standards. *Arch Dis Child* 1989;64:1483-7.

- 2 Himes J, Roche AF. Reported versus measured adult statures. *Am J Phys Anthropol* 1982;58: 335-41.
- 3 Himes JH, Roche AF, Thissen D. Parent-specific adjustments for assessments of recumbent length and stature. *Monographs in Paediatrics* 1981;13:1-88.
- 4 Himes JH, Roche AF, Thissen D, Moore WM. Parent-specific adjustments for evaluation of recumbent length and stature of children. *Pediatrics* 1985;75:304-13.

The taste of milk

SIR,—One in four bottle fed babies change their milk formula in the first weeks of life, often in response to non-specific symptoms.¹⁻³ This tendency is common in Portugal too. Often, the substituted milk has a similar composition to the original, but is a different brand. In this situation, mothers often express satisfaction with the switch to the new milk.

I cannot help reflecting that three out of four bottle fed babies accept, without reluctance, the very same type of food with no variation in composition (or presumably taste) six times daily during early infancy. This monotony, which is contrary to the most basic rule of dietary habits, might just prove too much for one in four babies—at least we should give the matter some further thought.

I presume that the evolution of the taste learning process has developed through breast feeding. It is well known that the composition of maternal milk is subject to important variations, which are part influenced by the maternal diet. Are there similar variations in the taste of maternal milk, thereby making meal-times somewhat more exciting for babies? Might such variations in taste, during early infancy, facilitate weaning and the natural appetite for a varied diet in toddlers? Conversely, is there any evidence that bottle feeding is associated with a narrow 'taste span' in toddlers?

For those babies who are not breast fed, perhaps there is nothing wrong with encouraging various brands of milk according to the whim of babies (and their mothers).

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- 1 Taitz LS, Scholey E. Are babies more satisfied by casein based formulas? *Arch Dis Child* 1989;64: 619-21.
- 2 Forsyth BMW, McCarthy PL. Problems of early infancy, formula changes and mothers beliefs about their families. *J Pediatr* 1985;106: 1012-7.
- 3 Department of Health and Social Security. *Present day practice in infant feeding: third report*. London: HMSO, 1988. (Reports on health and social subjects No 32.)