Correspondence

How fast can babies breathe?

Sir,

This is not a provisional entry for the *Guinness Book of Records* but an attempt to satisfy a longstanding and recently renewed curiosity.

As a house physician in Queen Elizabeth Hospital for Children in Hackney, I observed a respiratory rate of 180/minute in a 3-week-old preterm infant with an extensive bronchopneumonia which persisted for several hours, falling overnight to 120/minute, followed by gradual return to more normal levels with recovery. Within the last month, a 5-week-old infant (admitted at 2 weeks with a campylobacter enteritis) gradually developed a variable laryngeal stridor, with occasional mild cyanotic episodes associated with rapid stridulous breathing, during one of which I found the respiratory rate to be 172/minute, a rate not subsequently equalled, although rates well over 100/minute were recorded.

Have rates as high or higher been observed? The question is not entirely academic since I believe that some equipment designed to monitor respiration in infancy would not be capable of recording rates of this magnitude.

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New immunofluorescent blood test for gluten sensitivity

Sir,

We were surprised at the low incidence of anti-reticulin antibody (ARA) found by Unsworth¹ in his patients with coeliac disease. These results are not consistent with those of others² nor are they consistent with our results for children aged between 4 months and 12 years. During the last 4 years we have looked for the presence of ARA in many conditions, and have used indirect immunofluorescent assay.³

None of the 40 cases of the control group had circulating ARA, whereas out of 32 patients with gastroenterological diseases (such as giardiasis, intolerance to cows' milk protein, intractable diarrhoea), 4 (12.5%) had positive results at the time of the biopsy; none had demonstrable coeliac disease.

Out of 48 patients with probable coeliac disease studied at the time of the first biopsy, 36 (75%) were ARA positive. After one year on a gluten-free diet 21,

(60%) of 35 cases were negative, but most of the remainder admitted they had frequently lapsed from the diet. Between 2 months and one year after gluten had been reintroduced to the diet, 15 (68%) of the 22 patients were ARA positive.

It is our conviction that, although the presence of ARA cannot yet be considered to be the perfect screening test for detection and control of these patients, it is of considerable value.

Data now presented by Unsworth demonstrate that the presence of antibodies to gliadin is a non-specific test for coeliac disease. We think we shall only be able to draw firm conclusions if the same patients are studied in the three protocol phases necessary to diagnose coeliac disease according to the criteria established by the European Society for Paediatric Gastroenterology and Nutrition. This was not the case in Unsworth's study nor was it so in our own.

References

- 1 Unsworth D J, Manuel P D, Walker-Smith J A, Campbell C A, Johnson G D, Holborow E J. New immunofluorescent blood test for gluten sensitivity. *Arch Dis Child* 1981; 56: 864-8.
- 2 Wright R. Coeliac disease and gastrointestinal allergy. In: *Immunology of gastrointestinal and liver disease*. London: Edward Arnold, 1977: 27-44.
- 3 Rizzetto M, Doniach D. Types of 'reticulin' antibodies detected in human sera by immunofluorescence. *J Clin Pathol* 1973; 26: 841-51.

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Hypernatraemic dehydration

Sir,

In a recent paper¹ the incidence of hypernatraemic dehydration (serum sodium >150 mmol/l) in patients admitted with gastroenteritis was shown to have fallen from 4.9% to 0.9% in a 4-year period at one hospital for the age group 0-2 years. During the latter part of 1980 it was felt that our hospital had witnessed an upturn in the incidence of this problem. It was found that the incidence of hypernatraemia was 4.2% (13) in 311 patients admitted with gastroenteritis under age 2 years. In 1970 the incidence was 5.8% (24) in 414 patients. The incidence of hypertonic dehydration (serum osmolality >300 mmol/l) was 6.7% in 1970 and 9.6% in 1980. Data on the age