

If we hope to gain any knowledge about who may be safely given a normal diet, it is vital that we have at least a 'comparative' diagnosis based upon a standardized study.

We thank Dr. Hudson and Miss Clothier for their comments and also for the opportunity to reply to them.

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## Urinary tract infection in children of preschool age

Sir,

The high prevalence of urinary tract infection reported in preschool children in Glasgow (Boothman, Laidlaw, and Richards, 1974) is interesting and also surprising. It contrasts with the lower prevalence found in a slightly larger Leeds survey published in the *Lancet* last year (Davies *et al.*, 1974) and also a London survey (Saxena, Collis, and Laurance, 1975).

The reason for the apparently high prevalence in Glasgow rests mainly on the finding of 6 boys with urinary tract infection out of 81 boys tested in the age range 3-23 months (prevalence 7.4%). We found only one case of definite infection confirmed by suprapubic aspiration, in 334 Leeds boys of similar age (prevalence 0.3%). Was the urinary tract infection of the 6 Glasgow boys confirmed by suprapubic aspiration and culture? If not we suggest the results may be misleading. Have the authors any other explanation for this high prevalence in Glasgow boys? A prevalence of over 7% in boys of 3-24 months would be most surprising. It does not fit in with the known prevalence of urinary tract infection in boys of other ages, ranging from 2.5% in neonates (Littlewood, Kite, and Kite, 1969) to less than 0.05% after the age of 4 years (Kohler, Fritz, and Scherstén, 1972; Kunin, Zacha, and Paquin, 1962).

We agree with Boothman *et al.* that voided urine specimens from children under the age of 1 year contain a large proportion of false significant or doubtful colony counts. In screening over 500 children aged 1-12 months we found that 6.5% had 3 or more consecutive significant or doubtful colony counts. However, this apparently high prevalence of bacteriuria was shown to be false in that suprapubic aspiration showed only one of those 32 children with apparent persistent bacteriuria to have true bladder bacteriuria. It is significant that we found more contamination in boy

infants than girls. Without suprapubic aspiration, urine bacteriology reports in infants are misleading.

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The authors reply as follows:

The high incidence of significant bacteriuria in small boys in our study is indeed surprising but there is little to suggest the possibility of false positive cultures except, perhaps, in Case 6 (Table V) (Boothman, Laidlaw, and Richards, 1974). When investigated at the renal clinic, 4 of the 6 boys had positive cultures and these were confirmed in 3 cases by suprapubic aspiration. Reviewing the 2 cases where positive cultures were not obtained at the clinic, it is interesting that one child had serious renal impairment and has since had recurrent infections. This case, together with Case 8 who was admitted with acute symptomatic bacterial pyelonephritis within a fortnight of having one positive and one negative culture, led us to wonder whether some cases of urinary tract infection with intermittent bacteriuria were being missed.

These doubts regarding the possible occurrence of false negative or false positive cultures only serve to highlight the problems which surround the definition, diagnosis, and prognosis of urinary tract infection.

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## Essential fatty acids in cystic fibrosis

Sir,

We have read with interest the report by Elliott and Robinson (*Archives*, 1975) concerning the apparent