More America
It does appear
origin, and
gangrene
cold
that
au-hors have
British
Central
P.A.
alone is
during
15
occurs very
in
quite clearly demonstrable and
of bronchial secretion
sputum
I
"asthma"
Thomas,
P.
1972, 6,
222.
British
J.,
1971, 47, 118.

Asthma in the Elderly
Sir,—I briefly comment on two points in the paper by Drs. H. Y. Lee and T. B. Stretton (14 October, p. 93).
Reversible obstruction of the airways occurs very often in both young and elderly patients suffering from chronic non-specific lung disease. The attacks, especially when repeated, are mostly accompanied by signs of alveolar hypoventilation. I feel that the 15 elderly patients studied by the authors fulfilled only partly the criteria concerning the diagnosis of asthma—no hypercapnia and no reversibility of obstruction were found in most of them. Diminished vital capacity may indicate the respiratory ventilatory disturbance. I wonder if measurement of the FEV1 alone is suitable for the diagnosis of obstruction; if the residual volume is increased, a low FEV1 may simply result from high intrathoracic pressure. The values are quite high and the ratio of residual volume to total lung capacity may exceed 0.65.

Sir,—I read with interest the article on this subject by Drs. H. Y. Lee and T. B. Stretton (14 October, p. 93). I am rather concerned, however, about the suggested treatment. While systemic corticosteroids are essential and life-saving at times their constant use has created over the past 15 years the problem of corticosteroid-dependent asthma. In my unit we have been trying over the past 18 months to treat these patients with initial doses of systemic corticosteroid followed by aerosol inhalants of beclomethasone. This is a synthetic, poorly-absorbing corticosteroid, and we have used it successfully in 82 out of 96 cases of late-onset asthma. These have been followed up for 12 months, and we hope to publish the results.—I am, etc.,

Department of Respiratory Physiology,
Baguley Hospital, Manchester

Bicarbonate Solutions for Infusion
Sir,—It has come to our attention that 14% sodium bicarbonate infusion solutions are no longer available commercially in the U.K. and that the lowest concentrations being produced regularly are 2-74% (Poly-fuser—Boots) and 4-2% (Travenol Laboratories—Baxter). These firms may produce 14% sodium bicarbonate as a special order but this is not possible on a regular basis. It is therefore important that all hospitals which may at some time or another administer acutely poisoned patients should review their procedures for forced alkaline diuresis, as many of these regimens include 14% sodium bicarbonate solution.

Sodium bicarbonate solutions are used in forced alkaline diuresis regimens to promote the alkalisation of the urine and therefore it might appear that any procedure would be adequate which adjusts the proportion of sodium bicarbonate to the total infusion volume to give a urinary pH of 8. The pH of the bicarbonate solution buffered with bicarbonate is not suitable, in our experience, for this purpose and, if a pH meter is not available, narrow-range indicator papers should be used.) However, owing to the length of time required for the renal compensation of acid/base disturbances, the patient may become more alkalaeamic than hitherto before producing a significant alkaline urine. If these more concentrated solutions are used. In our experience there may be a transient rise in the blood levels of phenobarbitone when the patient is 'soda' treated, but the urine is alkaline until a base excess, and we are concerned that this rise may be considerably higher if the rate of infusion of alkali in a forced alkaline diuresis regimen is increased at any time. It seems prudent, therefore, if these more concentrated solutions are used, to give the sodium bicarbonate simultaneously with other infusion fluids connected with a Y-piece, but we would be interested to know what other centres are planning to do.—We are, etc.,

E. SIMPSON
M. J. STEWART
P. PATRICIA GOODEARD
Department of Clinical Chemistry,
Maryfield Hospital,
Dundee

Normal Range of "Effective Thyroxine Ratio"
Sir,—Standardized reagent kits for measurement of the "effective thyroxine ratio" (E.T.R.) have become available relatively recently (Malinckrodt U.K. Ltd.). This test has been shown1 to have a diagnostic accuracy comparable to that of a free thyroxine index in euthyroid patients according to their thyroid status. If a normal range and the respective tentative normal range (0-86-1-13) published by the manufacturers was based upon a population of wide geographical distribution, users were recommended to establish their own normal values. Having used this test routinely in our biochemistry department for some months, we have now analysed our first 1,000 results with this object in view, and present our findings here for the interest of other current or potential users.
We used the reagent kits according to the manufacturers’ instructions, except that a pool of at least 50 human sera taken from routine samples was used as a standard instead of the lyophilized material supplied; this modification was found to improve the reliability of the test (from S.D. = 0-032 to S.D. = 0-019 within batch).

The results, plotted on probability paper according to Hoffmann2 are shown in the Figure, where it can be seen that the cumulative percentage incidence of the values found is linear between approximately 10 to 85%. It seems reasonable to assume that this range of intermediate values, containing something like 65% of the results, is derived from euthyroid subjects and that, since the linearity of the graph in this region indicates a Gaussian distribution, the range of E.T.R. values for 95% of euthyroid subjects may be obtained by extrapolation of this straight line as suggested by Hoffmann.3 The range thus found is 0-88-1-09. This is similar to that found by Thorson et al.4 in 198 normal subjects (0-88-1-09), but broader than that found by Murray et al.5 in 80 such subjects (0-89-1-05). The latter authors suggested the existence of “borderline” zones between 0-86 and 0-89 and between 1-06 and 1-09; this is consistent with our own findings, as shown in the Figure, where deviation from

BRITISH MEDICAL JOURNAL 16 DECEMBER 1972
673

1 Buchman, D. J., British Medical Journal, 1972, 4, 141.
2 Allen, J., Journal of Causative and Genito-

141.
4 Thomas, J., British Medical Journal, 1972, 1, 247.
7 Carier, C., British Journal of Urology, 1971, 11, 68.

Department of Pneumology,
Semmelweis University,
Budapest

Department of Respiratory Physiology,
Baguley Hospital, Manchester