1. The restricted vital capacity of these patients may be due not only directly to the loss of distending pressure but also to secondary changes in the lungs themselves.
2. A single measurement of pulmonary compliance (static or dynamic) may not differentiate between primary intrapulmonary disease and changes secondary to extrapulmonary restriction.
3. Reduced distensibility of the lungs may be relevant to the breathing pattern of such patients.

Caro, C. G., Butler, J. and Du Bois, A. B. (1960). Some effects of restriction of chest cage expansion on pulmonary function in man. An experimental study. *Journal of Clinical Investigation*, 39, 573–583.

Use of radioactive N_2 in demonstrating localized disease in children believed to have asthma

S. GODFREY, G. HAMILTON, N. FREEDMAN, and P. WINLOVE We have recently developed the technique of radioisotope scanning to measure total and regional lung function in children of all ages (Ronchetti *et al.*, 1975; Godfrey *et al.*, 1975) and now present the use of the method to help make the correct diagnosis in children erroneously thought to have bronchial asthma.

The technique consists of administering a bolus of ^{13}N by inhalation and perfusion while the child lies over a gamma camera linked to a computer system which processes the data. For the inhalation study the gas is given through a nasal catheter at end expiration and for the perfusion study it is dissolved in saline and injected intravenously. The technique requires no active co-operation from the child, and it is painless apart from the injection and carries a negligible radiation hazard. The computer system enables the investigator to divide the lung fields into regions and provides a record of the arrival and washout of ^{13}N for each region from which information about ventilation and perfusion is obtained.

Wheezing is extremely common in infancy and childhood and, while the commonest cause of severe and persistent wheezing is bronchial asthma, it is recognized that other lesions may mimic asthma. Over a relatively short period several children have been referred to the asthma clinic with apparently intractable asthma which had failed to respond to treatment including steroids in some cases. Certain atypical features suggested that the diagnosis might be incorrect and ^{13}N gamma scans were carried out. In each case the scan revealed disease confined to one lung, the other being entirely normal, the characteristic change in the scan being diminished ventilation and perfusion of the affected lung with gas trapping. Illustrative cases will be discussed and the value of the new technique will be considered.

Godfrey, S., Ronchetti, R., Stocks, J. and Hallidie-Smith, K. (1975). Generalised pulmonary hyperinflation and Fallot's tetralogy in a neonate investigated by pulmonary physiological and radioisotopic methods. *Thorax*, 30, 456–460.
Ronchetti, R., Stocks, J., Freedman, N., Glass, H. and Godfrey, S. (1975). The clinical application of regional lung function studies in infants and small children using ^{13}N. *Archives of Disease in Childhood*, 50, 595–603.

CORRECTION

In the October 1975 issue of *Thorax* on p. 594, line 8 of the right-hand column should read as follows:

R. C. GODFREY Epidemiological evidence suggests