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### Response

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Doctors Bell, Ziegler, and Forbes must be congratulated for realizing that over a period of 30 yr the various factors used to correct the bromide space have been at times *apparently* misapplied (3). The correct equation should be written as follows:

Corrected bromide space

$$= \frac{\text{Amount of bromide administered}}{\text{Bromide concentration in plasma}} \times 0.90 \times 0.95 \times 0.94$$

where 0.90 corrects for the amount of intracellular bromide; 0.95 corrects for the Donnan equilibrium; and 0.94 corrects for the proportion of water in plasma.

Their letter triggered an extensive review of data in our three laboratories. Dr. Cassady recalculated the data from all studies performed in his laboratory (1, 2, 4-6) and found that the correct formula was indeed used. Dr. Cheek also used that formula in all his work (7-9). Unfortunately, typographic errors in the "Materials and Methods" sections of several articles suggested that some of the correction factors were misapplied (1, 4, 6, 9). Dr. Bell and his colleagues are therefore incorrect in concluding that "infants contain less extracellular water than was previously thought" and the "corrected" values given in his table are in fact erroneous. In Dr. Brans's laboratory, however, the incorrect formula reported by Cassady (4) and Cheek (9) was used:

Corrected bromide space

$$= \frac{\text{Amount of bromide administered}}{\text{Bromide concentration in plasma}} \times \frac{0.90}{0.95 \times 0.94}$$

An overestimation of both the corrected bromide space (CBS) and the interstitial water (IW) resulted (10). Because the same error was applied to the two study groups being compared (preterm *versus* term neonates), the overestimation did not affect the comparisons. Likewise, in the regression analysis, the errors

affected the slope and y-intercept of the regression lines, but not the correlation coefficient nor the  $S_{y \cdot x}$ . For the record, however, corrected values are as follows:

CBS (ml/kg):  $400 \pm 67.0$  in term *versus*  $501 \pm 61.0$  in preterm babies

IW (ml/kg):  $352 \pm 63.0$  in term *versus*  $449 \pm 59.4$  in preterm babies

$$\% \Delta \text{MT} = 0.064 \text{ CBS} - 1.3$$

$$\% \Delta \text{SS} = 0.081 \text{ CBS} - 7.2$$

$$\Delta \text{SMT} \times 10^4 = 0.087 \text{ CBS} - 5.8$$

$$\Delta \text{SSS} \times 10^4 = 0.077 \text{ CBS} + 0.2$$

$$\% \Delta \text{MT} = 0.066 \text{ IW} + 1.0$$

$$\% \Delta \text{SS} = 0.083 \text{ IW} - 4.0$$

$$\Delta \text{SMT} \times 10^4 = 0.090 \text{ IW} - 2.7$$

$$\Delta \text{SSS} \times 10^4 = 0.080 \text{ IW} + 3.0$$

These corrections do not affect the validity of the conclusions of the study.

We cannot agree that significant amounts of bromide are lost in the urine during the 3 h of the study. In our experience urine losses amount to less than 1% of the administered dose of bromide. Finally, Bell *et al.*'s conclusion that "infants contain less extracellular water than was previously thought" is not supported by the facts.

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