deadspace effect of a large shunt ($Q_s/Q_T$), etc. he will never use $V_p/V_T$ as an aid to patient care.

Dr. Atkin's mathematics are more logically correct, and seem to represent the facts more realistically. However, we processed our data by computer analysis using Dr. Atkin's equation and found the regression equation $y = 1.094x + 0.003$ and a correlation coefficient $r$ of 0.988. We reported the regression equation $y = 0.933x + 0.044$ and an $r$ of 0.953. The difference between the regression lines is not statistically significant ($P > 0.1$).

The difference between the two equations is zero at $V_p/V_T$'s of 0.33 and 0.67. As respiratory failure is said to occur at $V_p/V_T$'s greater than 0.60, it becomes unnecessary to use a more complex expression. Indeed, our equation can often be used mentally, as $V_p/V_T$ relates directly to $V_{en}$ and $p_{aco}$, whereas, in Dr. Atkin's equation, it is inversely related, making mental estimation more difficult. The absurd results which we admitted in the original article) when $V_p/V_T$ becomes greater than 0.7 are not of great clinical significance when the matter is to differentiate between a $V_p/V_T$ of 0.8 or 0.9, the patient being in a very serious condition either way.

It remains that Dr. Atkin's equation and ours compare surprisingly closely to Enghoff's equation. However, our equation should be tested on a larger number of patients. Dr. Atkin has not published any data yet.

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**REFERENCES**


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**Corrections, Program for Calculator**

To the Editor:—I believe one of the equations in the recent paper of Ruiz et al. contains an error of at least theoretic, if not practical, importance.

Equation 2, as written, implies that a decrease in $pH$ (as reported at 37°C) will cause an increase in the temperature coefficient of $pH$. Burton and Adamsons have shown the opposite to be true. In the absence of a metabolic derangement in acid–base balance, a decline in reported $pH$ causes a decrease in the temperature coefficient of $pH$. The Ruiz algorithm also fails to take into account the effect of base excess or deficit, which may be considerable. For example, at a reported $pH$ 7.2 the correction factor derived from equation 2 of Ruiz is 0.0159 $pH$ units per degree change in temperature. While this is approximately correct, if there were a severe metabolic acidosis, it might be very misleading, since in the presence of even moderate metabolic alkalosis at this $pH$ the temperature coefficient will fall below 0.0140.

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