

CORRESPONDENCE

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Control of Breathing

Editor, I enjoyed the article by Dr. Wolff in volume 8, number 1 of the ISMM Newsletter. However his "new" equation:

$$PaCO_2 = 0.25 PaO_2 + 15$$

is simply the equation of the top part of the line for alveolar gas composition in acclimatized subjects described by Rahn and Otis almost exactly 50 years ago (see figure). This is not surprising since the alveolar and arterial values for PO₂ and for PCO₂ will be very similar in normal subjects. Note that below a PO₂ of 50 torr, the linear relationship is lost.

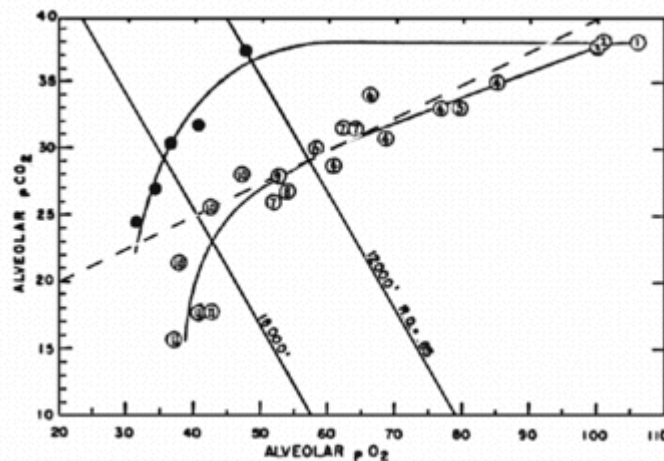


Figure 1 from Rahn and Otis (1949) with a broken line added corresponding to Wolff's equation.

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Rahn, H. and A.B. Otis. Man's respiratory response during and after acclimatization to high altitude. *Am. J. Physiol.* 157:445-462, 1949.

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