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Below are short overviews of the articles that appeared in this issue of VOLUME:

GERMAN TO ENGLISH TRANSLATION: The Obstructive Diseases of the Airways: Clinical Significance and Objective Proof with Whole-body-plethysmography (Prof W. T. Ulmer and E. Reif. Institute for Lung Function Research in Bochum in association with the University of Muenster, Germany).

[It is easy for English speaking researchers to inadvertently undervalue or miss important contributions from researchers who have published their work in languages other than English. This was particularly the case for work published before English became the dominant scientific language. This important paper by W. T. Ulmer and E. Reif was originally published in German (Dtsch Med Wschr, 90. Jg., 41, 8 October 1965: 1803-1809) soon after A. B. DuBois and colleagues described a practical plethysmographic method for measuring thoracic gas volume (J Clin Invest, 1956; 35(3); 322-326) - although the principle body plethysmography was first developed decades earlier by J. Gad (1881) and E. P. fluger (1882).

The article was kindly translated into English by A. E. Gale, S. Gale, H. Imberger and W. Wilde. The translation was a huge process taking 5 years to complete! Some sentences took days to accurately translate and even then there often remained some disagreement between translators. Having overseen this process, it became clear to me why translations of scientific papers are seldom attempted!

The article is followed by interesting commentaries by Drs H. Imberger and A. E. Gale. It is of interest that Dr Hennig Imberger (a former active Society member, now retired) worked in Professor Ulmer's laboratory in the 1960's and was so inspired by this technique that he eventually went on to complete a PhD in whole body plethysmography at Melbourne University. His thesis described in detail many theoretical problems associated with plethysmography (especially Raw) and elegant solutions to these that improved stability and accuracy. DPJJ

This translated paper (and Dr Imberger's comments that follow it) are packed with important scientific and practical information on the measurement and interpretation of plethysmographic lung volumes and airway resistance. The science in this paper still remains relevant today.

“If a plethysmograph gas capacity of 600 L is assumed when the test subject is inside, then when the box is closed, the amount of oxygen and the partial pressure fall(if) an oxygen consumption of 400 cubic cm/min being assumed no significant reduction of oxygen is to be feared during the time of testing.” (Extract from the translation).

Back Extrapolation of the FEV₁ (Jeffrey J. Pretto, Respiratory Function Unit, Repatriation General Hospital, Heidelberg, Victoria).

Jeffrey Pretto is well known to you all for his research and detailed knowledge of respiratory science. Jeffrey's article described the back-extrapolation technique (Gaensler A.E. Am. Rev. Resp. Dis. 118(2): 55-88, 1978) to obtain time zero. His paper reported the effect this technique has on the measurement of FEV₁ in 8 patients and 4 normal subjects who could perform reproducible spirometry. He found a mean

difference between extrapolated and un-extrapolated FEV₁'s of 56 ml (range 10-133) but with 6 of 54 individual tests having a difference of 100 ml or more.

Jeff concluded that the application of the back extrapolation technique causes an increase in measured FEV₁ which can be significant not only in patients but also in well trained normal subjects. He recommended that if all commercial spirometers were to apply this technique it would help reduce between-system variability in the measurement of FEV₁ (and other timed volumes).

Please contact me if you are interested in a copy of this or any other issue of VOLUME.

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