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References

- Boushy, S F, Aboumrad, M H, North, L B, and Helgason, A H (1971). Lung recoil pressure, airway resistance, and forced flows related to morphologic emphysema. *American Review of Respiratory Disease*, **104**, 551–561.
- Fukaya, H, Martin, C J (1969). Lung tissue shrinkage for histologic preparations. *American Review of Respiratory Disease*, **99**, 946–948.
- Gibson, G J, Pride, N B, O’Cain, C, and Quagliato, R (1976). Sex and age differences in pulmonary mechanics in normal non-smoking subjects. *Journal of Applied Physiology*, **41**, 20–25.
- Gough, J, and Wentworth, J R (1958). Thin sections of entire organs mounted on paper. *Harvey Lectures 1957–8*, **53**, 182–185.
- Harris, T R, Pratt, P C, and Kilburn, K H (1971). Total lung capacity measured by roentgenograms. *American Journal of Medicine*, **50**, 756–763.
- Hartcroft, W S, and Macklin, C C (1943). Intra-bronchial fixation of human lung for purposes of alveolar measurements using 25 μ microsections made therefrom. *Transactions of the Royal Society of Canada*, section V, **37**, 75–78.
- Heard, B E (1960). Pathology of pulmonary emphysema. Methods of study. *American Review of Respiratory Disease*, **82**, 792–799.
- Knudson, R J, Clark, D F, Kennedy, T C, and Knudson, D E (1977). Effect of aging alone on mechanical properties of the normal adult human lung. *Journal of Applied Physiology*, **43**, 1054–1062.
- Leopold, J F, and Gough, J (1957). The centrolobular form of hypertrophic emphysema and its relation to chronic bronchitis. *Thorax*, **12**, 219–235.
- McLean, K H (1956). The macroscopic anatomy of pulmonary emphysema. *Australian Annals of Medicine*, **5**, 73–88.
- Moolten, S E (1935). A simple method for fixation of lungs in the inflated state. *Archives of Pathology*, **20**, 77–80.
- Park, S S, Janis, M, Shim, C S, Williams, M H jun (1970). Relationship of bronchitis and emphysema to altered pulmonary function. *American Review of Respiratory Disease*, **102**, 927–936.
- Ryder, R C, Thurlbeck, W M, and Gough, J (1969). A study of inter-observer variation in the assessment of the amount of pulmonary emphysema in paper-mounted whole-lung sections. *American Review of Respiratory Disease*, **99**, 354–364.
- Sweet, H C, Wyatt, J P, Fritsch, A J, and Kinsella, P W (1961). Panlobular and centrilobular emphysema. Correlation of clinical findings with pathologic patterns. *Annals of Internal Medicine*, **55**, 565–581.
- Thurlbeck, W M (1967). Internal surface area and other measurements in emphysema. *Thorax*, **22**, 483–496.
- Thurlbeck, W M, Dunnill, M S, Hartung, W, Heard, B E, Heppleston, A G, and Ryder, R C (1970a). A comparison of three methods of measuring emphysema. *Human Pathology*, **1**, 215–226.
- Thurlbeck, W M, Henderson, J A, Fraser, R G, and Bates, D V (1970b). Chronic obstructive lung disease: a comparison between clinical, roentgenologic, function and morphologic criteria in chronic bronchitis, emphysema, asthma and bronchiectasis. *Medicine*, **49**, 81–145.
- Thurlbeck, W M, Horowitz, I, Siemiatycki, J, Dunnill, M S, Maisel, J C, Pratt, P, and Ryder, R (1969). Intra- and inter-observer variations in the assessment of emphysema. *Archives of Environmental Health*, **18**, 646–659.
- Thurlbeck, W M, and Simon, G (1978). Radiographic appearance of the chest in emphysema. *American Journal of Roentgenology*, **130**, 429–440.
- Turner, J M, Mead, J, and Wohl, M E (1968). Elasticity of human lungs in relation to age. *Journal of Applied Physiology*, **25**, 664–671.
- Weibel, E R, and Vidone, R A (1961). Fixation of the lung by formalin steam in a controlled state of air inflation. *American Review of Respiratory Disease*, **84**, 856–861.
- Wright, R R (1961). Elastic tissue of normal and emphysematous lungs. A tridimensional histologic study. *American Journal of Pathology*, **39**, 355–367.

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Correction

Tattersall, S F, *et al.* Lung distensibility and airway function in intermediate alpha₁-antitrypsin deficiency (Pi MZ). *Thorax*, 1979, **34**, 642.

The legend for fig 3 should read . . . (a) 12 Pi MZ and (b) 12 Pi M subjects.