

# SI units

In future issues of *Thorax* SI (Système International) units will be used (Baron *et al.*, 1974). The following table shows the conversion factors for the more commonly used measurements in the field of thoracic medicine and surgery. SI units will also be used for biochemical measurements but not for the clinical measurement of arterial blood pressure nor for dosage of drugs.

SI UNITS FOR REPORTING THE RESULTS OF TESTS OF LUNG FUNCTION

Index	Traditional Units (x)	SI Units (y)	Conversion Factor (f), i.e., $y = fx$
Gas flow: average	1 min <sup>-1</sup>	1 min <sup>-1</sup> *	1
	1 min <sup>-1</sup>	1 s <sup>-1</sup>	60 <sup>-1</sup>
Pressure or tension	cmH <sub>2</sub> O	kPa	0.098
	mmHg (or torr)	kPa	0.133
Compliance	1 cmH <sub>2</sub> O <sup>-1</sup>	1 kPa <sup>-1</sup>	10
Resistance	cmH <sub>2</sub> O l <sup>-1</sup> s	kPa l <sup>-1</sup> s	0.1
Conductance	1 s <sup>-1</sup> cmH <sub>2</sub> O <sup>-1</sup>	1 s <sup>-1</sup> kPa <sup>-1</sup>	10
Specific conductance	s <sup>-1</sup> cmH <sub>2</sub> O <sup>-1</sup>	s <sup>-1</sup> kPa <sup>-1</sup>	10
Gas uptake	ml min <sup>-1</sup>	mmol min <sup>-1</sup> *	22.4 <sup>-1</sup> †
Gas content in blood	ml dl <sup>-1</sup>	mmol l <sup>-1</sup>	2.24 <sup>-1</sup> †
Gas transfer factor	ml min <sup>-1</sup> torr <sup>-1</sup>	mmol min <sup>-1</sup> kPa <sup>-1</sup> *	0.335
Transfer coefficient	min <sup>-1</sup> torr <sup>-1</sup>	mmol min <sup>-1</sup> kPa <sup>-1</sup> l <sup>-1</sup> *	0.335
Ventilatory response to CO <sub>2</sub>	1 min <sup>-1</sup> torr <sup>-1</sup>	1 min <sup>-1</sup> kPa <sup>-1</sup> *	7.5
Energy expenditure	Calories	Joules	4.18
Power output	kpm min <sup>-1</sup>	Watts	0.1635

\*Strictly the time should be in seconds, but minutes which may also be used in the SI system are more convenient.

†For O<sub>2</sub> and most other gases; for CO<sub>2</sub> the factor is 22.26<sup>-1</sup> or in the case of CO<sub>2</sub> content in blood 2.226<sup>-1</sup>.

## REFERENCE

Baron, D. N., Broughton, P. M. G., Cohen, M., Lansley, T. S., Lewis, S. M., and Shinton, N. K. (1974). The use of SI units in reporting results obtained in hospital laboratories. *Journal of Clinical Pathology*, 27, 590.