

- Merton, P. A., 1954 "Voluntary strength and fatigue". *J.Physiol.* 123: 553-564.
- Milner-Brown, H. S., Stein, R. B. and Lee, R. G., 1975 "Synchronisation of human motor units: possible roles of exercise and supraspinal reflexes". *Electroencephalog.Clin.Neurophysiol.* 38: 245-254.
- National Radiological Protection Board, 1983 "Draft guidance notes for the protection of persons against ionising radiation arising from medical and dental use". HMSO, London.
- Perry, B. J. and Bridges, C., 1973 "Computerised transverse axial scanning (tomography): Part 3. Radiation dose considerations". *Br.J.Radiol.* 46: 1048-1051.
- Sale, D. B., MacDougall, J. D., Upton, A. R. M. and McComas, A. J., 1983 "Effect of strength training upon motoneuron excitability in man". *Med.Sci.Sports Ex.* 15: 57-62.
- Schantz, P., Randall Fox, E., Norgren, P. and Tyden, A., 1981 "The relationship between the mean muscle fibre area and the muscle cross-sectional area of the thigh in subjects with large differences in thigh girth". *Acta Physiol.Scand.* 113: 537-539.
- Tesch, P. and Larsson, L., 1982 "Muscle hypertrophy in body builders". *Eur.J.Appl.Physiol.* 49: 301-306.
- Tornvall, G., 1963 "Assessment of physical capabilities with special reference to the evaluation of maximal voluntary isometric muscle strength and maximal working capacity". *Acta Physiol.Scand.* 58: Suppl. 201.
- Wickiewicz, T. L., Roy, R. R., Powell, P. L. and Edgerton, V. R., 1983 "Muscle architecture of the human lower limb". *Clinical Orthopaedics and Related Research* 179: 275-283.
- Williams, P. L. and Warwick, R., 1980. *Gray's Anatomy.* 36th Edition. London, Churchill.
- Young, A., Stokes, M., Round, J. M. and Edwards, R. H. T., 1983 "The effect of high-resistance training on the strength and cross-sectional area of the human quadriceps". *Eur.J.Clin.Invest.* 13: 411-417.

---

## BOOK REVIEW

**Title:** MUSCLE FUNCTION TESTING  
**Author:** Vladimir Janda  
**Publisher:** Butterworths: London, 1983  
**Price:** £35 Hard cover

The book, which was first published in the Czech language in 1979, is designed as a practical manual for use by physiotherapists. It consists of 260 pages and is very well presented in terms of both text and illustrations. The main part of the book is concerned with a detailed description of muscle function tests for muscles responsible for movement in the face, trunk, upper limb and lower limb. At the start of each subsection, the relevant joint movements, muscles and nerve supply are described. Tests of muscle function are described in relation to specific joint movements; photographs are used to help show the position of the subject during each test and the application of resistance by the therapist. In each test, muscle function is assessed with regard to a six point scale, which ranges between normal function and complete paralysis. In addition to muscle function testing there are also sections on identifying shortened muscles and hypermobile joints. In general, the book would seem to be of considerable benefit to physiotherapists, but is too specific to be of particular interest to the majority of physical education teachers and sports coaches.

J. Watkins