

Dr Frederike van Wijck

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Job Title: Senior lecturer

Qualifications: BSc Physiotherapy, MSc (Human Movement Sciences), PhD, FHEA, MCSP

Frederike trained as a physiotherapist in the Netherlands and graduated in 1986, after which she started an MSc in Human Movement Sciences at the Faculty of Movement Sciences, Vrije Universiteit, Amsterdam, The Netherlands. She combined her studies with clinical work as a community physiotherapist and with teaching kinesiology and injury prevention to dance students at the Faculty of Dance, Amsterdamse Hogeschool voor de Kunsten in Amsterdam. Together with a dedicated team of dance teachers and health care professionals, she developed the Health Care for Dance project. It was in this environment with exceptionally talented performers that she developed a keen interest in skill acquisition, which led her to focus her studies on perceptuo-motor control and learning. In 1993, Frederike moved to Scotland and undertook her final MSc project in the Perception and Action Laboratory with Prof. David Lee at the University of Edinburgh, studying eye-foot coordination. In 1998, Frederike joined the Centre for Rehabilitation and Engineering Studies at the University of Newcastle upon Tyne as an RA and commenced her PhD in the area of skill acquisition and spasticity management in stroke with Prof. Garth Johnson and Prof. Mike Barnes. She took part in a number of EU-funded projects with clinicians and engineers, focusing on the measurement of arm motor impairment and spasticity (see: <http://www.ncl.ac.uk/spasm/>) Frederike joined QMU full time in 2001, where she enjoys teaching Applied Neurosciences and Analysis of Human Movement, while continuing her research in neurological rehabilitation. Her main interest is skill acquisition following acquired brain damage and how this may be enhanced using a range of strategies, from robotics to mental practice. Current projects include: the effects of botulinum toxin on arm function and spasticity, goal setting within the context of exercise after stroke, delirium after stroke, the effects of mental practice on self-feeding and robotics for improving dexterity.

Frederike is still attempting to improve her own motor skills by climbing, hill walking, ski touring – and Scottish ceilidh dancing.

Examples of recent publications

Authored books

Platz T, Pinkowski C, **van Wijck F**, Johnson GRJ. (2005)

ARM: Arm Rehabilitation Measurement. Manual for performance and scoring of the Fugl-Meyer test (arm section), Action Research Arm test and the Box-and-Block test. Baden-Baden: Deutscher Wissenschafts-Verlag (DWV)
Role: design, writing, review.

Chapters in books

1. Baer GD & **van Wijck FMJ** (2005).
Physiotherapy. In: MP Barnes, B. Dobkin, Bogousslavsky. (Eds.). *Recovery after stroke*. Cambridge University Press, 226-258.
Role: lead, design, writing majority of chapter, review, coordination, submission.
2. Pandyan AD, **van Wijck FMJ**, Johnson GR (2002). Instrumentation in experimentation. In: T. Greenfield (Ed.). *Research Methods, Guidance for Postgraduates*. London: Arnold, 226-235. Role: design, writing, review.

Refereed Journal Publications

1. Morris J, van Wijck F, Joice S, Ogston S, Cole, I, MacWalter RS (2008) A comparison of bilateral and unilateral upper limb task training in early post-stroke rehabilitation: a randomised controlled trial. *Archives of Physical Medicine and Rehabilitation*: 89,(7); 1237-45.
2. Coupar F, van Wijck F, Morris J, Pollock A, Langhorne P (2007) Simultaneous bilateral training for improving arm function after stroke (Protocol). *The Cochrane Database of Systematic Reviews* Issue 2. 2007.
3. Pandyan AD, van Wijck FM, Stark S, Vuadens P, Johnson GR, Barnes MP (2006). The construct validity of a spasticity measurement device for clinical practice: An alternative to the Ashworth scales. *Disability and Rehabilitation* 28 (9): 579-85
4. Platz T, Pinkowski C, van Wijck F, Kim I-H, di Bella P, Johnson G. (2005). Reliability and validity of arm function assessment with standardised guidelines for the Fugl-Meyer Test, Action Research Arm test and Box and Blocks Test: a multi-centre study. *Clinical Rehabilitation*; 19: 452-462.
5. Pandyan AD, Gregoric M, Barnes MP, Wood D, van Wijck F, Burridge J, Hermens H, Johnson GR: (2005). Spasticity: Clinical perceptions, neurological realities and meaningful measurement. *Disability and Rehabilitation*, 27, 1 / 2 (Special Issue), 2-6.
6. Wood DE, Burridge JH, van Wijck FMJ, McFadden C, Hitchcock RA, Pandyan AD, Haugh A, Salazar-Torres JJ, Swain ID (2005). Biomechanical approaches applied to the lower and upper limb for the measurement of spasticity: a systematic review of the literature. *Disability and Rehabilitation* 27, 1 / 2 (Special Issue), 19-32.
7. Burridge JH, Wood DE, Hermans HJ, Voerman GE, Johnson GR, van Wijck F, Platz T, Gregoric M. Hitchcock R (2005). Measurement of spasticity: recommendations for clinical and research applications. *Disability and Rehabilitation*, 27, 1 / 2 (Special Issue), pp 69-80.
8. Pandyan AD, Vuadens P, van Wijck FMJ, Stark S, Johnson GR, Barnes MP (2002). Are we underestimating the clinical efficacy of Botulinum Toxin (Type A)? Quantifying changes in elbow spasticity and strength, and upper limb function following treatment in a unilateral post stroke population. *Clinical Rehabilitation* 16, 656-660.
9. van Wijck, F.M.J., Pandyan, A.D., Johnson G.R., Barnes, M.P. (2001). Assessing motor deficits in neurological rehabilitation: patterns of instrument usage. *Neurorehabilitation and Neural Repair*, 15 (1), 23-30