

Prescribing information: AVONEX®

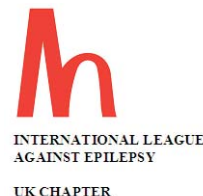
Presentations: Lyophilised powder for injection for IM administration containing a 30µg dose (6 million IU) of Interferon beta-1a per vial. Solution for injection in a pre-filled syringe of 0.5ml for IM administration containing 30µg dose (6 million IU) of Interferon beta-1a. **Indications:** For the treatment of ambulatory patients with relapsing multiple sclerosis characterised by at least 2 recurrent attacks of neurologic dysfunction (relapses) over the preceding 3-year period without evidence of continuous progression between relapses. AVONEX® slows the progression of disability and decreases the frequency of relapses. AVONEX® is also indicated for the treatment of patients who have experienced a single demyelinating event with an active inflammatory process if it is severe enough to warrant treatment with intravenous corticosteroids, if alternative diagnoses have been excluded, and if they are determined to be at high risk of developing clinically definite multiple sclerosis (see SPC for further information). Treatment should be discontinued in patients who develop chronic progressive multiple sclerosis. **Dosage and Administration:** The recommended dosage of AVONEX® in the treatment of relapsing MS is 30µg injected IM once a week. AVONEX® lyophilised powder presentation should be reconstituted with the solvent supplied. Treatment should be initiated under supervision of a physician experienced in the treatment of the disease. An antipyretic analgesic is advised to decrease the flu-like symptoms associated with AVONEX® administration. AVONEX® should not be used in children. **Contraindications:** initiation of treatment in pregnancy. Patients with a history of hypersensitivity to natural or recombinant interferon beta or any of the excipients. Patients with current severe depression disorders and/or suicidal ideation. **Precautions:** CNS: AVONEX® should be used with caution in patients with previous or current depressive disorders, in particular to those with antecedents of suicidal ideation. Depression and suicidal ideation are known to occur in increased frequency in the multiple sclerosis population in association with interferon use. Patients treated with AVONEX® should be advised to immediately report any symptoms of depression and/or suicidal ideation to their prescribing physician. AVONEX® should be administered with caution to patients with a history of seizures, to those receiving treatment with anti-epileptics, particularly if their epilepsy is not adequately controlled with anti-epileptics. **Pregnancy and lactation:** Initiation of treatment is contraindicated during pregnancy. Women of child bearing potential should take appropriate contraceptive measures. If the patient becomes pregnant or plans to become pregnant while taking Avonex, discontinuation of therapy should be considered. **General:** AVONEX® should be used with caution in patients with cardiac disease, severe renal or hepatic failure or severe myelosuppression, and these patients should be closely monitored. Routine periodic blood chemistry and haematology tests are recommended during treatment with AVONEX®. Laboratory abnormalities may also occur which do not usually require treatment. **Drug interactions:** No formal interaction studies have been conducted with AVONEX® in humans. Clinical studies indicate that corticosteroids or ACTH can be given during relapses. Caution should be exercised in combining AVONEX® with medicinal products with a narrow therapeutic index and dependent on hepatic cytochrome P450 for clearance. **Side Effects:** The most commonly reported symptoms are of the flu-like syndrome: muscle ache, fever, chills, asthenia, headache and nausea. Other less common events include: **Body as a whole:** anorexia, hypersensitivity reactions, weight loss, weight gain, severe allergic reactions (anaphylactic reactions or anaphylactic shock), syncope. **Skin and appendages:** alopecia, angioneurotic oedema, injection site reaction including pain, pruritus, rash, urticaria. **Digestive system:** diarrhoea, hepatitis, liver function test abnormalities, vomiting. **Cardiovascular system:** chest pain, palpitations, tachycardia, and vasodilatation and rarely arrhythmia, cardiomyopathy, congestive heart failure. **Haematological system:** thrombocytopenia and rare cases of pancytopenia. **Reproductive system:** metrorrhagia and/or menorrhagia. **Nervous system:** anxiety, dizziness, insomnia, paraesthesia, seizures, depression, suicide (see Precautions). Transient neurological symptoms that mimic MS exacerbations may occur following injections. **Musculoskeletal system:** arthralgia, pain, transient hypertonia and/or severe muscular weakness. **Respiratory system:** dyspnoea. Autoimmune disorders, central nervous system disorders and laboratory abnormalities have been reported with interferons. Rare cases of arthritis, hypothyroidism, lupus erythematosus syndrome, confusion, emotional lability, psychosis, migraine and very rare cases of autoimmune hepatitis have been reported with AVONEX®. For further information regarding adverse events please refer to the Summary of Product Characteristics. **Preclinical Safety:** Fertility and developmental studies with a related form of Interferon beta-1a in Rhesus monkeys show anovulatory and abortifacient effects at high doses. No teratogenic effects or effects on foetal development were observed. **Legal Classification:** POM. **Pack Size and UK NHS Price:** Box containing four injections £654. Reimbursed through High Tech Scheme in Ireland. **Package Quantities:** Lyophilised Powder: 1 box containing four trays. Each tray contains a 3 ml glass vial with BIO-SET device containing a 30µg dose of Interferon beta-1a per vial, a 1 ml pre-filled glass syringe of solvent and one needle. Pre-filled Syringe: 1 box containing four trays. Each tray contains a 1 ml pre-filled syringe made of glass containing 0.5 ml of solution (30µg dose of Interferon beta-1a) and one needle. **Product Licence Numbers:** EU/1/97/033/002-003. **Product Licence Holder:** Biogen Idec Ltd., 5 Roxborough Way, Foundation Park, Maidenhead, Berkshire SL6 3UD, United Kingdom. Date of last revision of Prescribing Information: September 2006. Please refer to the Summary of Product Characteristics for further information.

Information about adverse event reporting can be found at www.yellowcard.gov.uk. Adverse events should also be reported to Biogen Idec Ltd., on 08000 286639.

Date of preparation: February 2007

AVO-GBR-20561

PREVIEW: The ILAE UK Chapter 2007 Annual Scientific Meeting



The ILAE UK Chapter 2007 Annual Scientific Meeting will be held on 10th-12th October at the De Vere Grand Harbour Hotel, West Quay Road, Southampton, Hampshire.

The De Vere is an elegant five star property with a waterside location and excellent road, rail and air links with the rest of the UK. We are also offering lower cost alternative accommodation at the Holiday Inn, situated across the road from the De Vere. Both hotels have excellent leisure club facilities free to hotel guests.

The Council of the UK Chapter of the International League Against Epilepsy would like to invite abstracts of no more than 400 words. Abstracts can be related to any aspect of epilepsy (basic science abstracts should be submitted to the basic science abstract section). The best two abstracts will be invited for platform presentation at the Annual Scientific Meeting. Deadline is June 30th, 2007.

The Council also invite entries for the following 2007 Awards.

Gowers' Young Physician Award (£1000):

A dissertation on any aspect of epilepsy. Entrants must be no older than 35 years on 31st December 2007

Gowers' Medical Student Awards x 2 (£500 each)

A dissertation on any aspect of epilepsy, including case histories of a patient personally observed by the student. Entrants must be bona fide medical students

Gowers' Combined Nursing & Health Professional Award (£1,000)

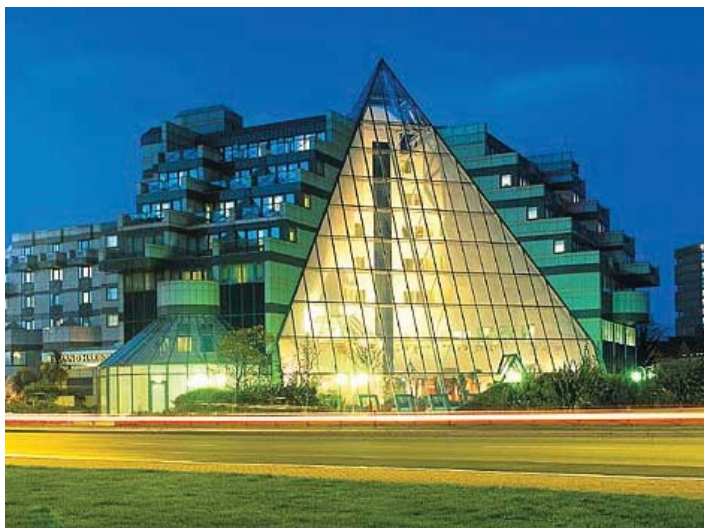
A dissertation on any aspect of epilepsy, by a member of the nursing profession or recognised health profession related to epilepsy care.

Closing Date 30th June 2007. Entries must be from within the UK, in English and not more than 5000 words. Prizes will be presented at the Annual Meeting. Accommodation and travel expenses for the award winners will be met by the ILAE UK Chapter.

Young Basic Scientific Investigator Award (£1,000)

The award is open to any UK basic scientist or health professional employed at lecturer level or below (or NHS equivalent) and working in the field of basic science research (non-clinical) in epilepsy. Entrants must be 40 years or under on 31st December.

For more information on the Annual Meeting or the Awards, see www.ilae-uk.org.uk/ASM.html or www.conference2k.com



PREVIEW: The SMI Group's 8th Annual Pain Therapeutic Conference

Crowne Plaza Hotel, London, UK, 11-12 June 2007.

Sponsored by: CRS Group, ICON Development Solutions, Lectus Therapeutics Ltd, Medeval Limited, Mallinckrodt & MD Biosciences.
Supported by: DrugResearcher.com, Neuro Drug Focus, CNS Drug News, Pharma Times & World Pharmaceutical Frontiers.

As pharmaceutical companies continually strive to find new and evolving ways to combat neuropathic and neurological pain, The SMI Group's 8th Annual Pain Therapeutics Conference once again showcases the new advances within the pharmaceutical industry.

Listen to case studies on novel targets for effective pain relief such as ion channels, CB2 receptors and the purinergic cascade, and explore revolutionary strategies for confronting neuropathic pain.

Senior representatives from the top ten Pharma Companies together with those from pharmaceutical companies that specialise in pain medication will deliver a series of specialised presentations detailing the discoveries and advances they have made over the last 12 months.

The continual success of The SMI Group's Pain Therapeutics Conference stands as proof of its reputation as the leading conference in the field. With this years promising to be the most successful, attendance is compulsory in order to keep abreast of developments in this ever-evolving industry.

This is an exceptional occasion to hear presentations from the industry's decision-making experts:

- Dr James Sullivan, Divisional Vice President, Neuroscience Discovery, Abbott Laboratories

- Dr Linda Surh, Director, CEDD Global Regulatory Affairs, GlaxoSmithKline
- Dr Shimon Amselem, Vice President, Pharmaceutical Development, Pharmos Ltd
- Dr Phil Skolnick, Executive Vice President and Chief Scientific Officer, DOV Pharmaceutical Inc
- Dr Alyson Fox, Global Head, Gastrointestinal Disease Area, Novartis
- Professor Theo Meert, Senior Research Fellow, Therapeutics Area Leader & Biology Head, CNS, Pain & Neurology, Johnson & Johnson
- Dr Liza Leventhal, Principal Research Scientist 1, Neuroscience Discovery Research, Wyeth
- Dr Steve England, Associate Research Fellow, Discovery Biology, Pfizer
- Dr John Connell, Director, Clinical Pharmacodynamics & Project Management, Icon Development Solutions
- Dr Emanuele Sher, Research Advisor, Pain/Migraine Team, Eli Lilly and Company
- Roland Kozlowski, Chief Executive Officer, Lectus Therapeutics

Benefits of Attending:

- **GROUNDBREAKING NEW TARGETS** for effective pain relief
- **SUCCESSFUL AND NOVEL** approaches to neuropathic and neurological pain

- **NEW AND EVOLVING ANALGESICS** in development
- **THE RELEVANCE** of translational pharmacology to neurological pain

PLUS AN ASSOCIATED HALF-DAY POST-CONFERENCE EXECUTIVE BRIEFING

The Critical Path for the Discovery of New Pain Therapeutics
13th June 2007

In association with NeuroKnowledge & Pharmidex

For more information, please visit our website at:

www.smi-online.co.uk/2007pain2.asp
To register contact Andrew Hinton on
Tel: +44 (0) 20 7827 6722 or
ahinton@smi-online.co.uk

Sponsorship and Exhibition Opportunities:

There are still a number of linked sponsorship and promotional opportunities available for this event. To discuss these or any other opportunities please contact **Martin Cawte** on Tel: +44 (0) 20 7827 6728 or mcawte@smi-online.co.uk.

Mention ACNR to be eligible for a 10% discount on the conference fee.

PREVIEW: 1st International Symposium on Basal Ganglia Speech Disorders and Deep Brain Stimulation

Institute of Neurology, Queen Square, London, UK, 2&3 July 2007.

Fluent articulation is probably man's most complex motor skill. It involves the co-ordinated use of approximately 100 muscles, such that speech sounds are produced at a rate of 15 per second.

Basal ganglia dysfunction can affect the smooth coordination of these muscles with a variable presentation of hypokinesia or hyperkinesia. The majority of people with Parkinson's disease and dystonia present with speech impairment at some stage of the disease process. Speech impairment can lead to both social isolation and direct disadvantages in employment.

There is a wide variability of the perceptual characteristics of basal ganglia speech disorders with lack of strong relationship with the limb motor disability.

This variable presentation of basal ganglia speech impairment responds poorly to otherwise effective medical and surgical management.

Speech is therefore an area of great interest both for research and clinical practice.

The development of basal ganglia stimula-



tion procedures gave rise to a renewed interest in the role of basal ganglia in speech motor control. Speech has a variable and often negative response to deep brain stimulation despite beneficial effects in limb motor control.

This area of neurological study remains relatively new and as such it presents many opportunities for the advancement of both research and patient care.

The aim of this first symposium is to focus

on speech problems following deep brain stimulation for Parkinson's disease, dystonia, Tourette syndrome and essential tremor.

The symposium will bring together a unique group of the world's most prominent researchers and practitioners in the field of neurological studies and speech, with emphasis on video /audio presentations and discussion.

Topics include: variability of basal ganglia speech disorders; measuring speech in movement disorders; deep brain stimulation: overview of the surgical procedure and post-operative management; speech and swallowing outcome following deep brain stimulation for Parkinson's disease and dystonia; imaging and neurophysiology in basal ganglia speech disorders; treatment of speech disorders following deep brain stimulation.

For further information visit:

www.ion.ucl.ac.uk/education/dbs.html

Neuroscience for Clinicians 14 & Brain Repair Spring School 2007

Cambridge, UK, 10-12 April 2007

A joint meeting of Neurosciences for Clinicians 14 and the Cambridge Centre for Brain Repair Spring School has been held in Cambridge recently. The focus of the conference this year was on demyelination, remyelination, progenitor biology and axon regeneration.

The first section of the conference was on 'Stem cells and progenitors'. W Richardson from the University College London presented his study on tracking oligodendrocyte progenitors, subventricular zone (SVZ) stem cells and their progeny in the adult mouse brain. With Cre-lox fate mapping techniques in transgenic mice, he showed that the adult oligodendrocyte progenitors (OPCs), which are widely distributed in the forebrain, are capable of a continuous generation of new oligodendrocytes in the white matter of adult brain. He also showed that the stem cells found in the adult SVZ are heterogenous, both in terms of their origins and their fates in the olfactory bulbs. The talk of T Ben-Hur then shed light on the effect of transplantation of neural stem cells on attenuating inflammatory process in multiple sclerosis (MS) models. Transplantation of neurospheres attenuated brain inflammation in the acute experimental autoimmune encephalomyelitis model of MS and reduced the degree of demyelination and axonal pathology in the chronic model. W Blakemore from the University of Cambridge then discussed the significance of the acute inflammatory response in initiating myelination from the remyelination-competent OPCs that repopulate the demyelinated area in MS lesions.

The conference next turned its attention to various other aspects on demyelination, remyelination and axon glial interactions. In this session, speakers discussed the latest advances in our understanding of the mechanisms on various myelin-related diseases and models. Their talks suggested that apart from studying the actual myelination/demyelination



by oligodendrocytes and Schwann cells, cross-talk between different cell types through gap junctions, internodal lengths and even the organelles in myelin-forming glia are important for the proper function of myelin. S Scherer from the University of Pennsylvania showed that mutations on various connexins cause mal-function and mal-formation of gap junctions on the myelin, which eventually leads to demyelination. P Brophy from the University of Edinburgh then demonstrated that the absence of Cajal bands on Schwann cells in periaxin null mice leads to a striking decrease in longitudinal growth of myelin. The effect of shorter internodal length is reflected in their conduction velocity with the conduction velocity decreasing from about 20ms⁻¹ to 10ms⁻¹. Furthermore a study by KA Nave from the Max Planck Institute demonstrated progressive axonal loss in both the PLP null mutants and Pex 5 conditional mouse. As PLP null mutants lacks NAD⁺ dependent regulatory enzymes and the Pex5 conditional mouse lacks functional peroxisomes, the axonal loss found in these models highlights the possible importance of sub-cellular organelles in axonal maintenance.

One of the highlights of the conference was the clinical session in which J Fawcett and J Somerfield introduced two patients, one with MS and the other with spinal cord injury. While both patients talked about their person-

al experiences in identifying the disease or the cause of the injury, the patient suffering from MS shared her view on how an ongoing clinical trial improved her life significantly. The patient with spinal cord injury expressed his opinion about the correct and positive attitude in maintaining a comparatively normal life. These interviews with patients do help the more basic neuroscientists to identify the key problems which patients are facing everyday and to understand the importance of good communication with patients in order to help improve their quality of life.

The final session of the conference focused on the repair of central nervous system (CNS) circuitry. By studying GAP-43 on Purkinje cells, F Rossi showed that over-expression of GAP-43 in these cells enhances their plasticity and allows neurite outgrowth even in the presence of inhibitory signals. The expression level of the receptors did not decrease in the presence of these inhibitory molecules. Further experiments using an injury model revealed that there is an accumulation of GAP-43 at sites where myelin retracts and new processes sprout on the Purkinje axon. L Schnell and D Pearse later discussed the various possible ways in repairing CNS injury. L Schnell spoke about how anti-NogoA antibodies help in neutralising the inhibitory properties of Nogo-A, therefore enhancing CNS regeneration in various animal models whilst D Pearse gave a very comprehensive review on the transplantation of Schwann cells on various spinal cord injury (SCI) models. He compared and discussed the results between acute and chronic SCI, complete and incomplete SCI and also thoracic and cervical SCI, using a combination of biological/pharmacological molecules. Finally, J Steve concluded the session by presenting various aspects and challenges which neuroscientists will have to consider if they are to translate their research findings into clinical practice.

Dr Jessica Kwok, Cambridge, UK.

Are you attending any of these meetings?

Would you like to write a short report for ACNR?

If so, please contact Rachael@acnr.co.uk or call Rachael on 01747 860168 for more information.

- BSRM: Rehab today and tomorrow
- 16th European Stroke Conference Glasgow
- MS Frontiers
- European Neurological Society
- From Science to Practice, Multidisciplinary care in PD
- 11th International Congress of PD & Movement Disorders, Istanbul
- International Headache Society Congress Stockholm
- 27th International Epilepsy Congress, Singapore
- 11th EFNS, Brussels
- 1st World Congress on Controversies in Neurology, Berlin
- World Congress on Huntington's Disease, Dresden
- ECTRIMS (MS) - Prague
- International Psychogeriatric Association Meeting, Osaka

Association of British Neurologists Spring Meeting

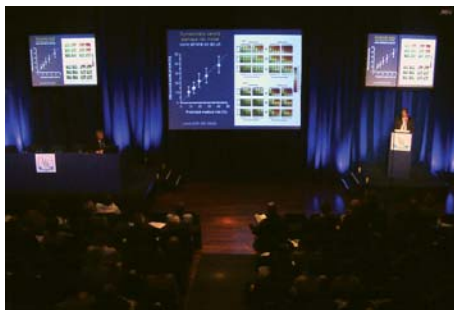
Cambridge, UK, 11-13 April 2007

For its 75th anniversary meeting, the Association of British Neurologists chose to meet in Cambridge. And a surprisingly lively affair it turned out to be.

My personal highlight was a magisterial account of the history and science of spinal cord injury by James Fawcett. He took us from the trenches of WWI to the current Nogo trials (which we have reported on before in ACNR). He dwelt in-between on the character of Sir Ludwig Guttmann, who single-handedly transformed Stoke Mandeville Hospital from sleepy DGH to the prestigious spinal injuries unit it is today. His secret, it seems, was to rigorously manage the bladder symptoms and pressure sores of his patients, which were considered at the time (and now?) to be the province of the nurses. George Hyslop's talk on Alzheimer's was as good, I understand from those whose clinical work I was left to do that afternoon.

The history of twentieth century British neurology was the one session arranged by the local organiser, Alastair Compston. Perhaps the biggest treat was a film of a patient with Wilson's disease, and other movement disorders, made by Kinnear Wilson himself. The great man appeared in one of the clips; identified as such by his son, a retired stooped scholar of ancient languages, who rose from the front row of the meeting to warm applause. Semir Zeki popped up, rather randomly in this historical section, to answer whether neuroscience had explained the brain or beauty with a resounding No, to little surprise. And the rest of the afternoon was spent indulging in warm anecdotes of our great predecessors. And then the grand unveiling of the ABN's Coat of Arms, presented by a Knight-Herald, or some such. Congratulations to Colin Mumford of Edinburgh for persisting with this project on the ABN's behalf.

I have written before of my frustration with recent ABN meetings. There seems to be a significant anti-academic wing amongst the abstract selectors. This was again apparent at the Cambridge meeting. In two and a half days, there was time for only 19 open platform presentations (why so few?). As at least 129 abstracts were submitted, those selected for an



oral presentation would be expected to be of the highest quality. And some were.... But not the talk on Google neurology or the audit of a DGH neurologist's work. Why did these take precedence over the following fantastic posters?

- A meta-analysis of 33 studies of secondary prevention of cervical artery dissection (unclear whether anticoagulation of antiplatelets better) [Menon, St George's].
- A study of excessive sleepiness of 843 patients with Parkinson's disease (23% scored in the narcolepsy range) [Malone, Exeter].
- A review of 84 consecutive cases of non-traumatic myelopathy from Tanzania (neoplasia and TB top the list interestingly) [Murphy, Kilimanjaro Christian Medical Centre].
- A prevalence study of the congenital myasthenic syndromes in the UK (210 found, of whom the investigators could identify 131 gene defects) [Lashley, Oxford].
- A five-year study of 126 patients with Parkinson's, which showed that subsequent cognitive decline could be predicted from baseline on the basis of a specific (MAPT) genotype and performance in verbal fluency and pentagon copying. [Williams-Gray, Cambridge].

By the last afternoon, I was beginning to think that the ABN had become a club for nostalgic reminiscences or discussing service development, rather than a community of thinkers keen to discover and provoke. But then came the debate. The motion, proposed some months ago in all innocence, was that "Modernising medical careers is good for patients, trainees

and the practice of neurology". But just a few weeks before the ABN meeting, the Medical Training Application Service had fallen apart, leaving young doctors stranded, and making national headlines. Chris Clough, who was proposing the motion, found it impossible to persuade the meeting that MTAS and MMC were not the same thing. So he locked his jaw and took the punches as Alastair Compston whipped up a preconditioned crowd, with great showmanship, to a near-unanimous (bar 4) vote against. A few days after the meeting, we all received this email from the ABN council.

At its annual general meeting on 11th April 2007 the Association of British Neurologists agreed that its aim was 'to improve the health and well being of people with neurological disorders by advancing the knowledge and practice of neurology in the British Isles'.

At a separate meeting of members and trainees during the Spring meeting, and by an overwhelming majority, members expressed their view that this aim could not be achieved by the exclusion of speciality-ready trainees from competing in an equal fashion with other applicants for ST3 posts as part of the MTAS selection process. In particular, trainees were of the view that they would prefer to be re-interviewed in open competition rather than proceed with a perceived flawed selection based on round one of the MTAS process.

The Association, through its Officers and Council, supports this position and recommends that any member who feels unable to participate in the existing appointments process because of this inequity should not do so.

For the first time, I felt that an ABN meeting achieved something significant. Concerned members were prepared to be awkward for the sake of young doctors and the subject. Bravo.

Alastair Coles, Cambridge, UK.

The Autumn Meeting of the ABN will be held at the QE11 Conference Centre, London, 14-16 November, 2007.



For further details please call

NCORE

Derbyshire Royal Infirmary
Tel: 01332 254679
or look on: www.ncore.org.uk
for a list of all our training events.

Training Events for Health and Social Care Professionals

Pain Management in Rehabilitation • 26th Jun 07
Posture and Balance in Neurological Conditions – Upper Limb Qualified staff • 26th and 27th Sept 07
10th Annual Advanced Rehabilitation Course • 3 days
Epilepsy Management in Neurological Rehabilitation • 26th Sept 2007
Neurological Rehabilitation in Primary Care • 27th Sept 2007
Multiple Sclerosis and the National Standards Framework • 28th Sept 2007
Exploring Gait as it relates to Posture and Balance for Qualified Therapists • 18th Oct 07

Posture and Balance in Neurological Conditions – Lower Limb Qualified staff • 15th Nov & 16th Nov 07
Epilepsy study day • 29th Nov 07
Parkinson Plus study day • Tbc Oct 07
Exploring Gait as it relates to Posture and Balance for qualified therapists • 23rd Jan 08
Neurological Upper Limb for Occupational Therapists • 30th Jan 08
Head Injury Conference: The Claiming Culture • 11th Mar 08
Motor Neurone Disease study day • 28th Mar 08