WFNR UPDATE

AUTUMN 2009

6th World Congress for Neurorehabilitation Update

Abstracts now required!

Abstract submission is now open for the 6th World Congress for Neurorehabilitation, which takes place in Vienna, Austria from 21-25 March 2010 at the Hofburg (Vienna's Imperial Palace).

The deadline is Friday, 16th October 2009. Instructions for abstract submission are detailed on the Congress website **www.wcnr2010.org**

Abstract deadline:

Friday 16th October 2009

6th World Congress for Neurorehabilitation

21-25 March 2010

Vienna, Austria

Venue ranks No.1

Vienna is the Number 1 city in the international ranking thanks to its outstanding infrastructure for congresses and its extensive range of tourist services. Due to its geographical position in the centre of Europe, Vienna has always been a hub of European east-west traffic and is very accessible. Vienna International Airport serves as a destination for more than 60 airlines and ranks top for reliability in Europe.

The 6th WCNR will take place in the historical congress centre of the Hofburg in the heart of Vienna, surrounded not only by the stately historical buildings of the city centre, but also by a splendid boulevard, Ringstrasse, with its extensive range of hotels and numerous top-class restaurants.

Excellent scientific programme

The congress provides an extensive programme, covering topics ranging from science and theory to practical applications, as well as public health issues. It is targeted at medical doctors and all professional groups working in neurorehabilitation.

The programme will feature lectures, symposia and workshops on clinical practice and research by leading experts from around the world. All levels of function will be addressed from the basic science of neural plasticity and regeneration, translational research targeting cognitive and physical abilities, to social reintegration and vocational rehabilitation.

The breadth of content reflects a contemporary vision of the field of neurorehabilitation that is leading to new breakthroughs in functional recovery after neural injury.

For further information, please visit www.wcnr2010.org

Our Journal, Neurorehabilitation and Neural Repair, Leads the Way

Neurorehabilitation and Neural Repair (NNR), the official journal for ***WFNR*** members, continues to fill the research needs of its readers.

The journal's citation index was the highest among 25 rehabilitation journals and in the upper third of all clinical neurology journals in 2008.

NNR now offers nine issues of over 100 pages a year. Professor Bruce Dobkin, Editor of ***NNR*** said "Submissions from Asia and Europe have especially increased in keeping with the aims of the ***WFNR***. However, the number of submissions puts a burden on reviewers who have expertise in areas that seem to attract investigators to submit to ***NNR***. The editorial board is always looking to add volunteer reviewers to its list".

Dr Gert Kwakkel, who is the new Chair of Neurorehabilitation in the Department of Rehabilitation Medicine at VU University Medical Centre in Amsterdam, has agreed to serve as a European managing editor and began his stint with the January 2009 issue.

STOP PRESS...

Bids required for WFNR Congress in 2014

Bids from potential host countries are now required for the 2014 World Congress. The deadline is the 31 January 2010 and further information can be obtained from Tracey Mole, WFNR Executive Director.
traceymole@wfnr.co.uk

In this issue...

ABILOCO: a Rasch-Built Questionnaire to Assess Locomotion Ability in Patients with Stroke

Professor TM Lejeune, G Caty and JL Thonnard, Louvain Belgium

Post-stroke neurologic impairment frequently limits walking ability, which is considered the most important activity of daily living. Assessment of locomotion ability is therefore fundamental in neurological rehabilitation.

The locomotion ability (WHO-ICF activity domain) is a latent variable that cannot be quantified by a measuring device and can only be assessed by questionnaires. The measurement of walking speed (10-meter or 6-minute test) is simple and well validated but describes a subject's performance in an artificial and motivating environment, and might not be related to the patient's walking capacity during daily life.

We therefore developed ABILOCO, a new questionnaire that assesses the walking ability of adult patients with stroke, and demonstrated its psychometric qualities (validity, linearity, unidimensionality, invariance and reliability) using the Rasch probabilistic model.

Detailed questionnaire content

The preliminary questionnaire included 43 locomotion activities from the existing scale and also from the clinical experience of our rehabilitation team.

A sample of 100 patients, representative of the stroke population, completed this 43-item questionnaire. Their stroke occurred between one and 260 weeks before the study and they had no major cognitive deficit that would prevent them from completing the questionnaire. Their neurologic impairments induced gait disturbances and walking disability noticeable by visual observation.

The patient's responses were analysed following the Rasch Model and 13 out of the 43 items were selected following the criteria in Table 1.

Table 1: Criteria for selection

- Frequency of missing values: only items commonly attempted by the patients were retained
- Ordered rating scale: questionnaire needed to fit with the probabilistic model meaning that subjects with a greater locomotion ability should be able to perform a greater number of activities, and subjects being able to perform a great number of activities should have a greater locomotion ability
- Unidimensionality: subject's responses to each item had to depend only on locomotion ability (latent variable) and not on other patient or item characteristics
- Invariance: Differential Item Functioning. The item difficulty hierarchy was invariant as a function of sex, age, delay since stroke, and affected side

Results were excellent

The concurrent validity of ABILOCO was demonstrated by the good relationship between the locomotion ability assessed by ABILOCO and by existing ordinal scales (e.g. FAC). The ABILOCO results and walking speeds at 10 metres were well correlated and complementary: slow-walking patients presented a wide range of locomotion ability; and patients with the same walking ability presented a wide range of spontaneous walking speeds.

The validity to the self-report assessment was demonstrated by asking a group of 28 patients to fill in the questionnaire and then to perform the 13 activities while an examiner observed them and rated their ability to perform it.

The locomotion abilities assessed by the patients were well correlated with that evaluated by the independent examiner. In case of severe cognitive impairments, a third party assessment by a physical therapist was also validated. Finally, the reproducibility of ABILOCO was also demonstrated.

The ABILOCO responsiveness has been demonstrated in a study about treatment of stiff-knee gait by botulinum toxin injections. ABILOCO detected a functional progress in walking ability related to improvement in gait analysis variables. In contrast, results obtained with ordinal scales (e.g. FAC) were not significantly improved.

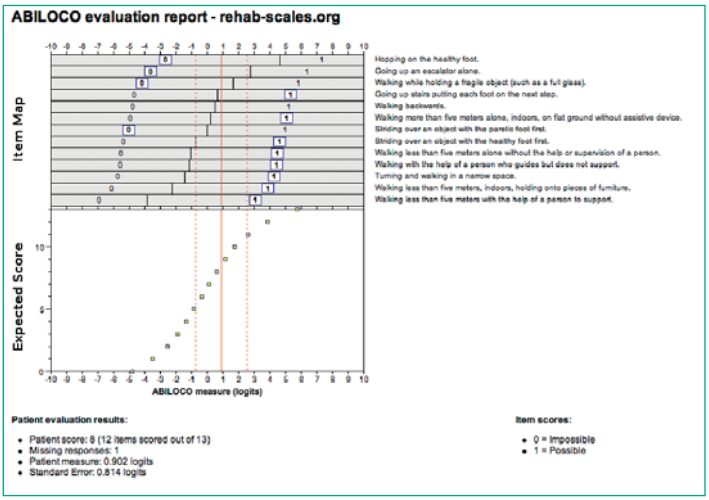
Access ABILOCO via internet

For practical use of the ABILOCO, a website (**www.rehab-scales.org**) is freely accessible. The questionnaire and instructions can be downloaded in several languages. The patient is asked to estimate his ability to perform each activity as impossible or possible. Activities not attempted in the last three months are not scored. Then, it is possible to encode the patient answers and to perform an online analysis to convert the total raw score into a linear measure expressed in logits. This score may be submitted to arithmetical computation and powerful parametric statistical analysis contrary to score obtained on ordinal scales.

Up to now, ABILOCO has been validated and calibrated for adult stroke patients and children with cerebral palsy (CP) - it may not be used for other pathologies without additional validation work.

Further questionnaires have been developed

Our team has also developed questionnaires to assess manual ability among stroke patients and CP children (ABILHAND), ability to perform ADL among patients with neuromuscular disorder (ACTIVLIM), and to assess satisfaction in participation among stroke patient (SATIS-stroke). These questionnaires can be completed easily, quickly and cheaply, enable assessment of a patient's activity and participation limitations in a "real-life" context and allow regular evaluation of a large number of subjects over the whole course of a rehabilitation program for clinical or research purposes.



Translational Research and Neurological Rehabilitation: A New Direction is Needed

Professor A Magid Bakheit, Birmingham UK

Basic science medical research is only valuable when it translates into medical treatments or disease prevention strategies that ultimately bring benefits to patients when cure is not possible and even when disease progression is inevitable.

To date basic bio-medical science research in chronic neurological disease has taken different directions without a coherent theoretical framework that addresses issues beyond the disease pathology and the impairments that result from it. Thus, it has failed to address the total impact of disease on the individual.

For several decades basic science research into disabling neurological disease has been the domain of the discipline of 'restorative neurology' and the emphasis was (and remains) on the reversal of the disease pathology or the neurological impairments.

Current research strategies

Generally, two research strategies are pursued. These are either research programmes into interventions that replace the dead neural tissue or treatments that aim to delay the progression of the pathological process. Brain tissue transplantation and stem cell research are examples of the former, while gene therapy usually aims to halt or slow disease progression.

While these research programmes are valuable and address fundamental scientific questions, they fail to consider the significance of environmental and social factors in the course of chronic disabling disease. Nor do they recognise the importance of the therapeutic interventions (other than the treatment that is being evaluated) on the eventual clinical outcome.

Table 1: Research strategies

- Interventions to replace dead neural tissue, e.g., brain tissue transplantation and stem cell research
- Treatments to delay progression of the pathological process, e.g., gene therapy

Reversal or reduction of the impairments per se is not a goal in rehabilitation. It is only useful when it leads to improvement in function. Even then, the interventions directed at reducing the impairments are only one part of a holistic rehabilitation programme that primarily seeks to reduce the activity limitation and promote social participation.

Under these conditions the benefit of the overall rehabilitation programme is invariably more than that of a single therapy intervention. Consequently, translational research in disabling neurological disease should reflect this complexity in study design[1,2].

In particular, attention should be given to the selection of clinical outcomes that are relevant and important to patients and to the methods of measuring them.

Role of outcome measures

The exclusive use of biological outcome measures, e.g., counting the number of multiple sclerosis plaques on MRI scans, is insufficient and is often misleading in the context of translational rehabilitation research. The evaluation of novel treatments should therefore include functional and social outcome measures.

Nowadays research questions can be formulated in such a way as to bridge the current gap between basic science and rehabilitation research. For example, thanks to the advances in neuro-imaging in recent years it is now possible to evaluate the effects of therapeutic interventions on neural plasticity (with biological variables) and to correlate this with neurological rehabilitation outcomes.

New approach required

A new approach in translational research in neurological rehabilitation is not only needed in research design, but it is also necessary to establish a balanced and equitable method of research funding that reflects the importance of viewing translational research as a continuum of scientific endeavour from the laboratory to real life clinical situations.

This will require collaboration between basic science researchers and rehabilitation academics. A balanced composition of the research group and active collaboration with basic scientists are essential for good research design and for the successful competition for research funding[3].

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Brain Stimulation in Neurorehabilitation

Dr Jorge Hernández-Franco, Mexico City and Dr Leonardo G Cohen, NINDS NIH

Non-invasive transcranial stimulation in the form of magnetic (TMS) or direct current (tDCS) stimulation is a painless procedure that modulates cortical excitability. Both modalities involve delivery of electrical currents to cortical tissues through the scalp. Depending on stimulation parameters, TMS and tDCS may upregulate or downregulate excitability to different extents in the neural structures under the stimulating coil (TMS), and under scalp surface electrodes (tDCS).

Effects on cortical excitability can outlast the stimulation period for up to one to two hours, and may influence motor behavior over longer periods of time.

Therapeutic uses of stimulation

Potential therapeutic uses have been explored in depression, chronic pain management, stroke and movement disorders with varying degrees of success.

Most studies have stimulated the motor cortex, but the stimulation of parietal cortex and the dorsolateral prefrontal cortex has been used in the treatment of depression and chronic pain states, with variable results.

rTMS often has been tested alone or in combination with psychotherapy and pharmacologic treatment of depression. According to van Dijk and collaborators, the use of parietal rTMS may reverse some of the sleep disorders that affect patients with Parkinson's disease.

One exciting application has been in the neurorehabilitation of motor function following stroke. Downregulation of excitability in the contralesional primary motor cortex (M1), or upregulation of excitability in ipsilesional M1 could facilitate motor function after chronic stroke. Low frequency rTMS at around 1 Hz, or cathodal tDCS applied to the contralesional M1, facilitates excitability of the non-stimulated ipsilesional M1 probably through a reduction of interhemispheric inhibition from the stimulated to the non-stimulated M1.

This modulation of interhemispheric activity, especially disinhibition of the ipsilesional hemisphere has been proposed as the basis for the use of rTMS and cathodal tDCS in stroke recovery.

Several reports propose that the stimulation of the ipsilesional M1 facilitates excitability and improves motor function in the paretic hand. These proof of principle studies indicate that TMS, and particularly tDCS, are fruitful areas of investigation in neurorehabilitation.

tDCS is particularly well fitted to the design of double-blind placebo controlled investigations. Evaluation of the usefulness of both techniques represents a new field of research worthy of new, well designed clinical studies.

Finally, it is of interest that the combined application of brain stimulation techniques with somatosensory stimulation of the paretic hand appears to result in more prominent benefits in the motor domain than each form of stimulation alone.

Adjuvant strategies

Although TMS and tDCS are developing as promising adjuvant strategies to customarily used neurorehabilitation treatments, there is still a lack of well designed thoroughly controlled multicentre clinical studies proving efficacy.

There is no consensus yet on the specific parameters of treatment (e.g. site of stimulation, stimulation parameters, frequency of treatment, patients who could benefit most from each type of intervention). More work is still needed to assess safety in the short and long-term.

Perhaps the combination of brain stimulation with pharmacological strategies like adrenergic agents could in the future provide additional benefits?

References: *A full list of the references supporting this article is available from the editor (see back page for details).*

Preliminary results of the International Stroke Inpatient Rehabilitation Reinforcement of Walking Speed Trial

Dr Bruce Dobkin, UCLA USA

The International Stroke Inpatient Rehabilitation Reinforcement of Walking Speed Trial (SIRROWS) is looking at the feasibility of conducting a clinical trial for a simple intervention that requires no funding, across 25 international sites.

A randomised, multi-site clinical trial was designed with blinded outcome measures across 11 inpatient rehabilitation centres in the USA and 14 in Japan, India, Italy, Germany, Turkey, Korea, Nigeria, Spain, and Austria. UCLA served as the randomisation and data management site using a Wiki-based Web entry system.

All 220 patients had recent hemiplegic stroke and were admitted for initial inpatient rehabilitation. All subjects gave Informed Consent. When the patients could take at least five steps without human assistance, they were randomised to an Experimental Group that received the site's standard therapy plus daily feedback and verbal reinforcement about walking speed during a timed walk of 10-15 minutes. The Control Group received standard mobility training, but the patients were not timed and received no feedback about walking speed. Reinforcement was expected to improve velocity by 25%. The main outcome measures are listed in Table 1.

Table 1: Main outcome measures

- Walking speed over 30 m (100 ft) at discharge
- Distance walked in three minutes
- Length of inpatient stay corrected for time since onset of stroke

The preliminary results regarding the primary outcomes and novel information about changes in walking speed over the first three months after stroke will be presented in October at the ASNR/ACRM meeting in Denver.

Conclusions

Overall the conclusions are that motivated clinicians can successfully participate in trials conducted within the usual framework of care to test novel therapeutic strategies. This approach for Stage 2 and 3 trials may enable large numbers of subjects to be entered within a short time frame and provide results that permit greater generalisability.

Special Interest Groups

The **WFNR** is extremely proud of its increasing number of Special Interest Groups (SIGs). These Groups attract a diverse group of health professionals working in specific areas of neurorehabilitation. They are formal groups approved by the **WFNR** Board.

SIGs are self-directed and have an agenda of work or involvement that sustains the group throughout the year. Activities include, but are not limited to, research projects, newsletters, policy initiatives and other targeted activities.

The goals and objectives of the SIGs must be compatible with the overall direction of the **WFNR**. Priorities for each SIG are developed in collaboration with the **WFNR** Management Committee and are in line with the strategic initiatives undertaken by **WFNR**.

To this effect a policy is now being developed that will guide and govern existing and new SIGs to ensure that they have appropriate structures in place, are working towards common goals and that the **WFNR** is able to provide maximum support. This policy currently is being developed and is scheduled for implementation in 2010.

Young Neurologists SIG: WFNR reaching out to young doctors and trainees

Barbara Hess, Walter Struhal and Johann Sellner

The Young Neurologists SIG is a dynamic and growing group and would like to attract young trainees from all over the world.

The European Association of Young Neurologists and Trainees (EAYNT), a Brussels based non-profit organisation, has been representing the interests of Young Neurologists for the past ten years and has been actively involved in decision-making processes with regard to the future of European Neurology.

The EAYNT Executive Committee decided to promote projects on neurorehabiliation and training for neurologists, and accepted an invitation to form the Young Neurologists SIG within the **WFNR**.

Although this SIG was established by the European EAYNT, it represents worldwide issues and is building relationships with other young neurologists organisations. Major activities are regularly reported on the homepage **www.eaynt.org**

Workshop at the 6th World Congress

The next major event for this SIG will be the Young Neurologists Workshop at the 6th WCNR in Vienna.

For further information, contact: barbara.hess@wienkav.at if you are interested in activities of the Young Neurologists SIG and would like to join the group.

Dysphagia SIG: Improving standards in neurorehabiliation

Kay Coombes, UK

This new multidisciplinary SIG was proposed following the World Congress in Brasilia, September 2008. Its aim is to promote research, debate and discussion about the diagnosis, assessment, treatment and management of dysphagia in children and adults resulting from various neurological pathologies and thereby contribute to improving the standards in neuro-rehabilitation.

Membership is growing and the SIG has begun compilation of relevant dysphagia policies and procedures including national guidelines.

For further information, contact: Kay Coombes, Acting Chair: arcos@globalnet.co.uk

Neurological Conditions and Driving SIG: Steering towards a 'fitness to drive' consensus

The main aim of this SIG is to achieve consensus on medical standards of fitness to drive for neurological conditions which will be adopted by different countries. In addition it aims to collaborate on research studies across different countries, contribute to the evidence on which medical rules for driving are based and deliver a position statement on driving after a neurological condition or event.

Membership is open to doctors, psychologists, psychiatrists, therapists, nurses, researchers, and anyone with an interest in driving and neurological rehabilitation.

For further information, contact: c.a.hawley@warwick.ac.uk

OPSYRIS SIG: Psychological research into stroke

Formed in 2002, the OPSYRIS SIG provides a support and information network specifically for clinical and neuropsychologists researching in stroke. Membership is not restricted and individuals from any other relevant discipline are welcome to join.

The SIG exists mainly as an email distribution list with a current membership of 96 which includes two EU members. OPSYSRIS activities are managed by an informal steering committee of six key members.

Members of the group are currently undertaking an audit of the assessment and management of individuals with low mood after stroke. Participating centres have agreed to document a cohort of service-users with stroke admitted to clinical psychology services over a three-month period. The aim is identify methods of assessment used and treatment provided to those with low mood. This will enable us to identify research priorities and to design randomised trials which reflect clinical practice.

Members of our group have also contributed to an update of the British Psychological Society Briefing Paper 19 "Psychological Services for Stroke Survivors and Their Families" (2002) and the revision is due for publication later this year.

For further information, contact: Dr Stuart Anderson, Acting Chair: OPSYRIS stuart.anderson@southdowns.nhs.uk

Neuroethics SIG

Professor F Gerstenbrand, Vienna; Secretary: Dr Sabahat A Wasti, Abu Dhabi

All neurologists working in the area of neurorehabilitation should have an understanding of the ethical issues in this field and a detailed knowledge of the medicolegal problems involved. All practitioners need to be able to interpret the ethical rules in all aspects of neurorehabiliation. This SIG is aimed at raising awareness in this field, not only for research purposes, but also for everyday clinical practice.

The SIG will have a Focused Workshop on Neuroethics at the 6th World Congress and a teaching course for 'Clinical Trials and Ethical Rules and All The Different Obligations' (ICH-GCP) is in preparation.

For further information: Professor F Gerstenbrand, Vienna; Secretary: Dr Sabahat A Wasti, Abu Dhabi

Useful Resources

Intrathecal Baclofen Therapy National UK Guidelines
Dr Valerie Stevenson, London UK

New consensus guidelines for the management of spasticity with intrathecal baclofen (ITB) will be available by the end of this year.

The need for national guidance for this extremely effective but invasive treatment was identified along with the highlighting of specific areas for research and audit. It was apparent that there are considerable variations in the practise of ITB therapy throughout the UK and within different clinical specialties.

The UK National ITB Forum brought together a wide spectrum of clinicians including rehabilitation physicians, anaesthetists, adult and paediatric neurologists and neurosurgeons. Through several meetings and the formation of a steering committee, comprehensive guidelines have been compiled which cover all aspects of ITB therapy.

Included in the guidelines are background information on the evidence base, the assessment and selection process with full details on the trial procedure, surgical techniques, role of physiotherapy, long term follow up needs, management of complications, transition from paediatric to adult services and information for commissioners of services. Tools for storing and collecting data are also included along with suggested audit proformas.

It is hoped that the publication of these guidelines will help existing and future ITB providers to facilitate the provision of ITB to all appropriate patients in a safe and effective way. In addition where evidence for efficacy or cost-effectiveness is lacking directions for future research and audit are suggested.

Chronic Spinal Cord Injury: Management of Patients in Acute Hospital Settings: National guidelines 2008
Dr Angela Gall, RNOH Stanmore

The life expectancy for people with Spinal Cord Injury (SPI) is less than for the general population, although it continues to increase. These individuals are at risk from the age-related diseases that affect the general population, including cardiovascular disease, infection and malignancies. Also, the multisystem impairments resulting from SCI can lead to several complications, particularly infections, respiratory complications and pressure ulcers. Those with SCI are at greater risk of hospital admission every year following their injury compared with the general population. As a result, general physicians are likely to find themselves caring for individuals with SCI in acute hospital settings.

The guidance is one of a series published by the Royal College of Physicians (RCP) and was written for implementation in the UK but much of it will be applicable outside the UK.

Objectives and target audience

The guidelines aim to assist in the assessment and management of people with SCI and to avoid the common problems of hospital-acquired morbidity in this potentially vulnerable group of people. The target audience is general physicians and other clinicians involved in the management of adults with SCI when they are admitted to an acute hospital setting.

Guidance detail

The guidance includes more detail on the clinical standards department of the RCP, the concise guidance series, the methodology and the background to these guidelines. There is a brief description of the relevant pathophysiological consequences of SCI to the respiratory, cardiovascular and neurological systems, including the effects on bladder and bowel function.

The guidance reminds us of the importance of listening to the person and their family, who are often expert in the management of the condition, and of maintaining close contact with the individual's regular team/specialist spinal cord injuries centre. It includes algorithms for the recognition and management of autonomic dysreflexia, for the management of some aspects of bladder management and for bowel management.

Staff need to be aware of the specific complications associated with SCI (see Table 1) and be trained to manage these. They also need training in the management of AD and bowel management, including manual evacuation.

Table 1: SCI complications

- Respiratory problems
- Pressure ulcers
- DVT
- Urinary tract pathology
- Malnutrition
- Mood disorder

Patient assessment and management are addressed including the importance of discussion with the SCI centre, as well as the need for specific management plans including DVT prophylaxis, appropriate nutrition, ongoing bowel and bladder management and managing AD if it occurs.

The guideline also highlights the importance of the discharge planning process and makes recommendations including communications and requirements for discharge. The appendices include a checklist which we hope will be useful in ensuring all aspects of the guidelines are implemented, and has contact details for all UK SCI centres.

The guidance is available through the Publications Department of the Royal College of Physicians and appears on the websites of the British Society of Rehabilitation Medicine (**www.bsrm.co.uk**), the Multidisciplinary Association of Spinal Cord Injury Professionals (**www.mascip.co.uk**), and the Spinal Injuries Association (**www.spinal.co.uk**).

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Presentation: Vials of 500 units of *Clostridium botulinum* type A toxin-haemagglutinin complex. **Indications:** The treatment of focal spasticity, including: arm symptoms associated with focal spasticity in conjunction with physiotherapy in adults; and dynamic equinus foot deformity due to spasticity in ambulant paediatric cerebral palsy patients, 2 years of age or older. Spasmodic torticollis, blepharospasm and hemifacial spasm in adults **Administration:** Dysport should only be injected by specialists who have had administration training. Blepharospasm and hemifacial spasm, reconstitute 500 units in 2.5mL normal saline. Spasmodic torticollis and focal spasticity, reconstitute in 1mL. **The units of Dysport are specific to the preparation and are not interchangeable with other preparations of botulinum toxin**. Posology: The dose should be lowered for patients with low muscle mass or in whom the suggested dose may result in excessive weakness. See SPC for recommendations. Adult arm spasticity: The recommended dose is 1000 units in total, distributed among the most active arm muscles; biceps brachii (300-400 units); flexor digitorum profundus (150 units); flexor digitorum superficialis (150-250 units); flexor carpi ulnaris (150 units); flexor carpi radialis (150 units). Sites of injection should be guided by standard EMG locations, although actual sites will be determined by palpation. All muscles should be injected at one site, except for the biceps which should be injected at two sites. Paediatric cerebral palsy: Starting dose is 20 units/kg body weight given intramuscularly as a divided dose between calf muscles. Subsequently the dose may be titrated between 10 and 30 units/kg body weight, depending on response. If only one calf is affected, the dose should be halved. The maximum dose administered must not exceed 1000 units/patient. Injections may be repeated approximately every 16 weeks or as required to maintain response, but not more frequently than every 12 weeks. Spasmodic torticollis: The initial recommended dose is 500 units given intramuscularly as a divided dose to the two or three most active neck muscles, which will likely include splenius capitis and sternomastoid. The split amongst muscles will vary according to the type of torticollis diagnosed. Doses within the range 250-1000 units are recommended. Injections should be repeated approximately every 12 weeks or as required to prevent recurrence of symptoms. Blepharospasm and hemifacial spasm: The initial recommended dose is 120 units per affected eye; injections are given subcutaneously, medially and laterally into the junction between the preseptal and orbital parts of both the upper and lower orbicularis oculi muscles of each eye. Injections should be repeated approximately every 12 weeks or as required to prevent recurrence of symptoms. Subsequently the dose may be reduced to 80 units per eye and then to 60 units by omitting the medial lower lid injection. **Contra-indications:** Dysport is contraindicated in individuals with known hypersensitivity to any component of Dysport. **Warnings and precautions**: Patients with a history of dysphagia and aspiration should be treated with extreme caution. Dysport should be used with caution in patients with subclinical or clinical evidence of marked defective neuromuscular transmission. Patients and their care-givers must be warned of the necessity of immediate medical treatment in case of problems with swallowing, speech or respiratory disorders. Patients treated with therapeutic doses may experience exaggerated muscle weakness, especially in those with underlying neurological disorders. Dysport should be used under specialist supervision in such patients only if the benefit is considered to outweigh the risk. Careful consideration should be given to the use of Dysport in patients with a history of allergic reaction to a product containing botulinum toxin type A or in patients with prolonged bleeding times, infection or inflammation at the proposed injection site. Dysport contains a small amount of human albumin. The risk of transmission of viral infection cannot be excluded with absolute certainty following the use of human blood products. Antibody formation to botulinum toxin has been noted rarely in patients receiving Dysport. The recommended posology and frequency of administration for Dysport must not be exceeded. Dysport should only be used to treat a single patient during a single session. **Interactions:** Drugs affecting neuromuscular transmission may enhance the effect of botulinum toxin and should be used with caution. **Pregnancy and lactation**: Safety in this patient group has not been demonstrated. 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Paediatric cerebral palsy Common: diarrhoea, vomiting, leg muscle weakness, urinary incontinence, abnormal gait, accidental injury due to falling. Spasmodic torticollis *Very common*: dysphagia; common: dysphonia, neck muscle weakness; *uncommon*: headache, diplopia, blurred vision, dry mouth; *rare*: respiratory disorders. Blepharospasm and hemifacial spasm *Very common*: ptosis; *common*: facial muscle weakness, diplopia, dry eyes, tearing, eyelid oedema; *uncommon*: facial nerve paresis; *rare*: entropion, ophthalmoplegia. Hypersensitivity reactions have been reported. Prescribers should consult the Summary of Product Characteristics in relation to other side effects. **Overdose:** Respiratory support may be required where excessive doses cause paralysis of respiratory muscles. There is no specific antidote; antitoxin should not be expected to be beneficial and general supportive care is advised. 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Adverse events should be reported. Reporting forms and information can be found at www.yellowcard.gov.uk Adverse events should also be reported to the Ipsen Medical Information department on 01753 627777 or medical.information.uk@ipsen.com

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Dysport® is a highly purified preparation, with a well established history of product consistency, quality and proven efficacy.[2-13]

Dysport® can be an excellent choice for the treatment of:

- **Dynamic equinus foot deformity** due to spasticity in ambulant paediatric patients with cerebral palsy
- **Cervical dystonia, blepharospasm**, and **hemifacial spasm** in adults
- **Arm symptoms** associated with **focal spasticity** in adults, in conjunction with physiotherapy

The anti-spasticity effect of Dysport® can lead to significant improvements in arm function,[9*] reducing disability and carer burden for patients.[10]

Developed by experts, chosen by specialists

*As determined by meta-analysis of targeted indicators of arm function in Dysport® randomised controlled trials.

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IPSEN

Creating your solution

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CLOSTRIDIUM BOTULINUM TYPE A TOXIN-HAEMAGGLUTININ COMPLEX

VICE PRESIDENT MEDICAL SCIENCES NEUROLOGY REQUIRED FOR IPSEN

The role is based preferably in Paris or in London and possibly in Boston, within Ipsen's Discovery and Innovation (Research) Department and reporting to the Chief Scientific Officer.

He or she will provide medical strategic input in the field of neurology with emphasis on movement disorders to support the long term strategic planning activities of the Neurology Portfolio Management Team, the selection of Discovery and Innovation programmes and projects, and the technical evaluation of therapeutic compounds and product(s). He or she will also be the corporate expert in neurology by establishing and nurturing contacts with the key knowledge leaders in the field and organise and animate scientific advisory boards in the field of neurology.

Candidates will have a Medical Degree, post-graduate professional qualifications required in Neurology in addition to Medical certification (equivalent in UK of Membership of Royal College of Physician or Fellowship of Royal College of Surgeons and preferably board certified in the related medical speciality) plus 15 to 20 years of international experience in the relevant therapeutic area. Excellent understanding of the pharmaceutical value chain is required, acquired through international experience in pharmaceutical drug development with possibly one prior successful experience in the field of drug registration and approval at the European level and in the USA. In addition, ability to develop strategic vision is required with the ability to work in a matrix organisation and in cross-functional teams. The candidate will have demonstrated strong influencing skills and networking abilities, a pragmatic approach to the delivery of objectives, performance focus, clear communication skills, and excellent organisational skills.

Excellent verbal, written and interpersonal communication skills in English are required. An ability to read and speak French is not mandatory but would be a 'plus'.

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www.ipsen.com

South Korea

CERTIFICATE COURSE IN NEUROLOGICAL REHABILITATION

12-30 April, 2010

Seoul National University Bundang Hospital

Seongnam, South Korea

For further information, please contact Nam-Jong Paik

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Diary dates 2009

7-11 OCTOBER 2009
ACRM-ASNR Joint Educational Conference
Denver, USA
www.acrm.org

15-16 OCTOBER 2009
International Symposium on Neurorehabilitation. From Basics to Future
Valencia, Spain
www.fundacioncac.es/val/fundacion/actividades/programa.jsp?idActividad=86
10% discount on registration fee for all WFNR members

24-30 OCTOBER 2009
WCN 2009
Bangkok, Thailand
www.wcn2009bangkok.com

11 NOVEMBER 2009
Developments in Acquired Brain Injury UKABIF Annual Conference
London, UK
E: ukabif@btconnect.com
W: www.ukabif.org.uk

13-16 DECEMBER 2009
XVIII WFN World Congress on Parkinson's Disease and Other Related Movement Disorders
Florida, USA
www.kenes.com/parkinson

2010

5-7 MARCH 2010
International Congress of Neurology and Rehabilitation
Goa, India
www.icnr2010.org

10-14 MARCH 2010
8th World Congress of the International Brain Injury Association
Washington, DC, USA
www.internationalbrain.org

21-25 MARCH 2010
6th World Congress for Neurorehabilitation
Vienna, Austria
www.wcnr2010.org

12-30 APRIL 2010
Certificate Course in Neurological Rehabilitation
Seoul, Korea
E: njpaik@snu.ac.kr

23-25 APRIL 2010
International Congress of Neurology and Rehabilitation
Goa, India|
www.icnr2010.org

19-23 JUNE 2010
20th meeting of ENS
Berlin, Germany
www.ensinfo.org

29 SEPTEMBER – 2 OCTOBER 2010
8th Mediterranean Congress of Physical Medicine and Rehabilitation Medicine - Rehabilitation without Frontiers
Limassol, Cyprus
www.medcongress.prm10.org

13-16 OCTOBER 2010
7th World Stroke Congress
Seoul, Korea
www.kenes.com/stroke

2012

15-19 MAY 2012
7th World Congress for Neurorehabilitation
Melbourne, Australia