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JOURNAL OF THE ASSOCIATION OF PAEDIATRIC CHARTERED PHYSIOTHERAPISTS
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EDITORIAL

Oh no you say - haven't we had enough change lately, in fact it never seems to stop! As many of you will know the Editorial Board has been considering for some time the need to change the current format of your Journal. Many people photocopy articles and papers to support their own practice and continuing professional development. With the journal produced in an A5 page size it does not lend itself to easy and neat copying. Nor does it fit well into most standard size binders. Along with this on your shelves most journals are produced in a slightly larger format. Taking all of this into consideration from the March edition next year the Journal will be produced in an A4 size that will hopefully meet people's requests for easier storage and photocopying. The cover design will remain the same distinctive purple and white which we have all come to recognise as it drops through our letter boxes.

Some of the content order will be changed to try and make finding contact names and addresses a little quicker but everything will still be there in the way that it always has. A particular effort is going to be made to try an include a section which will keep everybody up to date on more of the non-clinical matters such as clinical governance and issues generated by central government. The letters pages will still be there early in the Journal and will remain as a forum for you all to exchange ideas and seek help and information from your colleagues. It would be really excellent to try and extend these pages to include some of your replies as these are often of interest to everyone and not just the therapist initially looking for support.

In changing the Journal format it also is a good time to introduce peer review for articles on a formal basis. The Editorial Board would like to extend their thanks to those of you who have offered to become peer reviewers. Peer review will obviously help to increase the already high standard of the articles and papers published and go some way towards supporting those of you who use them as part of your research. It will also help to extend the professional portfolios of all those who have work printed.

Please look out in this Journal for the revised pricing for advertisements in future issues and for the draft information that will be available for those of you who wish to make your own contributions in the future We all have to face change and always hope that it will be for the better. Please let us know how you feel about your new style journal .

However, in the time honoured fashion may I take this opportunity to wish you all a Happy Christmas and a prosperous and healthy New Year (without too many changes).

Sally Braithwaite

Copy for the

MARCH 2004 JOURNAL

must be with the editor by

1st FEBRUARY 2004

The editorial board reserve the right to edit all material submitted

LETTERS

Jenny Durnin
Children's Occupational Therapist
Helen Burchnall Children's Physiotherapist
Children's OT & PT Dept
Hinckley Health Centre
Hill Street,
Hinckley
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Dear Colleagues,

A continuous professional development group for children's occupational therapists, physiotherapists, speech and language therapists, and dieticians in eating and drinking has been set up within our service. Also participating are staff from local children's Family Centres and Medics. Unfortunately we have recently lost the services of a child psychologist with an interest in this field.

We review interesting cases, talk to each other about our roles in dysphagia management and look at current research articles. Our latest project is looking at setting up eating and drinking groups. The first stage of this is to gather information on evidence behind the effectiveness of such groups and a needs analysis. We have observed a similar group dealing with pre-school children for whom the main problems were sensory/psychological. The needs of the families and carers of the children were also addressed.

We would be interested to hear from professionals in this field particularly in improvement in the development of multi-disciplinary working. We would also be very interested to hear from people who have experience with feeding groups. Please contact us at the address below.

Yours faithfully

Jenny Durnin, Children's Occupational Therapist
Helen Burchnall, Children's Physiotherapist

Helen Turner
Community Paediatric Physiotherapy,
Rainbow House,
Ayrshire Central Hospital,
Irvine, KA12 8SS
Tel: 01294 323070

Dear Sally,

Recently we have received an increasing number of referrals to the paediatric physiotherapy service of children with problems of daytime wetting. Bladder training and pelvic floor exercises have been requested as treatment. I would be very grateful if any other services who work with children with these problems would be willing to share their expertise with me. If anyone has advice sheets, standard assessments or clinical guidelines, I would be very interested to read them. Thank you.

Helen Turner

LETTERS

Alison Macleod
Conference Organiser
steps

Dear Ms Braithwaite

I am writing to you from **steps,** the charity who deal with lower limb abnormalities. We are promoting our forthcoming 2nd Manchester International Clubfoot Conference taking place on Sunday 16th November 2003. The focus of this year's conference is the introduction of the Ponseti method for treating clubfoot. I understand that you are the editor of the APCP magazine, and wonder if you would be able to advertise our conference in your next issue?

For further information, please do not hesitate to contact me. My telephone number is 01204 459827.

Thank you for your assistance. We hope to see you at the Conference.

Yours sincerely
Alison Macleod

Deana Bellew
Senior Paediatric
Physiotherapist
Children's Physiotherapy
Service
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deana.bellew@thpct.nhs.uk

Dear Sally

I am a paediatric physiotherapist who has recently undertaken a small study looking at the effects of treating patellofemoral pain in children within a group session rather than individually. I would be interested to hear from APCP members if they are aware of evidence based guidelines or outcome measures for treating this condition in children. I have undertaken a literature search that is very "adult" based. I would also be interested to hear from anyone who has looked at the effect of treating within a group rather than individually.

Would it be possible to request this information through the APCP journal?

I look forward to hearing from you.

Yours sincerely
Deana Bellew

Anna Emslie
Senior Physiotherapist
Physiotherapy Department
Royal Hospital For Sick Children
5 Rillbank Terrace
Edinburgh
Tel: 0131 536 0336

Dear Editor

Management of Idiopathic Toe Walkers

As a paediatric physiotherapist working in the community in the Edinburgh area I am investigating the management of idiopathic toe walkers.

I plan to develop a guideline for physiotherapy intervention and would like to hear from anyone who has used or formulated guidelines for treating these children.

Yours sincerely
Anna Emslie

LETTERS

Clair Culligan MCSP
Senior Physiotherapist
Meadowside Special School
Pool Lane
Woodchurch
Birkenhead
Wirral

Dear Sally,

I recently attended a course on Paediatric Rheumatology which I found useful and informative. I am experienced in the treatment of children with JIA and have previously attended courses on this subject. I was surprised to find that this time there was a fundamental change in the physiotherapy treatment.

Previously it had always been advised that we moved the joints into the painful range when we were mobilising them. This was also to be carried out when there was acute inflammation in the joint. This was in order to increase range of movement and prevent deformity in the joints. The child and parents were advised that theywere to do this on a daily basis to maintain mobility. I was surprised therefore to hear that we were now advised not to move the affected joints into the painful range. The reason given was that it would cause muscle spasm restricting further movement, as well as non-compliance. It was also suggested that the parents could interpret our actions as child abuse.

I have always thought that one of our roles as physiotherapists is to persuade, motivate and encourage our patients to carry out exercises/activities that may cause discomfort or pain, in order to achieve a full recovery. Good communication often brings the key to full cooperation. Personally I have always found that movement into the painful range has maintained and where necessary, increased the movement in the joint.

I was a little troubled to discover this wide variation in practice amongst physiotherapists specialised in paediatric rheumatology. I would be keen to hear from anyone who has experience treating children with JIA as to their thoughts on these two quite different methods. My experience over the years has governed my practice but I would be interested in knowing of any research that could support either method.

Yours faithfully
Clair Culligan MCSP

Ali Taylor
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Website: www.backuptrust.org.uk

Dear Sally,

The Back-Up Trust

I understand that you're a National Officer of the APCP, and as such, I'm contacting you to let you know of The Back-Up Trust, and its work for young people with spinal cord injury.

The Back-Up Trust is a national charity, which aims to offer spinally injured people positive opportunities to help re-build confidence, independence, skills, and a return to a full and active life. We do this by organising a year round programme of integrated outdoor activity courses. Adult courses have been running since 1986, and due to popular demand, a programme of courses for spinally injured teenagers has begun in the last 3 years. This summer, I was employed full-time as Back-Up's Youth Project Co-ordinator, to expand the courses we offer, and therefore to create more opportunities for more young people.

We ran two multi-activity courses this summer, which gave teenagers the opportunity to try canoeing, kayaking, sailing, climbing, abseiling, and many more. Also included on the courses were wheelchair skills sessions, led by spinally injured trainers, covering skills such as backwheel balance, floor to chair transfers, going up and down stairs. On each course, there were 12 teenagers, aged between 14 and 17, 6 of whom were spinal cord injured, and 6 of whom were non-disabled. The ethos of Back-Up is to offer integrated courses, and for everyone to get stuck in together, and tackle the challenge of outdoor activities as a team. Supporting the young people were 6 adults, including a spinal nurse, carers, a physio or OT, and two experienced group leaders who had been on courses before. The courses were based at The Calvert Trust, an outdoor activities centre which is expert at providing adaptive instruction.

In summer 2004, we have 3 multi-activity courses planned for teenagers:

24-31 July	The Calvert Trust, Keswick, Lake District
7-14 Aug.	The Calvert Trust, Kielder, Northumberland
14-21 Aug.	The Calvert Trust, Keswick, Lake District

Although we have excellent relations with the UK spinal injuries units, it is clear that not many spinally injured young people pass through them, and I'm keen to be able to offer the opportunity of our courses as widely as possible. I'd therefore be very grateful if you could steer me in the direction of any contacts you know, who might be able to put me in touch with spinally injured young people. Likewise, we're always delighted to hear from therapists who would be keen to join a course. Finally, if you can think of any publications which it might be pertinent for me to write to, I'd be grateful for your advice. You are welcome to contact me by phone, email, or at the address above.

Thanks very much for your time, I look forward to hearing from you.

Ali Taylor

LETTERS

Copies of replies which I received to a letter published in the September 2003 Journal that might interest you all.

Adare Brady
Chair APCP
8 Ballyloughan Avenue
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N. Ireland
19.10.03

Dear Sally

Re: Sleep Systems and Lycra Splinting

As Chair of APCP, I would like to respond to a letter published in the September 2003 APCP Journal.

I have established links with Felicity McElderry, Professional Advisor of NAPOT (National Association of Paediatric Occupational Therapists) and together we (APCP and NAPOT) submitted some topics for consideration to NICE (National Institute for Clinical Effectiveness). These included evaluation of 24-hour postural management, including sleep systems, and use of specialist equipment for children with disabilities.

Ralph Hammond, Professional Advisor at the CSP, is a key link wih NICE and is always looking for willing volunteers to help with the guideline process. APCP has been working closely with Ralph and members are already actively involved on behalf of APCP and the CSP. If anyone has ideas they feel should be further explored with NICE they should be brought to the attention of the Regional Representative in the area so the National Committee can represent members' views.

It should be noted, however, that APCP can submit ideas to NICE but has no control over those selected for further development.

Yours sincerely
Adare Brady
Chair APCP

Wendy Gray
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Date: 25/09/2003

Dear Wendy

Re: Sleep Systems and Lycra Splinting

I was interested to read your letter in the September issue of the APCP journal regarding national guidelines on the use of sleep systems and Lycra splinting. You report that there are many differences in the provision in different areas and in local guidelines and criteria for provision. I agree that there appears to be nationally a great variation, both in the type of equipment supplied and also in the methods of funding this equipment.

Although guidelines are important in informing and influencing therapy interventions ultimately at an individual level the emphasis on equipment provision should be closely related to each child's postural requirements.

An assessment which provides a critical analysis of a child's posture and how this impacts in the short and long term on their ability to progress, functional abilities and risk of deformity is an essential pre-cursor to prescription and provision of interventions such as sleep systems, lying supports or lycra splinting. Prescription is also related to other interventions, age of the child and expectations of the intervention. Too often a thorough assessment is made but used as an outcome measure rather than a guide to provision. Once the assessment is made it is the therapist's responsibility to prescribe equipment using the detail of the assessment to achieve desired outcome e.g. neutral pelvic position, shoulder girdle protraction, improved motor or functional activity, maintenance of muscle length. Too often, I feel, the choice of equipment is viewed more as a "shopping expedition" for parents to choose an item of equipment rather than guided by the expert as to which best meets a child's needs. This negates our knowledge and expertise. Clearly children and parent's views and opinions are important but they should be informed. This clear link between assessment and provision facilitates a clear justification to funders on the clinical reasoning behind equipment provision. Re- assessment within equipment should establish whether objectives have been achieved.

These issues are far more important than looking at the different types of equipment and one should focus very closely on ensuring that the desired outcome is achieved by the position the child adopts within the equipment. The key to this is the use of reliable and valid assessment and outcome measures which are able to detect changes within the equipment need to be used.

In terms of sleep and lying supports there are issues of safety and a detailed history of a child's sleep patterns should be taken to ensure that a child's position does not comprise respiratory or digestive problems.

There is an urgent need for multi-professional guidelines on the overall management of children with cerebral palsy and individual guidelines on isolated topics often lose the complex nature and interaction of the many services and agencies involved with children and families.

Care pathways and local protocols are probably the current way forward and there a number of these being developed. These, however, should be embedded in a sound assessment process which should guide prescription and provision.

So in answer to your guidelines question I think that there is a need to develop guidelines in this area on the provision of postural management but as part of broader remit which would include treatment approaches, orthotics and positioning equipment as these cannot be isolated.

Yours sincerely

Terry Pountney PhD, MA, MCSP
Research Physiotherapist
cc Sally Braithwaite Editor APCP Journal

IMPROVING MOTOR SKILLS AND LEARNING SKILLS IN DYSPRAXIC CHILDREN BY IMPROVING POSTURAL BASE, STABILITY AND VISUAL-MOTOR CONTROL: A PILOT STUDY

By: **Kath Glendenning MCSP SRP** – Superintendent Physiotherapist, Community Children's Service (school based), NEWT
Anne Ryan DBO(D) – Senior Orthoptist, NEWT
Jenny Fonseca MSc BSc CHBiol MIBiol – Lecturer in Physiology Research Division, Faculty of Health Studies, University of Wales, Bangor

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Key words: Posture, Stability, Alignment, Visuo-motor, Muscle tone

SUMMARY

Introduction
Links have been suggested between postural stability and the development of organised motor skills and behaviours necessary for learning. This study assesses the effects of improving the postural base, stability and visual-motor control on the motor behaviours and learning abilities of dyspraxic children.

Method
Nineteen dyspraxic children with identified learning difficulties and attending Special Needs Infant and Junior units were assessed for motor impairment and oculo-motor control. They received therapy comprised of neuropostural, proprioceptive and vestibular elements twice each week for 10 weeks. This was followed by 12 weeks of twice-weekly visual-motor control exercises and a programme of neuropostural exercises to carry out at home. The children were re-assessed at the end of the programme, approximately six months later.

Results
Improvements substantially greater than those expected during a six-month period without intervention were found in all key elements. Wilcoxon matched-pairs signed-rank exact tests showed significant improvements in scores for visual-motor control ($p = 0.000$), mental age ($p = 0.000$), manual dexterity ($p = 0.013$), ball skills ($p = 0.066$) and static and dynamic balance ($p = 0.001$). The TMIS score, a combination of the last three, showed highly significant improvement ($p = 0.000$). Improvements in the Junior group were accompanied by progress in reading and writing skills well beyond the expectations of their Special Needs Teacher. In the Infant group, there were overall improvements in focus and language, as well as significant motor improvement.

Conclusion
The results achieved support the view that an efficient, stable postural base and improved oculo-motor control will have a positive effect on the dyspraxic child's ability to learn.

INTRODUCTION
Children with dyspraxia struggle to cope in school because of their poor motor skills and consequently impoverished learning strategies which result in a downward spiral of low achievement and low self-esteem (Henderson et al., 1989; Williams et al., 1999). A study by Shoemaker and Kalverboer (1994) also suggests that children with movement problems are more introverted, anxious and judge themselves to be less competent physically and socially.

IMPROVING MOTOR SKILLS AND LEARNING SKILLS IN DYSPRAXIC CHILDREN BY IMPROVING POSTURAL BASE, STABILITY AND VISUAL-MOTOR CONTROL: A PILOT STUDY

Despite the difficulties surrounding diagnosis there is a growing awareness of a link between motor skills and learning difficulties. The literature contains increasing numbers of studies linking dyspraxia with other conditions and developmental disorders. In a study of 164 school children, Dueul and Doar (1992) found a positive correlation between motor performance and IQ determined on the Weschler Intelligence Scale for Children. Other studies link impaired visual perceptions and phonological information processing and DCD (Fletcher-Flinn et al., 1997) and indicate that these problems are differentially related to difficulties with reading and spelling. Further, Maeland (1992) has demonstrated that handwriting is significantly related to visual-motor integration and visual form perception in "clumsy" children, and Parush et al., (1998) suggests an impaired relationship between visual perception and visual-motor integration. Taylor (1999) has gone on to demonstrate a relationship between visual-motor integration skills and academic performance in a study of 191 infant and junior age children. A range of "concomitant conditions" prevalent among dyspraxic children including dyslexia, specific language disorders, attention deficit, hyperactivity disorders, high functioning autism and Asperger's Syndrome is provided by Chu (1998a).

Magrun (1996) has developed these views further by suggesting that "the difficulties in movement and posture directly cause or contribute to the learning problems which are diverse and global". He also suggests that if the normal postural base is impaired, the efficient motor skills and organised behaviours essential to learning cannot be achieved. These views form the basis of this study.

Treatment approaches to dyspraxia are as diverse as the condition itself. Chu (1998b) compiled a comprehensive list of therapy approaches ranging from remedial to functional and maintenance. There is very little research relating to any of these approaches that can inform the practitioner. Some recent papers on therapy interventions have been reviewed, all of which considered conventional therapy approaches. An OT study (Polatajko et al., 1997) concluded there was no convincing evidence of benefit from a process-oriented approach. Physiotherapy studies (Lee & Smith, 1998; Williams et al., 1999) conveyed positive outcomes to intervention but the evidence provided is inconclusive. A multi-professional approach comprising three elements, rebound, proprioceptive stimulation and aquacise over a 3-term period (Addy, 1996) demonstrated improvement in raw scores, but no statistical analysis was carried out on the results.

The present study sought to evaluate the benefits of treatment that combines neuropostural and visual-motor elements (Magrun, 1996; Bobath, 1964, 1984) combined with some vestibular and proprioceptive elements based on the work of Lefroy (1990), Ayres (1994).

AIM

The aim of this study was to assess whether any measurable improvements in learning could be achieved by addressing the perceived core elements of dyspraxia, namely postural control, muscle tone, stability and visual-motor control. This was done by evaluating the benefits of treatment combining neuropostural and visual-motor elements (Magrun 1996; Bobath 1964, 1984) with some vestibular and proprioceptive components from the work of Lefroy (1990) and Ayres (1994).

METHOD

The children, aged 6 to 11, attended one of two special units for children with mild to moderate learning difficulties. The study began with 20 children, but one left the area shortly afterwards. Eight of the remaining children (5 boys and 3 girls) were in the infant age group and eleven (9 boys and 2 girls) were in the junior age group. Only three had been referred for physiotherapy but none had received any intervention.

Tests and Measurement

As most of the children targeted for the study had not previously been identified for referral, it was essential to determine whether they exhibited a range of motor difficulties that would normally justify a diagnosis of dyspraxia. Because there is no agreed definition of dyspraxia, the following key characteristics which represent a neuropostural and visual-motor approach were identified and used to select the children for the study:

- Generalised low muscle tone with areas of compensatory high tone;
- Reduced postural control and stability;
- Poor postural alignment and impaired visual-motor control;
- Absence of any neuropathological condition;
- Total motor impairment scores equivalent to ratings at or below the 15th percentile (Henderson & Sugden, 1982).

Pre- and post-treatment tests were conducted to assess function. These elements were not practised in the intervention programmes. The Movement Assessment Battery for Children (MABC), a recognised and validated motor impairment test (Barnett & Henderson, 1998) was chosen as the base test. It provides scores for manual dexterity, ball skills and static and dynamic balance, and the combined scores produce a Total Motor Impairment Score (TMIS). The maximum test score of 40 represents poor performance, while 0 represents optimal performance. Raw scores can be converted into percentile ratings, and intervention is recommended for children achieving ratings between 1 and 15% (Henderson & Sugden, 1982). The test also facilitates observation of 'quality' elements such as sequencing, sitting posture and muscle tone.

The children achieved raw test scores between 10 and 39. When these were converted to percentiles, 12 children were below the 1st percentile, a further 6 between the 1st and 11th percentiles, and one child was on the 15th percentile. All the children were within the range identified for intervention. Interestingly, all the children from the Junior Special Needs group and all except one from the Infant group met the working criteria for dyspraxia.

Although posture, tone and visual-motor problems were in evidence throughout the MABC test, further assessments were carried out for confirmation and to assess progress.

- A visual-motor function test (Kephart, 1960) assessed the child's ability to visually fix and track objects in different planes and across the mid-line. It also tested dissociation of eye movements from head movements. Results indicated varying degrees of difficulty in all the children (tables 1 and 3).

- Smooth pursuit, convergence, stereopsis (3-D), depth perception, nystagmus and visual acuity assessments, and prevalence of squints. There were a wide variety of problems in the group, only 3 had perfect 3-D vision and 4 had squints (table 3).

- Photographic records of posture showing typical postural abnormalities at the neck, shoulder, scapular, lumbar, knee and foot (figures 1 and 2). For the photograph children wore only shorts and stood by markers on the floor. The camera was placed at waist height, six feet from the child.

Finally, in order to test the hypothesis that learning can be improved by improving postural and visual-motor control, the following learning attainment tests were included.

- Intellectual maturity (Draw a Man Test, Goodenough & Harris, 1963). This test provides a good indication of the child's conceptual development or intellectual maturity (Harris 1991) because the child draws what he or she knows, not what he or she sees. An example is shown in figure 3. The results are converted to a mental age score.
- Reading tests from class teachers. The Infant group had not achieved a reading age at the time the baseline assessments were made. The Junior group was given sight vocabulary tests. Changes in test results are shown for the 12-month period before intervention and the 8-month period encompassing intervention (table 2).
  Improvements prior to intervention were generally poor.
- Writing samples were taken from all the children. These showed problems with letter formation, spacing, positioning and line crossing (figures 4 and 5). Writing abilities were generally poor.

Agreement and written informed consent was obtained from the parents of all the children prior to commencement. Agreement was also obtained from the Community Paediatricians and Class Teachers.

The MABC tests, posture photography, visual-motor tests and additional motor impairment tests were conducted by the Physiotherapy/Assistant team who also carried out the intervention programme. Tests were video-recorded to allow for review and ensure consistency of scoring. Smooth pursuit, convergence, stereopsis, depth perception, nystagmus, visual acuity and squint assessments were carried out by the senior Orthoptist. All assessments took place in the room used for treatment, except the reading, writing and conceptual maturity tests, which were applied by the class teachers in the children's classrooms. The conceptual maturity test was scored by a teacher who was experienced in applying the test but who was not otherwise involved in the study and did not know any of the children involved or the nature of the study.

Intervention Programme

The aims of the intervention were to improve:
- postural alignment, control and stability, and associated muscle tone,
- weight shift,
- visual-motor function

It was postulated that improvements in these areas would of itself lead to improvement in co-ordination, body awareness and the skills being assessed. No specific programmes were ascribed to particular elements or problems.

Intervention was scheduled in 2 stages, an initial stage directed towards improving the postural base, muscle tone and stability in preparation for the final stage of improving visual-motor control.

Stage 1

The children undertook a programme of postural stability-oriented activities adopted from the work of Magrun (1996) and Bobath (1964, 1984). This also incorporated some musculo-skeletal elements directed towards increasing muscle strength in the strategic muscle groups required for limb girdle stability. Neurodevelopmental and/or neuropostural techniques were used to:
- inhibit areas of compensatory high tone,
- produce more normal postures,

- produce more normal movement within those postures,
- improve limb girdle mobility and control,
- improve weight shift.

The children carried out these activities once a week.

The programme was supplemented by two trampoline sessions each week, one on the same day as the exercise programme and the other as a separate session. Trampoline activities (Ayres, 1994; Lefroy, 1990) were used to:

- assist with stability activities,
- provide proprioceptive reinforcement to improve postural alignment,
- recruit vestibular responses to increase muscle tone.

The programme lasted for 10 weeks. The children attended at the same time each week in groups of 3 or 4 in their respective age groups, and received treatment from the same Physiotherapy team. The postural activity session and one trampoline session took place in school time. The second trampoline session took place outside of school hours. Very few children achieved 100% attendance.

Stage 2

At the completion of Stage 1 the children began a programme of visual-motor activities. Initial assessments indicated that although the children could achieve the central vision necessary for learning, the effort required to sustain it for activities such as reading was excessive because of poor muscle tone.

It was thus felt that efforts to improve central vision would be more beneficial if introduced when some postural/stability improvements had been achieved. Visual-motor activities were implemented as a secondary input on a twice-weekly basis. These exercises were carried out in the child's own school by members of the Physiotherapy team for a period of 12 weeks at the same time each week. The visual-motor programme was devised by the Senior Orthoptist and the Superintendent Physiotherapist.

The intervention programmes were carried out by one Technical Instructor and two Physiotherapy Assistants under the direction of the first author. Trampoline sessions were led by the Technical Instructor who is a qualified Special Needs Coach.

Wilcoxon matched-pairs signed-ranks exact tests were carried out for each set of pre- and post-intervention scores. Mean pre-and post-test scores were included to provide a sense of the level of improvement.

RESULTS

All children improved significantly in posture. Typical changes are shown in figures 1 and 2. Significant changes were also seen in writing skills (figures 4 and 5). The changes in scores for motor skills, vision fixation and learning maturity tests with intervention are shown in table 1. A significant difference was found in all areas except ball skills which was just outside the significance range. The majority of sub-section improvements were highly significant ($p<0.01$). Individual scores are shown in Appendix 1. A typical example of the change in conceptual maturity seen in the Draw a Man tests is shown in figure 3. Table 2 shows the results of sight vocabulary tests during the periods before intervention and encompassing intervention for the Junior group. Improvement was greater in the 8-month period encompassing intervention than in the 12-

month period prior to intervention. There is no comparator for the Infant group because they had no pre-intervention scores. However, the Infant Special Needs Teacher reported overall improvements in motor function, focus and language. In both groups, socialisation was also improved.

Figure 1. September 1998 – Before

March 1999 – After

Figure 2. September 1998 – Before

March 1999 – After

Figure 3. September 1998 – Before

March 1999 – After

Figure 4. September 1998 – Before

Friday 18th Septemberl
go to Tallesin
school I work in
class 6

March 1999 – After

Tuesday 9th March

We have enjoyed going to trampoling. We can do lots of shapes. On Mondays we went in a mini bus from school. Miranda and Tess have worked very hard with us.

Figure 5. September 1998 – Before

Friday 18th septembe
190 to Tallesin
School I work in
class 6

March 1999 – After

Tuesday 9th March

We have enjoyed going trampolining. We can do lots of Shapes On Mondays We Went in a mini bus from School Miranda ved hard With us

Table 1. Motor Skills, Vision Fixation and Learning Maturity Test Results

Skills	Tests	No. of subjects	Mean Pre-test score	Mean Post-test score	Significance level *
Motor	Manual Dexterity	19	9.71	7.29	0.013
	Ball Skills	19	6.45	4.74	0.066
	Balance	19	7.68	3.55	0.001
	T.M.I.S.	19	23.27	16.87	0.000
Vision and Fixation	Right Horizontal	19	4.37	7.63	0.000
	Left Horizontal	19	3.37	7.47	0.000
	Up Vertical	19	3.11	7.32	0.000
	Down Vertical	19	3.53	6.95	0.002
	Stereopsis	15	158.67	90.67	0.002
Intellectual Maturity * *	Draw-A-Man	19	1.42yr	.25yr	0.002

* Wilcoxon matched-pairs signed-ranks exact tests, one-tailed.
** Expressed as the mean difference between chronological and mental age.

The Wilcoxon matched-pairs signed-rank exact test for the change in score from September/October 97 to June 98 is significant (p=0.001).

Table 2. Sight Vocabulary Test Results

Child	Changes in test results in the periods before and after intervention					
	Sept 97 Score	Sept/Oct 98 Score	12 month Increase		June 99 Score	8-month Increase
				I		
1	10/100	25/100	15%	N	71/100	46%
2	5/100	10/100	5%	T	40/100	30%
3	*	10/100	~	E	37/100	27%
4	*	3/100	~	R	20/100	17%
5	*	60/100	~	V	90/100	30%
6	25/100	30/100	5%	E	57/100	27%
7	30/100	70/100	40%	N	100/100	30%**
8	3/100	10/100	7%	T	34/100	24%
9	2/100	3/100	1%	I	14/100	11%
10	40/100	60/100	20%	O	90/100	30%
11	***			N		

(*) No data is available
(**) This child achieved the target
(***) This child always had exceptional recall.

Table 3. Results Of The Orthoptic Tests

19 children completed the programme:

- 4 had manifest squints
- 15 had no manifest squints

Of the 15 children without squints:

- 12 improved their 3D vision
- 3 had perfect 3D vision before treatment
- 2 improved their convergence
- 13 had good convergence before treatment

Overall, of the 19 children:

- 12 improved their eye movements
- 16 improved their handwriting
- 2 had glasses prescribed for the first time

DISCUSSION

The results demonstrate significant or highly significant improvements in each area tested. Knock-on effects were also seen in socialisation, especially with regard to confidence and self-esteem. These improvements far exceeded the expectations of the Special Needs Teachers and the Physiotherapy and Orthoptic team. These results support the hypothesis that learning can be improved once postural stability and visuo-motor control have been improved. The improvements in MABC subgroup scores, which were significant or highly significant in two subgroups and almost significant for the third, indicate a broader based improvement than has been shown in previous studies (Williams et al, 1999, Shoemaker et al 1996).

The outcome measures described by Lee & Smith (1988) were also used in the pre- and post-intervention assessment processes. However, the results are not reported here because the Physiotherapy team found the tests too subjective to be reliable. They also found when reviewing the video recordings that scoring had been much stricter at post intervention testing. This emphasises the need, generally, for reliability both in the definition of the assessment measures and in the assessment process.

Although overall improvements were seen across the age ranges, the degree of improvement and the areas of improvement were different for the two groups. The Infant group achieved greater improvement in static and dynamic balance whereas the Junior group achieved greater improvement in visual-motor skills and conceptual maturity tests. The results were similar for the two groups for ball skills, manual dexterity and posture.

One possible reason for the differences in improvement is that the older children were at an age where they could take advantage of the improvements achieved for example in their readiness to make the transition from peripheral to focused vision. This is an area which clearly requires future study.

Other aspects that require further study are the visual-motor skills. Although the study achieved an improvement in the child's ability to fix on objects in all places and sustain it for periods of up to 20 seconds, the consequential improvement expected in visual pursuit was not achieved. Further consideration is being given to amending the visual-motor element of the intervention.

Clearly, there are limits to this study. The sample size was fairly small, which precluded sub-dividing the subjects to create a control group. Even though prior changes in sight vocabulary tests are available for comparison, the general absence of a control group, as in previous studies relating to this condition, does raise questions regarding the influence of maturation upon the results. In this instance the children were all placed in special units where the teachers' expectations of their learning abilities were low, based on performance to date. They were thus regarded as acting as their own control. It is recognised that a control group would further enhance the validity of the study.

Although there is a growing awareness of links between dyslexia and dyspraxia and of the high incidence of language disorders among dyspraxic children, typically semantic and/or pragmatic, and attention deficits (Gillberg, 1998, McCabe et al., 1998), these were beyond the scope of this study.

Initial assessments support the view that children within this diagnostic grouping are under-referred. Only three of the original twenty children had been referred for physiotherapy prior to the study, but all had scores that placed them in the intervention range identified by the authors of the standardised assessment (MABC). Furthermore, all the children in the Junior Special Needs Unit and all except one in the Infant Unit met the working criteria for dyspraxia. If these children are to avoid falling through the net in future, it is essential that adequate screening tools are identified and applied at an appropriate time.

The timing of assessment and intervention is always the subject of debate within paediatrics. There is generally a belief that the younger a child is treated the greater will be the benefit. This study does not support that belief, but rather, suggests optimum ages for specific interventions. Further work is therefore needed to determine the optimum age for intervention that will not only influence the aspects considered in this study but other associated difficulties for which DCD may be a precursor (Schoemaker & Kalverboer, 1994; Magrun, 1996).

Having identified these children it is also essential that Health Authorities and Special Education Services consider and develop facilities, resources and support structures to address their needs and facilitate the necessary therapy intervention which is not always achievable within a mainstream setting. This is clearly the subject of another debate.

CONCLUSION

The outcome of the intervention described in this study supports the hypothesis that learning ability is improved once postural stability and visual-motor control have been improved. The results of this study support the views of Deuel & Doar (1992) that there is a correlation between motor performance and IQ levels, and of Magrun (1996) that the postural base is a key factor in the development of efficient motor skills and organised behaviours necessary for learning. Further work is required in relation to pursuit and dissociation of eye movement from head movement to enhance the improvement in visual-motor skills seen in this study. A larger scale controlled trial is also needed to improve the validity of the findings.

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APPENDIX 1

Materials used:

1. Henderson & Sugden 1982
   Movement Assessment Battery for Children (M.A.B.C.)
   Harcourt Brace, London

2. Goodenough-Harris 1963
   Draw-A-Man Test
   Harcourt Brace, London

3. Digital Camera
   Kodak DC210 (1997)

4. Printing & Editing of Photography:-
   Kodak Picture Easy Software 2.0 (1997)

5. Kephart N.C. (1960)
   Test of Visual-Motor Function
   The Slow Learner in the Classroom
   Merrill, Columbus, Ohio

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ISSUES AROUND SPORTS PARTICIPATION IN DISABLED CHILDREN AND INJURY PREVENTION IN THE YOUNG WHEELCHAIR ATHLETE

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Aim

The first aim of this article is to provide a general introduction and overview of all considerations with regards to disabled sports participation. The second aim is to provide a general introduction to issues around injury prevention in the paediatric wheelchair athlete.

Sport in Context:

The benefits of sport in society are well documented. The physiological aspects are well known, but the importance of the psychological benefits to the development of both an individual and society as a whole, are often overlooked. Sport has the capability of enhancing a person's confidence, their self-esteem and has been shown to improve one's self-image. It can provide a platform for group identity and self-belief. It can help develop social skills and interaction on many different levels. This can be between peers, coaches, referees and supporters both on and off the sporting arena. It encourages qualities such as self-discipline, self-reliance, responsibility, loyalty, honesty and focus. The characteristics and positive benefits of exercise are such that it is accepted in the medical world and recommended to aid the treatment in conditions such as Chronic Fatigue Syndrome (White, Naish 2001, Fulcher, White 1998, Deale et al 1998).

The sports field offers the opportunity for people to compete on level ground exempt from social barriers that exist in everyday life. This provides a stage for people to exceed all expectations. A prime example of this is the footballer Ronaldo, who was born in a shantytown area of Bento Ribeiro in Brazil, one of the best known and most skilful players of his generation.

One would assume that the benefits are just as great, regardless of physical function or disability, however, there is very little evidence of this. One small study did conclude that male and female wheelchair athletes possess 'superior mental and emotional health, compared to the general population' (Horvat et al 1986). Furthermore they were comparable psychologically to male and female able-bodied athletes, which would confirm the generalisation of the psychological benefits.

Sport within the National Curriculum

The National Curriculum is a document that has been published jointly by the Department for Education and Employment and the Qualifications and Curriculum Authority. It (the National Curriculum) *'... lies at the heart of our policies to raise standards. It sets out a clear, full and statutory entitlement to learning for all pupils'* (NC Online version Key Stages 1-4 1999). Furthermore *'The Government believes that two hours of physical activity a week, including the National Curriculum for physical education and extra-curricular activities, should be an aspiration for all schools'* (NC Online version Key Stages 1-4 1999).

Sports Participation in Children with a Disability

The most comprehensive study looking into sports participation in children with a disability was called 'Disability survey 2000 – Young People with a Disability and Sport' and was commissioned by 'Sport England'. It looked at a sample population of 2,293, 6-16 year-old children with a disability and their sporting habits. Disability was measured using the Health Utilities Index (HUI), a scale that has been tried, tested and validated in the USA and Canada (Sport England 2000).

Sport in School

The results showed that children and young people with a disability have a lower rate of sports participation and frequency than for young people in general. Indeed 5% of disabled young people did not take part in any sport, either in or out of school, in the year previous to the study. In young people who have participated in sport, the numbers of sports were significantly lower than for the general population. Furthermore as the number of disabilities increases, i.e. the individual's needs becomes more complex, the sports participation decreases.

Of particular concern are primary school children (key stages 1-2), 53% of whom are spending less than an hour per week in P.E. lessons at school. Sport England feel that this is very significant, arguing that '*... Playing a range of sport is the most crucial in the youngest age groups in order that appropriate skills and a positive attitude to sport are developed as early as possible. However, in school lessons the younger age groups had the least opportunity for undertaking sport ...*'

Extra curricular sport

The numbers participating in extra curricular organised sport is much lower in children and young people with a disability, only 14% of disabled young people in comparison with 45% of the general population. It can be said that in this sample population they were falling well below the two hours per week suggested by the government in the national curriculum as an aspiration for schools.

Out of school sport

This figure is very similar to extra curricular sports participation. The most popular setting to take part in sport (13%), was 'another miscellaneous club' excluding youth club, guides, scouts and church. Of this 13% in 'another miscellaneous club' only 15% were in a club specifically for the disabled and only a further 9% in an organised after school club or play scheme. This suggests that the remaining 76% are participating in sport in a less organised environment,which when looked at in conjunction with 'high risk groups' does have its own implications.

Types of Sport Participated In

The top five sports undertaken frequently (at least 10 times) in school were:

- Swimming, diving or lifesaving (37%)
- Other game skills (24%)
- Gym (24%)
- Football (14%)
- Athletics (11%)

The top five sports undertaken frequently (at least 10 times) out of school were;

- Swimming (35%)
- Football (18%)
- Cycling (16%)
- Other games skills (12%)
- Walking (12%)

Barriers to Participation

Sport England argue that the way we view disability will affect the solutions that are developed to overcome any barriers that exist. It is argued that we can look at disability from a medical perspective and try to treat the impairment, or we can look at it from a social perspective and focus on 'environmental and social factors to improve access, availability and suitability of facilities' (Sport England 2000).

Individual disability and health was high on the list (43%) as the main reason for not participating in sports. A large number of children (37%) also cited that lack of money and unsuitable facilities were also barriers to sport participation. Such a large proportion of people stating that money is a barrier would suggest that both travelling and the cost of participation is, for these families, too high. This statement also brings in another important issue: dependence on others. 21% state that lack of other people's time was a reason that prevented them from participating in sport. A further 32% of children stated that the local clubs do not provide for people with their disability. This suggests that there are large gaps in sports provision for this client group. The problems do not stop there. There is a large group of children (21%) who feel that staff of health centres and sports clubs are unwelcoming. This further prevents them from regularly going to the health centres and sports clubs and hence from undertaking sport. However, 75% of young people with a disability said that they enjoyed PE in school, this is in comparison to 90% of the general population. This would suggest that when all other factors are controlled there is the enthusiasm for sport amongst this client group.

Wheelchair sports

A reason for this difference in opportunity may well be influenced by the fact that it is only recently that participation in wheelchair sports has increased. 'Organised sports competition for male and female wheelchair individuals is in its embryonic stages of development when compared to sports for the able-bodied' (Horvat et al 1986). Indeed the first known ancient Olympic games began in 776 BC, whereas the first games to involve wheelchair athletes began in 1948 at Stoke Mandeville, initially attracting only 16 competitors. In the last 55 years there has been a rapid growth in sports participation both in numbers involved and types of sport.

Some authors believe that this growth in participation hasn't been accompanied by a growth in specialist training or coaching expertise for these athletes. This would lead us onto the inevitable subject of injuries. It has been estimated that at least 72% have experienced an injury since commencing wheelchair sports. (Curtis, Dillon 1985).

High Risk Sports

It is accepted that there are certain sports that pose a higher risk of injury than do others. Curtis and Dillon (1985) identified that road racing, basketball and track events are the highest risk sports for injuries in wheelchair athletes. These sports alone accounted for 72% of all injuries in their study. Ferrara and Davis (1990) had

similar results with track and field accounting for 60% of all injuries and swimming accounting for another 20% of all injuries. Both of these studies were looking at adult populations. There is very little research into paediatric wheelchair athlete's injury patterns, however, Wilson and Washington (1993) did look at precisely this. They found very similar results with 97% of track athletes, 91% of the swimmers and 22% of the field athletes reporting injuries. All of the high-risk sports involve continuous skills characterised by repetitive use of the upper limbs both in training and competition.

High Risk Groups

There is no specific evidence available for high risk groups in wheelchairs, however, there is also no reliable evidence to suggest we can't draw some conclusions from general research in this area. The following section (High Risk Groups) therefore only includes studies in the general paediatric population.

It has been shown that male children are more commonly injured than their female peers (Damore et al 2003, Michaud et al 2001, Tursaz 1986). It is suggested that this is probably due to greater risk taking and more frequent participation in sports in male children (Michaud 2001). This difference becomes more pronounced for injuries occuring outside school (Tursz, Crost 1986), thus suggesting that there is a higher injury rate in less organised situations.

Athletes aged between the ages of 20-24 have the highest injury risk, probably due to the intensity of the competition (Kujala et al 1995). Another study of 6,799 Irish school children found that males over 14 were 3.5 times as likely to be injured as the younger boys. The opposite was found in the females with the incidence of injury decreasing after the age of 15 (Watson 1984). The risk of injury also increased as the physical standing of an athlete increased. In outstanding male athletes over the age of 15 the injury risk was as high as 1 in 6 (Watson 1984). Chronological age is a very simple but crude means of classification. Michaud et al (2001) tested 3,609 in-school adolescents and concluded that the risk of injury appeared to be more closely linked to pubertal stage rather than to chronological age.

Areas Susceptible to Injuries

It has been estimated that 60-100% of long term wheelchair users experience shoulder pain (Nichols et al 79) regardless of sports participation. The upper extremity is the most commonly injured area in both adult elite athletes and paediatric athletes. It accounts for 58% of total injuries, followed by the lower extremity, 22% and neck/spine 18% (Ferrara, Davis 1990). It is generally accepted that the shoulder is at very high risk of being injured and in several studies has been shown to be the most susceptible to injury (Nyland et al 2000, Curtis, Dillon 1995, Wilson et al 1993, Ferrara, Davis 1990, Burnham 1988). The wrist is the second most common area injured (Wilson, Washington 1993, Ferrara, Davis 1990) followed by the fingers, hand, elbow, upper arm and lower arm (Ferrara, Davis 1990). These studies have taken a large cross section of a variety of sports to calculate these results. However, different sports place different demands on an athlere and consequently the injury patterns will reflect that. A study on the British wheelchair racing population revealed that the most common site of injury among these athletes was the hand and wrist rather than the shoulder (Taylor, William 1995).

Types of Injuries

The most common types of injury in wheelchair athletes are soft tissue, including sprains, strains, muscle

pulls, tendonitis and bursitis (Nyland et al 2000, Ferrara, Davis 1990, Curtis Dillon 1985) and blisters (Wilson, Washington 1993). Other injuries include lacerations, abrasions and cuts 17-38% (Wilson, Washington 1993, Ferrara, David 1990, Curtis, Dillon 1985) fractures 5-6% (Wilson, Washington 1993, Ferrara, Davis 1990, Curtis, Dillon 1985) and dental injuries 1% (Curtis, Dillon 1985).

Mechanism of Injury

Ferrara and Davis (1990) identified that the most common mechanism of injury (49%) was a direct impact with the floor, another chair or another object. A further 35% were thought to be due to overuse or repetitive stress.

Injury Prevention

The main problem with any 'generalised' research in this area is just that, it is generalised. The whole concept of disability is very complex and individual with many influencing factors. Thus it is vital to take into account each individual's specific disabilities and specific sport when looking at an optimal approach to sports injury prevention. Education of competitors, coaching staff, parents, teachers, learning support staff and alerting all medical personnel to the 'unique problems encountered by junior wheelchair athletes of varying disability and age' (Wilson, Washington 1993) is vital to any injury prevention programme.

A small adaptation to a wheelchair or wheelchair prescription may have a drastic effect on the upper limb biomechanics and thus increase the injury risk. Ferrara and Davis (1990) cited cases where athletes specifically mentioned the fact that altering the seating position or learning a new propulsion technique precipitated an injury. However, on a recent review of the literature Stankovits (2000) concluded that 'current research does not provide conclusive information on optimal seating' in wheelchair athletes.

The use of protective equipment such as gloves and padding over susceptible areas is also of benefit. Small adaptations to the environment may make a big difference to injury rates. An example of this can be seen with swimming where there is a very high incidence of skin abrasions occuring at the side of the pool. (Wilson, Washington 1993). The use of poolside mats and foot protectors may cut this number down immediately.

Several studies (Blair et al 1987, Ekstrand et al 1983, Ekstrand, Gillquist 1982) have shown that training variables do influence injury rates in wheelchair athletes. Indeed wheelchair propulsion relies heavily on extensor muscle use, which in turn can lead to muscle imbalance, altered biomechanics and decreased flexibility (Wilson, Washington 1993). This need to be accounted for in any training program.

An alarming amount of paediatric athletes (48%) train only before regional competition; this can lead to poorly conditioned muscle and inflexible joints which are prone to overuse syndromes (Wilson, Washington 1993).

Conclusion

It is felt that as physiotherapists we are in a prime position to facilitate, encourage and assist paediatric wheelchair users to take part in sport. This needs to be facilitated on a number of levels from assisting in sports selection and availability for the child, to linking in with schools and health/sports centres for education, training and support. It is often said that each child is unique; this doubly so for the disabled child and needs to be accommodated for. The 'one-size-fits-all' approach needs to be dismissed and a personal problem solving

approach adopted. We need to be proactive in risk assessment for the individual, the environment and for the sport itself, as these will all play an equally important role in minimising the injury risk.

Wheelchair sports participation has grown rapidly over the last 55 years; unfortunately this has not been accompanied by a growth in research with the majority of the studies being completed in the mid 1980s. It is suggested that this may be partly due to the fact that each individual is so unique that this immediately introduces many extraneous variables that are difficult to control when looking towards a reliable and validated randomised controlled trial. However, conversely to this, it is suggested that single case studies can have an important role in this client group, helping to educate and inform others of how unique requirements have been dealt with so that we can learn and adapt situations from fellow professionals. Either way there is a desperate need for further research in this ever-growing client group so that we can provide optimum advice and care.

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THE USE OF ANKLE FOOT ORTHOSES IN THE MANAGEMENT OF CHILDREN WITH CEREBRAL PALSY.

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ABSTRACT

There is little information available to Therapy staff involved in the treatment of children diagnosed with Cerebral Palsy about the design features of Orthoses used for these children.

This article attempts to give information on some of the clinical features and strategies that I use when prescribing and fitting Ankle Foot Orthoses.

INTRODUCTION

The use of Orthoses in the treatment of children diagnosed as having Cerebral Palsy is well established. This has evolved from the situation over thirty years ago when bracing these children usually involved the philosophy of forcing the body segments into position using usually over-engineered metal and leather devices that tried to maintain correction by brute force. This of course was unsatisfactory and real progress was not seen until the advent of thermoplastics and an understanding of the clinical aspects of the condition were appreciated.

For the last twenty or so years the use of the Ankle Foot Orthosis [AFO] has been the mainstay of Orthotic management of these children.

I would say that there is very little scientific evidence of the efficacy of this form of treatment (in common with most other therapy treatments) and I will not dwell on the many reasons and difficulties for this lack of evidence in this paper.

There is however an acceptance that the use of Orthoses with these children has real benefits and a Consensus Conference held by the International Society for Prosthetics and Orthotics (1) stated that Orthoses would provide assistance in the following:

- Pre-standing phase
- Standing Phase
- Walking
- Prevention / correction of deformity.

TREATMENT

The treatment options for these children continues to grow and now can range from soft Lycra Orthoses through to chemical treatments (Botox).

It is important to recognise that Orthotic treatment has limitations and an incorrectly prescribed Orthosis can be at best unhelpful or at worse damaging.

With this in mind I will attempt to discuss some of the treatment methods I use in my clinical practice.

EARLY TREATMENT

We are in the fortunate position where our Therapists who see these children at an early stage will usually refer them to us in the pre-walking stage or just as they start to weight-bear. What we are looking at in particular is the relationship of the calcaneus to the shank of the leg. Given that the hind foot of a new- born is pronated by

Fig. 1

Fig. 2

approximately 8 degrees some of these children with delayed development will retain this "immature" foot well past the normal milestones. (Figs. 1 & 2) With an increased body mass of say an 18-24 month old child on weight bearing, the subtalar joint will be driven further into pronation and starts the process of bringing the midfoot arch down and opening the medial midfoot joints allowing the navicular to be displaced and so produce the valgus foot and hallux that so many of these children develop.

We will observe these children for a period and if there is no sign of normal developmental changes I will fit them with a soft Foot Orthosis that will realign the subtalar joint to neutral. (Figs. 3 & 4)

This will protect the foot through the hypotonic phase.

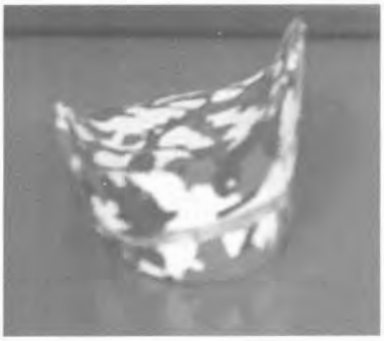

Fig. 3

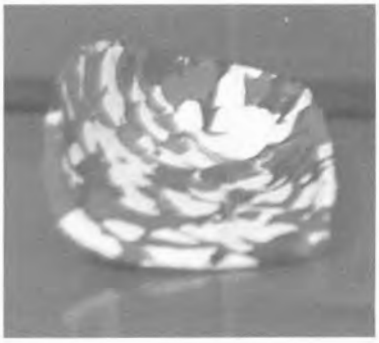

Fig. 4

ANKLE FOOT ORTHOSES (AFOs)

If the muscle tone increases, the Therapists who monitor the children in the community will again refer the child to us for assessment for an Orthosis to control the high tone. This will invariably be an Ankle Foot Orthosis of some description.

The use of Dynamic Foot Orthosis has been in vogue recently but as yet no clear prescription principles have been produced and whilst accepting that there is evidence that it is possible to modify the tone of these children (2) there is scant evidence that the use of contoured footplates have any predictable effect on the tone of these children.

It is impossible and unwise to produce a recipe for an Orthosis for this condition, as what is prescribed will depend on so many factors such as diagnosis, age, size, development status, that an important stage of producing an Orthosis is the assessment prior to prescription.

Information from the child, parent/carer and, if practical, the therapist will all be helpful to arrive at the final prescription.

However, I will describe some of the strategies that I use in my clinical practice.

The 'standard' AFO. Will prevent plantar flexion and give stability to the hind foot.

Fig.5.

Fig. 6

I use a homopolymer polypropylene; its rigidity allows me to use a thinner section making entry into footwear easier. It is also translucent which means that (particularly new parents) can see that the heel is properly engaged.

I tend to flare the proximal edge this is particularly important for children attending conductive education establishments as coming off and on the non padded equipment can produce nasty nipping.

Sometimes parents will be concerned that a 'dent' will be present around the level of the proximal posterior edge of the AFO. This is usually the high tone children and can be a result of gastrocnemius overstretching the Tendo Achilles and the resultant lengthening producing a balling effect of the gastrocnemius.

The proximal strap is not fastened too tightly, it should be snug but not tight enough to mark the tibial crest.

The strapping arrangement around the ankle is critical for the proper maintenance of position. The options are: - for low tone elastic Velcro straps can be used, this allows some limited movement. With low-moderate tone a simple lay-on type of Velcro is satisfactory. With high tone a strap with a loop will increase the effectiveness but will add bulk.

I tend to use a full sole plate, (Fig. 6) with the distal section 'ramped' to extend the metatarsal joints this gives a more effective roll-over at mid to late stance, it may also reduce tone. Trimming the footplate behind the metatarsal heads may be an option for low tone children but where there is high tone there is the theory that

this may stimulate the plantar grasp mechanism.

Forefoot ad/abduction can be a problem with these high tone children and can be controlled by the walls of the footplate. It is not always necessary to extend the wall beyond the metatarsal joints (this can make shoe fitting a problem) if the walls are trimmed and flared behind the joint, this will give effective control of the forefoot.

A common problem with AFOs is pressure over the navicular bone. This is usually due to one of two things.

Firstly what I describe as 'escape valgus' this is where the gastrocnemius is tight, and when trying to dorsi-flex the ankle the foot spins into pronation and thus opens the medial joints of the foot, allowing the navicular to 'pop' out. (Figs. 7, 8, 9).

The solution for this is to hold the mid foot in supination, then pronate the forefoot to neutral, this locks up the midfoot. The foot is then slowly eased into a plantigrade or dorsiflexed position

If parents are taught this technique at fitting as a way to apply the AFO routinely a lot of these problems can be minimised. (Fig. 10). Botox may be an option for these children.

Secondly the Gastrocnemius and Tendo Achilles being structurally short cause similar problems but manipulation cannot correct the equines. This produces a scenario similar to the above but is not correctable. This can present around growth spurts and a clue is often the patient will appear in clinic with red marking around the calcaneus (a result of the heel 'bouncing' within the AFO). Serial casting has been successful with these patients.

Jointed or articulated AFOs can be used but care has to be taken at assessment stage, I use a 'rule of thumb' that the ankle foot complex must be capable of attaining at least 15 degrees of true dorsi-flexion with full knee

Fig. 7

Fig. 8

Fig. 9

Fig. 10

Fig. 11

extension. Failure to comply with this can lead to rocker bottom foot deformities. (3)

Valgus / Varus can be controlled most effectively by incorporating a 3 point force pattern in the orthosis. (Fig. 11). This uses pressure tolerant areas to apply forces to hold the foot / ankle complex in neutral without the complication of added straps or pads.

When fitting a Solid Ankle AFO a critical part of the design and fitting of an AFO is the relationship of the tibia to the ground, sometimes referred to as the 'Shank angle'.

This is the combination of the orthosis /shoe contour reacting with the ground and the effect this has on knee position and stability. When fitting the orthosis it is possible to change this relationship by using heel wedges between the shoe insole and the heel of the AFO. This 'Tuning' can add stability to the knee displaying a flexed pattern or can reduce the knee recurvatum in an extension pattern. (Figs. 12, 13).

This can be a useful tool when analysing gait and is a good example of when a multidisciplinary team works well, however remember that techniques such as this do alter the characteristics of the orthosis and with safety in mind should only be done by an Orthotist.

SUMMARY

The use of orthotics in the management of the cerebral palsied child is well established in the U.K.

Fig. 12

Fig. 13

As stated previously, evidence based practice is rare and the working conditions imposed on most Orthotists in the U.K. make it difficult to undertake any meaningful research.

There is a perception among some health care staff that this is simply a piece of white plastic and the sourcing of this is almost a commercial undertaking and the clinical element is secondary.

I am convinced that with good multidisciplinary practice and an appreciation of the clinical features of these devices, the management of these children can only be enhanced.

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APCP INTRODUCTION TO PAEDIATRICS. HARROGATE 2002. CASE STUDY

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For the purpose of this case study the child to be presented shall be referred to as Z. Z is 2 years and 7 months old at the time of writing. Z was first seen at this neuromuscular centre when she was 3 months of age, however this physiotherapist has only been involved in her assessment, treatment and management for approximately the last year. This case study will therefore concentrate on this time period.

Z was born with Arthrogryposis Multiplex Congenita (AMC), a term used to describe multiple congenital contractures. It is a non-progressive disorder, characterised by severe joint contractures, muscle weakness, fibrosis but normal sensation. Z's multiple joint problems had not been noted antenatally despite numerous scans because of maternal infections and the query of whether placental fluid was being lost. No other problems were reported during or after birth. At a few weeks old, Z had her feet serial cast in plaster of Paris for five weeks following which referral to an orthopaedic surgeon was made. She had a bilateral talectomy operation when she was 13 months old following which she was in plaster for 8 weeks.

The following assessment took place after Z's plasters had been removed.

Subjective

Z is an only child living with her mother who was present at this assessment. Z was dependent on assistance for eating and drinking. Her appetite had been reasonably good, with no chewing difficulties. She was constipated intermittently; Senna or Lactulose medication was being used as required. Her general health was otherwise good. No comprehension problems were reported and Z was saying a few words such as "Yes, No, Ta".

Z's mother reported that good correction of Z's foot posture had been gained by the surgery, better on the right than the left, but she was concerned about this being maintained. Her main concern was over Z's future functional ability level.

Objective

Muscle Power: This was assessed by observation and play with Z, using the MRC grading.

0: Elbow flexors and extensors.

1: Ankle dorsi and plantar flexors.

2: Neck flexors, trunk flexors and extensors.

Part range antigravity: Left shoulder flexors, shoulder abductors, hip flexors, extensors and abductors, knee flexors and extensors.

Full range antigravity: Neck extensors, right shoulder flexors.

Unable to comment on shoulder and hip adductors.

Shoulder and hip flexors noted to be recruited with excessive internal rotation to assist.

Muscle tone:

Z was slightly hypotonic proximally around her trunk, hips and shoulders.

Passive joint range of motion:		Right	Left
Shoulder	Flexion	130°	110°
	Abduction	130°	110°
	Medial rotation	1/2 ROM	1/2 ROM
	Lateral rotation	Minimal	Minimal
Elbow	Flexion	15°	45°
	Extension	Full	Full
Forearm	Supination	1/2 ROM	1/2 ROM
Wrist	Flexion	Full	Full
	Extension	Just to neutral	10° off neutral
	Ulna deviation	Full	Full
	Radial deviation	10° off neutral	20° off neutral
Long finger flexors and thumb flexion/abduction		3/4 ROM	3/4 ROM
Hip	Flexion	Full	Full
	Extension	Full	TEOR
	Abduction	Full	Full
	Medial rotation	1/2 ROM	1/2 ROM
	Lateral rotation	Full	Full
Knee	Flexion	70°	80°
	Extension	Full	Full
Ankle	Dorsiflexion	25° off plantigrade	25° off plantigrade
	Plantarflexion	Full	Full
	Inversion	Full	Full
	Eversion	3/4 ROM	3/4 ROM

Resting joint positions:

Upper limbs in internal rotation at shoulders, extended elbows, and flexed and ulnar deviated wrists. Lower limbs with knees extended and equinovarus posture of feet. Hips in neutral when lying or flexed in sitting.

Posture

Z's spine was straight in prone and sitting.

Gross Motor Abilities:

Z was able to roll supine to prone and vice versa over both sides. In prone Z was able to lift her head, but not able to prop on her upper limbs due to lack of elbow flexion range and gross upper limb weakness. She was not

able to lift her head in supine, but demonstrated only a mild head lag and good shoulder girdle bracing when pulled to sit. She was not able to get from lying to sitting independently. Z was able to sit unsupported with quite a kyphotic posture, and demonstrated good equilibrium, righting and saving reactions. Z was able to bottom shuffle for independent indoor mobility. She was not able to move independently and safely into any other position from sitting. When held in supported standing at furniture Z's feet still demonstrated an equinus position with weight bearing largely through the lateral border, and she sagged into available flexion at her knees and hips. She needed some support at her trunk but this was minimal and she displayed good head control and maintained her head in a midline position.

Objective measure:

Z was scored on the SMA scale (Appendix A) for functional ability (Main 2003). This is a scale used frequently in this centre and was felt to be the most appropriate objective measure to use at her current age and ability level.

She scored 16/40, being able to sit, roll and lift head from prone.

Main problems:

Multiple joint contractures.
Decreased muscle strength.
Poor upper limb function.
No independent transition between positions.
Inability to stand/walk.

Treatment/Intervention Goals:

Goals were set jointly with Z's mother taking into account the family's needs and wishes as well as the physiotherapy aims. It was agreed that these would be set for review in six months' time, when it is anticipated that the goals should have been achieved.

Global goal: to maintain, and where possible improve, joint range of motion in all affected joints.

Incorporated focal aims: to increase upper limb function, as self-care skills, feeding and manipulation of objects are dependent on hand function and elbow flexibility. Allowing transitional positions to be maintained currently limited by her joint contractures. Goals: for Z to be able to finger feed herself small items of food, to be able to maintain forearm and extended arm prop in prone and kneel.

Rationale and treatment: Bayne (1985) looked at hand management in arthrogryposis recommending early treatment consisting of passive stretching of the contracted parts by either plastic casts or splints, followed by more functional splinting as the child gets older and if previous splinting was successful. The idea is that persistent gentle loads (creep) may lead to correction of the deformity. Splinting provides gentle loads over a long period of time to correct deformities (LeVeau & Bernhardt 1984). Z was provided with hand splints made jointly with the occupational therapist. She had two sets, day splints that did not include the fingers, to allow Z to manipulate items and use her hands as much as possible, and night resting splints that included the fingers to stretch them while she slept.

Following Z's foot surgery, and with the approval of the surgeon, she had Ankle Foot Orthosis made by the orthotist, to wear the majority of the time. The main aim was to prevent reoccurrence of previous deformity

hence maintaining the posture gained from surgery. A study by Nakamura et al (1996) found that following tibial lengthening an orthosis needed to be worn for at least 16 hours a day to prevent equinus deformity. However, according to Donohoe & Bleakney (1994), for AFOs to be maximally effective, they should be worn for 22 hours a day.

Considerable research has been carried out on whether splinting/orthoses or stretching are of most benefit in joint deformity and contracture management, especially with regard to the foot and ankle complex. Casting combined with stretching was found to be an effective method of correcting ankle plantar-flexion contractures in patients with traumatic head injuries (Moseley 1997). In 2000 Hyde et al compared stretching alone to a combination of stretching and use of night splints in controlling Tendo Achilles contracture in a group of boys with Duchenne Muscular Dystrophy. They found the combination to be 23% more effective even after equalization for muscle strength differences. A programme of passive movements and stretches was therefore given for Z's mother to do with her, as well as wearing her splints.

Palmer et al (1985) concluded after experiences with 95 infants with arthrogryposis that daily intensive passive stretching of joints and serial splinting substantially increased their functional ability, and similar findings are reported in similar papers (Hahn, 1985; McDonald, 1998; Bernstein, 2002). Slow stretch is applied to a muscle or joint such that a stretch reflex is not elicited and the effect is therefore inhibitory in terms of neural response. It appears to have an influence on both the neural and structural components of muscle (Jackson, 1998). Tardieu et al (1988) investigated how long a muscle (soleus) needed to be stretched each day to prevent contracture in children with cerebral palsy. They concluded that a minimum of six hours was needed and that when stretching time was as short as two hours there was progressive contracture. Donohue & Bleakney (1994) recommended 3 to 5 sets a day with 3 to 5 repetitions during each set. Z's mother was advised to incorporate the stretching programme into their daily pattern.

Z therefore wore her splints for approximately 20 hours a day, with the remaining time for standing (to be discussed later) and stretches. Z had her stretches carried out during physiotherapy sessions and on other days at nappy changes and prior to meals, at least twice per day, which was found to be the minimum needed to maintain range (Donohue & Bleakney 1994). This programme was jointly agreed to, being effective for contracture management according to the research available but manageable within the family's daily routine.

Global goal: For Z to be able to stand independently for 30 seconds.

Incorporated focal aims: maintaining lower limb joint range, increasing proximal muscle strength and stability and allowing further upper limb function in standing position. Goals: For Z to be confident and able to reach out of her base of support to play ball games in standing.

Rationale and treatment: Standing is an important part of therapy during the first and second years. A standing programme using an upright stander and Z wearing wedged AFOs to compensate for her foot posture was initiated.

Weight bearing is essential for musculoskeletal development, good functional alignment and promotes normal neurodevelopment. Stuberg (1992) found that 60 minutes of standing 4 or 5 times a week increased the bone mineral density of non-ambulatory children with severe to profound Cerebral Palsy (CP). This is supported in a study by Chad (1999) which showed a reduction in bone density in children with CP when their regular standing programme was stopped for two or three months. LeVeau & Bernhardt (1984) summarise that increased weight bearing results in an increase in the thickness and density in the tibial shaft and unused bones are therefore smaller in size and abnormal in shape. Hence, intermittent loading of a bone produces better development. Secondary to either excess or lack of compression, congenital deformities can cause early

appearance of degeneration.

Development of the articulating surfaces of the hip joint, the acetabulum and femoral head rely on body weight and muscle tension through weight bearing to guide their development (Stuberg, 1992). The use of standing programmes to enhance acetabular development appears valid with findings by Howard (1985) supporting previous research.

Standing is especially important in neuromuscular problems to decrease the incidence and progression of contractures and deformities. Standing programmes of approximately 45 minutes duration, three times daily, have been reported to control contractures of the lower limb in children with muscular dystrophy (Stuberg, 1992). Joint alignment tends to be more influenced by the load caused by muscular forces than by the pull of gravity (LeVeau & Bernhardt, 1984). Standing can enable muscles to be kept in an elongated position for a period of time and this can assist in preventing shortening (Beattie, 2002).

After surgery followed by a period of immobilisation bone mineral density loss is seen and has been shown never to be fully regained in normal children (Henderson, 1992). Lack of loading on ligaments after immobilisation decreases their strength and ability to absorb energy (LeVeau & Bernhardt, 1984). Early weight bearing after surgery can be seen to be beneficial to minimise these effects. The standing programme was therefore commenced as soon as possible after her surgery, this being at the time of the assessment, after Z's plasters were removed. At first Z was encouraged to stand for as long as she could tolerate, aiming for 2 hours a day, for maximum musculoskeletal benefit. This two hours did not have to be in one session but could be broken down throughout the day to provide intermittent loading for better bone development.

Apart from the musculoskeletal system, standing also has positive effects on other systems of the body. Upright posture enhances respiration, promotes circulation, improves bladder drainage (Kyes, 1993), aids digestion and improves bowel function, and decreases the risk of ischial and sacral pressure sores (Stewart, 1989). It was hoped that her standing program would help Z's intermittent constipation.

Standing also enables and encourages functional improvements in children. Supported standing, such as in a standing frame, allows the child to receive sensory and biomechanical feedback about the standing posture and to learn the proprioceptive skills required for standing (Beattie, 2002). Clinically, improvements in swallowing, communication and upper limb function are often seen in standing as long as sufficient alignment and stability is given. Standing is also important to the child's global development and environmental integration, allowing them to be at peer level for normal functional situations (Kyes, 1993).

The benefits of standing passively have therefore been well documented. Following Z's foot surgery and passive standing being initiated, it was thought from assessment that dynamic standing and independence could be achieved. In weight bearing bones, where locomotion efficiency depends in part on bone mass, dynamic strains are essential to maintain bone mass (Stuberg, 1992). Combining weight-bearing activities with movement would create more desirable forces for joint formation. Aiming for some "activity" in standing will maximise the effect on bone structure (Chad et al, 1999). It was clear from full assessment that to begin standing out of the standing frame, Z would require some orthotic support to maintain good lower limb alignment and to give stability where there was decreased muscle strength. She was assessed in gaiters and found to have good trunk and hip extension recruitment and was therefore cast for knee-ankle-foot orthoses (KAFOs). The KAFOs incorporated a wedge again at the foot to compensate for her K's fixed plantarflexion ankle posture. Prolongation of walking through the use of orthoses is common for children with Duchenne Muscular Dystrophy. Spencer & Vignos (1962) reported a dramatic improvement in functional capacity and Rodillo et al (1988) suggested that walking in orthoses in this group of children prevented rapid progression of scoliosis. Z started by standing in her KAFOs at an appropriate height table and playing with lots of upper limb extension to

encourage trunk and hip extension work, progressing to free standing with support playing ball games.

Further intervention of developmental facilitation and play to address muscle strength and tone and incorporating stretching were also carried out but this will not be described within the confines of this case study. This included practice on moving from different positions, such as lying to sitting through prone and side lying, and lots of activities in different positions.

Outcome

This case study gives a 'snapshot' of the intervention with this child. Treatment continues and aims and goals are being readjusted all the time as she grows in age, size and ability. With stretches, splinting and standing, joint range of motion has been maintained in all joints as measured with a goniometer and increases have been made in elbow flexion, wrist extension, knee flexion and ankle dorsi flexion ranges bilaterally. Z is now able to finger feed herself with her left arm with the increase in elbow flexion range gained with stretching, although she does compensate slightly by using her leg to support and bringing her head to her hand slightly. Z is also able to be placed in and maintain the position of high kneeling at a table to play due to increased knee flexion range and increased proximal strength and stability. This is an ongoing goal.

Following intervention progressing passive standing to active standing in orthoses, Z is able to stand in her KAFOs independently for approx 20 seconds. She is stepping, with assistance, in her KAFOs and has just been provided with a Kaye Walker to progress independence with this. Z will throw and catch a ball in standing but requires minimal support at her pelvis to do this presently. The goal of doing this independently has been reset for a further 2 months' time.

Muscle strength was also seen to have improved in certain groups, noticeably around her hips and shoulders, when re-graded with the MRC scale and continues to be addressed with functional play.

When the SMA scale was repeated Z now scored 21/40, being able to now flex her head to one hand, achieve prop on forearms, and hold prop on extended arms and for point kneeling when placed. The SMA scale only scores for activities done without orthoses so Z's standing ability showed no increase on this score. Timing independent standing in her KAFOs is monitoring this and now the distance she is able to mobilise with her Kaye walker.

Appendix 1

SMA FUNCTIONAL MOTOR SCALE (REVISED BY ABILITY)

NAME	**DATE**	**AGE**	**HOSP NO**	
SCORE 2 POINTS	**SCORE 1 POINT**		**SCORE 0 POINTS**	
1. Frog/chair sitting No hand support	1 hand support		2 hand support	( )
2. Long sitting, no hands	1 hand support		2 hand support	( )
3. Touches one hand to head (R/L?)	flexes head to hand		unable	( )
4. Touches two hands to head	flexes head to hands		unable	( )
5. Half roll from supine, both ways	one way (R/L?)		unable	( )
6. Rolls prone to supine over R	pushes on hand		unable	( )
7. Rolls prone to supine over L	pushes on hand		unable	( )

8.	Rolls supine to prone over R	pulls on hand	unable	( )
9.	Rolls supine to prone over L	pulls on hand	unable	( )
10.	Gets from sitting to lying (safely not accidentally)	unable	unable	( )
11.	Achieves prop on forearms – head up	holds position when placed	unable	( )
12.	Lifts head from prone (arms down by sides)	unable	unable	( )
13.	Achieves prop on extended arms – head up	holds position when placed	unable	( )
14.	Gets to sitting from lying through side lying	through prone	unable	( )
15.	Achieves four point kneeling - head up	holds position when placed	unable	( )
16.	Lifts head from supine	through side flexion	unable	( )
17.	Crawls	Creeps, head up	unable	( )
18.	Stands with one hand support	Stands with MINIMAL trunk support	knee/hip support needed	( )
19.	Stands independently count > 3	Stands independently count of 3	Stands momentarily	( )
20.	Takes > 4 steps unaided	Takes 2-4 steps unaided	unable	( )
			TOTAL	( )

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NOTICE

In March 2004 the format of your journal will be changing to an A4 size. It will therefore be necessary to change some aspects of the advertisements and other copy that we publish. The following information will take effect with the publication of the March 2004 edition.

THE APCP JOURNAL

IBSN 1368-7360

GENERAL INFORMATION FOR CONTRIBUTORS

(current circulation 2000 approx)

ARTICLES and FEATURES

We are unable to offer any remuneration for articles printed

Articles should be submitted typed, double-spaced on one side of the paper and the pages must be numbered consecutively. Photographs and diagrams are desirable as they add interest to an article and attract the reader. Manuscripts should clearly show the Title, Name(s) of author(s) and an address for correspondence. A small photograph and thumbnail sketch or mini CV of the author(s) is also useful. Detailed information for contribution of articles, including peer review (this will take effect from March 2004) will be freely available in this journal Please send a printed copy and, if possible a disc in word 6 format

ADVERTISEMENTS

Study Days and Courses – Free for all APCP regional and national events

All other study days and courses along with recruitment and advertisements placed by any other interested parties will be charged as follows:-

	Courses and Vacancy Advertisements	Other Advertisements
Full Page	£300	£500
Half Page	£175	£300
Quarter Page	£125	£200

Currently a full mailing of the membership with single A4 flyers inserted into each journal will be charged at £500. Costings for larger inserts will need to be negotiated with the editorial board. This mailing will be strictly reserved for the membership to circulate research questionnaires etc and cannot be used to promote product information

It is preferable that copy for advertisements is submitted complete with typesetting and artwork. The printers will typeset from text if necessary.

COPY DATES

Distribution date		Copy to be with the editor by
The second week of	March	1st February
	June	1st May
	September	1st August
	December	1st November

The Editorial Board reserve the right to edit all material submitted

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WRITING FOR THE APCP JOURNAL

The aim of the APCP Journal is to be a forum to disseminate original research, facilitate continuing education for paediatric physiotherapists and provide an opportunity to debate all controversial issues.

Most articles should be no longer than 3,000 words excluding references and abstract. The types of article identified to achieve these aims include:

Peer reviewed articles

Papers submitted under this section are all reviewed blind.

- *Research Report*

A report which permits examination of the method, argument and analysis of research using any method or design (quantitative, qualitative, single case study or single case design etc).

- *Scholarly paper*

A paper sharing ideas and experience or reviews in a specific area of practice

- *Audit Report*

A report which contains examination of the method, results, analysis, conclusions and service developments of audit relating to children and physiotherapy, using any method or design.

- *Review Paper*

A critical appraisal of primary source material on a specific topic related to children.

- *Treatment Report/Case Studies*

A report of the treatment of a child or series of children that provides a base line description of established treatments, or a new insight into the techniques or treatment of children with a specific problem.

Case reports should be no longer than 2,000 words.

- *Technical Evaluation*

A description of a mechanical or technical device used in assessment, treatment, management or education to include specifications and summary evaluation.

- *Service Development Report*

A report of changes in service delivery aimed at improving quality.

Other types of Editorial Material

- *Abstracts of Theses and Dissertations*

Abstracts from research projects, including those from undergraduate or higher degrees, audits or presentations. They should be up to 300 words and where possible the conventional format: introduction, purpose, method, results, discussion, conclusion.

- *Letters and replies to APCP*

These can be about any issue pertinent to paediatric physiotherapy or APCP. They may relate to material published in the previous issue(s) of the APCP journal. Copies of replies to editor.

- *Book reviews – up to 500 words*

Preparation of Editorial Material

Copy should be produced in Microsoft Word. Wherever possible diagrams and tables should be produced in electronic form, e.g. Excel, and the software used clearly identified.

The first page should give:

- The title of the article
- The names of the author(s)
- A complete name and address for correspondence
- Up to three relevant professional and academic qualifications for all authors and their current positions
- Any source of funds supporting the work
- The title, date and location of the conference if the paper is an adaptation of a presentation.

All Peer-reviewed Articles

The title page should give:

- The title of the paper
- Up to five key words.
- A structured summary of no more than 300 words explaining the purpose and summarising the key points and conclusions. For research reports this should be under the headings of:
- Background and Purpose
- Methods
- Results of Findings
- Conclusion

Copy should be:

- typed or printed
- double spaced
- on one-sided A4 paper with at least a 1" margin all round
- Consecutively numbered
- include the name, qualifications, current position, and contact address of the author(s).

The text should be well organised and written in simple and correct English under appropriate headings. The positions of tables and figures should be indicated.

References

References should be in the Harvard style:

In text, cite only the author(s) surname(s) followed by the date of publication, eg (Robinson, 1994) or Robinson (1994). Use a, b, etc, to indicate more than one publication by the same author(s) in the same year (eg 1992a,

b). For three or more authors of a cited paper, name the first followed by et al, eg (Smith et al, 1990).

In the reference list, include articles in journals and books alphabetically by author. For citations from journals, give the names and initials of all authors (year of publication), title of the article, full name of the journal, volume number, issue number and first and last page numbers, eg **Brown, A, Green, B and Gold, C (2001).** 'The value of exercise', Physiotherapy, 87, 1, 77-79.

Referring to books, give the names and initials of all authors/editors (year of publication), title, publisher, place of publication, and the chapter number or the page number of the citation or both, eg **Gardner, M (2001).** *The Annotated Alice*, Penguin Books, Harmondsworth, Chap 10, page 210.

Tables

Give them an appropriate title and number them consecutively as they are referred to in the text. Use only horizontal lines. Explain all abbreviations in a footnote. Place tables on a separate sheet after the references.

Figures and photographic images

Number them consecutively as they are referred to in the text and place on separate sheets after the tables. List all captions (legends) on a separate sheet.

Permissions and Ethical Certification

Protection of subjects: Written permission from children, parents or guardians to publish photographs of recognisable individuals must be enclosed with the material, or obscure facial features. For reports of research involving people written confirmation of informed consent is required.

Any paper based on a study of children, families or staff, submitted to the APCP journal, must have received ethical approval and state by which REC committee. If for any reason your study is exempt, you must make a statement with the covering letter explaining why it is not applicable.

The use of names for children is encouraged in case studies for clarity and humanity, but they should not be their real names.

Submission of Articles

A disk or CD Rom and 2 hard copies of each article should be sent with a covering letter from the principal author stating the type of article being submitted.

NOTICE

The 31st Annual General Meeting

of the

Association of Paediatric Chartered Physiotherapists

will be held on

Saturday 1st May 2004

at

The Crown Plaza Hotel, Liverpool

beginning at 11.30 am

All paid up members of the Association are entitled to attend. Voting will be restricted to full members of the Association and a current membership card will be required.

Minutes of the last AGM are available from the Secretary on receipt of a S.A.E.

Notification of any committee vacancies will be published in March 2004 journal.

National Committee Working Weekend

The National Committee of APCP is having a working weekend in Belfast in January 2004 to discuss future issues affecting APCP. It is planned to map out a 5 - 10 year plan for APCP and therefore it may be necessary to make some amendments to the Constitution. There will be 3 broad categories for the weekend. Profile (including publications, web site, journal), continuing professional development and structure (including Constitution, focus groups, responsibilities for committee members, regional issues etc).

If there are any changes to be made to the Constitution APCP members will be notified before the AGM.

I would be grateful if members would bring to my attention any issues of concern or ideas they may have to help to move APCP forward and plan for its future.

Please contact me by email by 30th December 2003 at the very latest.
My email address is - aabrady@talk21.com

Adare Brady
Chair APCP

News from the National Committee

A meeting of the National Committee was held on Friday 24th October 03 at CSP, Bedford Row. This was the first meeting held in the new "all day" format which allows committee member time to discuss issues fully. The business of the day included

Ongoing issues

- A.P.C.P. and N.A.P.O.T propose to collaborate with the production of joint guidelines for the treatment of D.C.D. It is hoped that in future representatives from the respective committees will attend the others' conferences.
- There will be a review of the evidence base for the Erbs Palsy and Hip guidance summaries
- C.S.P. continues to consult A.P.C.P regarding paediatric based N.I.C.E guidelines. The most recent contribution has been to the Paediatric Stroke Guidelines.
- There has been ongoing discussion regarding establishing focus groups for areas of paediatric clinical interest. The first group was the Neo-natal group and A.P.C.P. has been contacted by other groups wishing to explore similar links.
- Adare Brady has contributed, on behalf of A.P.C.P., to the national reference group for Children's Skills and Competencies framework. A.P.C.P continues involvement with the steering group for prescribing rights
- 3 research bursaries have been awarded (subject to ethical approval). Subjects include Consent issues in Paediatrics, Physiotherapy services to children with cerebral palsy in mainstream schools and the development of a functional foot orthosis for the treatment of paediatric knee pain
- National committee continue to receive requests for funding for courses and would refer members to their regional committees. The committee wish to support request from students for help with research projects Research;

It is hoped to arrange a further research study day in February 2004

Education;
The Introduction to Paediatrics and Advanced Cerebral Palsy course are over subscribed and the committee discussed ways of responding to the demand for these courses

Membership;
Membership of A.P.C.P. continues to increase. Some changes have been made to membership forms and there was discussion around facilitating the work of the membership secretary.

Editorial;
Editorial board presented the new format of the A.P.C.P. journal for comment. They are working to produce guidelines for contributors and for peer reviewers.

The Clinical Interest Group liaison officer continues to feedback from the C.I.G. committee.
The committee have arranged a working weekend in January 04 to discuss the future direction for A.P.C P and will look at possible changes to the constitution.

The next meeting will be held on Friday 16th January in Belfast. Contact your Regional representative if you have any issues for discussion.

Laura Wiggins. Secretary

Children's Skills and Competences Framework Project

I attended the "Children's Skills and Competences Framework Project" National Reference Group meeting in London on Wednesday 22nd October 2003, and wish to give the members of APCP an update on the project to date. (For earlier details please see the APCP Journal March 2003, page 33)
Field tests and consultation for the new draft competences for children's services took place over July / August 2003. The field tests involved evaluating the draft competences in the workplace. Participants were encouraged to test one or more of the units (see later) using a variety of work based activities. They were then asked to complete 'unit evaluation forms' based on their findings. Consultation materials were sent to a wide range of stakeholder organisations with an interest in children's services, including Professional Bodies, children's charities, unions and other representative bodies in health, social services, education, youth justice and the police.

The 14 units being tested were as follows :-

Unit 1 Communicate effectively with children and young people, and those involved in their care;

Unit 2 Work with children and young people to assess their health and well-being;

Unit 3 Co-ordinate assessments of the health and well-being of children and young people;

Unit 4 Plan, implement, monitor and review individualised care plans to meet the needs of children and young people;

Unit 5 Plan, co-ordinate and review service responses to meet the needs of children and young people

Unit 6 Plan and implement transfer of care and discharge with children and young people, and those involved in their care;

Unit 7 Plan, implement, monitor and review preventative interventions with children and young people, and those involved in their care;

Unit 8 Plan, implement, monitor and review therapeutic interventions with children and young people, and those involved in their care;

Unit 9 Administer, monitor and help manage medicines used by children and young people;

Unit 10 Improve services to address the health and well-being of children and young people;

Unit 11 Create an environment to protect children and young people from abuse;

Unit 12 Protect children and young people from abuse;

Unit 13 Enable children and young people to understand their health and well-being;

Unit 14 Enable children and young people to cope with changes to their health and well-being.

A total of 67 organisations or sites took part in the field tests or consultation and I am pleased to report that paediatric physiotherapists (18 +) were represented in the 300 individuals who responded.

The other practitioners included nurses, clinical specialists, pharmacists, social workers, education providers and others.

Eight of the field test sites also involved service users in the evaluation of the new draft units.

Activities used to test the units included:

- Comparing the standards to job descriptions
- Using the standards to carry out a training needs analysis
- Comparing the standards to training programmes or curricula
- Using the standards for performance review
- Developing a CV
- Consultation of members.

After the field testing there were debriefing meetings and the information and comments were collated. Further analysis will be carried out to identify gaps and omissions in the overall competence framework, which will be updated for the Project Board meeting in December.

There are also many questions concerning the implementation of the competence framework that need to be considered by Skills for Health. Common issues raised were about :

- who will use the units and how?
- publication and dissemination of the framework
- concerns about implementation, particularly in terms of resources, including staff time to be able to use the framework.

My work with the National Reference Group working on this project is now completed but I have just heard that the Care Group Workforce Team has identified resources for the next priority – Maternity and Care of the Newborn (this includes specialists competences to care for the sick and well neonate) and I will highlight the need for APCP to have representation on this group.

Adare Brady
Chair APCP

Botulinum Toxin Physiotherapy Focus Group

A meeting of the newly formed Botulinum Toxin Physiotherapy Focus Group was held at C.S.P., Bedford Row on 30th October. This group will be a subgroup of A.C.P.I.N. and aims to work with CSP and the national prescribing centre to standardise competencies, education and training activities for physiotherapists with particular reference to injecting Botulinum Toxin. It would hope to contribute to the development of strategies to support clinical governance, research, clinical effectiveness and audit. Using the interactive CSP site it will act as a point of contact for those interested in adult spasticity management.

Among those attending were a small group of paediatric physiotherapists. It became apparent during the workshops that some of the issues raised, for example, writing Patient Group directives, would be of interest to APCP members. APCP will seek a link with this group. Members can make contact using the interactivecsp website. This is a subgroup of the adult neurology network.

If you are interested in looking at National Guidelines for Botulinum toxin A injection and management; and work at a centre currently injecting Btx A contact Lesley Katchburian at katchl@gosh.nhs.uk

Laura Wiggins
APCP Secretary

APCP NATIONAL COMMITTEE E-MAIL DIRECTORY

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Research

The next APCP research study day is to be held on Thursday 26 February 2004 at the CSP in London. There will be a workshop in the morning looking at methodologies in research and a free paper session in the afternoon. There will be plenty of opportunity to discuss your research ideas, how to access help for particular problems and to talk to others about research in paediatric physiotherapy. There will also be an opportunity to find out about facilities and services available at the CSP, to help you in research and evidence based practice. Details will be in advertised shortly in Frontline and on the Interactive CSP website. www.interactivecsp.org.uk

APCP research bursaries

Following our call for research proposals back in the summer, three bursaries have now been awarded in the following areas:

- To investigate the difficult issues around consent in paediatrics
- Use of functional foot orthoses
- The physiotherapy management of children with cerebral palsy in mainstream schools

These bursaries will be given over the next 18 months and I look forward to the progress reports and findings of these projects.

Help needed with student questionnaires

We are often asked by physiotherapy students for a list of APCP members to whom they can send questionnaires as part of their research projects. If you would be a willing candidate to help students and complete their questionnaires, please e-mail me at scrombie@srtl.co.uk and I can put you on a list. Do help as we have all been there!

News from the CSP

The CSP now has a list of free text electronic journals that are relevant to physiotherapy. This can be found at: www.csp.org.uk/libraryandinformation/library/accessingjournalarticlas/electronicjournals.cfm

New NICE guidelines are now available for the management of head injury: Triage, assessment, investigation and early management of head injury in infants, children and adults. June 2003
Found at: http;//www.nice.org.uk/catcg2.asp?c=20034

Management of obesity in children and young people (April 2003). Information is available on this from the Scottish Intercollegiate Guidelines Network on www.sign.ac.uk

Consumers in NHS Research support Unit

This organization aims to provide information, advice and support to consumers, researchers and those working in the NHS on consumer involvement in health research. It has changed it's name to INVOLVE with a new website: www.invo.org.uk

BioMed Central

BioMed Central is an open access publisher, with over 90 peer-reviewed journals across the whole spectrum of biology and medicine. These journals are free to NHS staff at http;//www.biomedcentral.com

Funding opportunities

The Health Foundation (previously called the PPP Foundation) http;//www.health.org.uk/ourawards/

The Health Foundation Nursing and Allied Health Professions Research Training Fellowships are on offer to support the training of AHPs in advanced research skills. Closing date is midday on 12 January 2004

RDInfo

This database has a 17 page special on funding opportunities for AHPs

http;//www.rdinfo.org.uk/newsletter/AHP.pdf

Medical Research Council

Clinical research training fellowships are available from the MRC to provide a salary, research training and possible tuition fees for PhD registration. Closing date is the 30 January 2004

Personal bursary scheme for those living in Northern Ireland

Personal bursaries provide support to those wishing to undertake a degree course providing training in research or to attend a short course of training in specific research methodology. It is provided by the Northern Ireland R&D office and is available all year round with no deadline for submissions. Tel: 028 9055 3613

http://www.csa.n-i.nhs.uk/rdo

Help with critical appraisal

Check out the BMJ website: http://www.bmj.com/collections/read.shtml 'How to read a paper' by Trisha Greenhalgh. This gives a useful selection of articles on how to appraise different papers.

A useful file summarizing critical appraisal

http://www.evidence-based-medicine.co.uk/ebmfiles/WhatisCriticalAppraisal.pdf

Sarah Crombie, APCP research officer

EDUCATION

The education committee are very pleased by the application response to the Introduction to Paediatrics and the Advanced Cerebral Palsy courses. These have been very oversubscribed and we are keen to run these courses again in the near future. Look out for the adverts in the journal.

CPD Course - Introduction to Paediatrics - Liverpool October 2003

This 5-day course is held annually in a variety of locations throughout the UK. The most recent one was in Liverpool. The course covers the main aspects of paediatrics (Musculoskeletal, Neurological and Respiratory) and is aimed a senior II Physiotherapists or established physios moving specialities who are new to Paediatrics.

The course evaluated extremely well.

We are looking to the regions to suggest the next location for this course which will be run next year.

Advanced Cerebral Palsy course

This course is planned for the 11th and 12th of November 2003. It is designed to assist in clinical decision making with regard to treatment and management programmes of children with cerebral palsy. We will let you know further details of the next courses once the November course is completed and evaluated.

Outcome measures pack

Work is ongoing in collaboration with the CSP, PPIMs and BABTT in relation to updating the outcome measures pack. The draft document is to be finalised following our meeting in January and we aim to have it available for the conference in April.

This initial document will cover generic outcome issues, including reliability, validity, standardisation, choosing a measure and completing the feedback loop. The first set of measures to be included will be developmental and neonatal, however this will eventually be rolled out to include orthopedic, neuromuscular, and respiratory measures. If you have a particular interest in outcome measurement and would be willing to help review the most common measures please let me know. I'm particularly looking for help with orthopaedic and respiratory measures as we are currently trying to establish the most frequently used and the most highly recommended measures in these areas. If your department regularly uses a standardised test for these specialities then please let me know.

Journal Club

The Journal Club is on hold for the moment as the education committee have a great deal of committments for APCP and in their "full time" employment at the moment, however we are hoping co-opt more people onto the committee in January and will then be in a position to reinstate this aspect of the education page.

Adele Moore

Education liaison officer.

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NORTHERN IRELAND

Firstly I must apologise for the absence of reports from Northern Ireland in the last two journals - a few technical hitches! Not a very good start as the new Northern Ireland rep! On behalf of the N.I.A.P.C.P. committee and its members I would like to thank Judith for all her hard work over the years on the N.I. committee and more recently as the chairperson and regional rep. Hope you're still enjoying motherhood and the sleepless nights are beginning to wear off!

Mary Parker also came off the committee this year. We thank Mary for all her hard work in APCP. We were therefore able to welcome Gemma Lipscomb onto the committee. A warning to anyone else thinking of going onto the committee - there seems to be something in the water, with two babies safely arrived and another two on the way!

In April this year we ran a most successful two-day "Hydrotherapy in Paediatric Neurology" course in Sandleford School, Coleraine. Jackie Pattman from the Princess Royal Hospital in Sussex taught a very practical and most beneficial course. Who of us would dare forget Archimede's Principle now?!

The committee has planned an interesting programme of evening meetings for this year. We kicked off on the 6th October with a talk from Claire Kerr and Suzanne McDonagh. They gave us some very useful feedback on their recent research looking into electrical muscle stimulation and cerebral palsy.

Our next meeting is on the 3rd November in the Northern Ireland Children's Hospice when Ruth Graham will be talking to us about her work there.

Looking forward to seeing you all then!

ALISON MOUNSTEPHEN

LONDON

Well we must be doing something right because you are turning out in droves to support our programme of evening meetings. So for your delight and delectation we have organised a couple of interesting talks for the New Year.

First of all, on Wednesday February 11th at 6 for 6.30 start, we have Steve Mottram, Clincal Specialist Orthotist from Medistox Ltd presenting on the use of cranial re-moulding orthoses for infants with positional plagiocephaly and other head shape deformities. I am sure that many of you are aware that there seems to be an epidemic of plagiocephaly. In the States these helmets are now being used and what goes on in the good ol' U.S. of A eventually resurfaces on our side of the pond! Parents also find out about these things via the Internet so this will be your chance to be ahead of the field (forgive the pun!) Following Steve's talk Jeanne Hartley will finish off the evening with a talk on the assessment and management of torticollis. This will all take place in the Physio Department at Great Ormond Street Hospital - please watch out for fliers arriving in your departments or ring me (020 7405 9200 Bleep 690) to reserve a place. Book early as we only have room for about 60 people. Bargain at £5.00.

On Thursday March 9th at the Wolfson Centre, Mecklenberg Square, WC1, we are planning an evening talk by Cate Naylor, Senior Physiotherapist,who will present her research on Constraint Induced Therapy. Again this should be a really interesting talk. The plan is to have drinks (can you resist this offer) at 6-6.30 and then to hold the London Branch AGM at 6.30. Cate's talk will start at 7 but please do come to the AGM as it is important that your Branch get a chance to meet you and listen to any helpful suggestions you care to make. You could even 'volunteer' to join the Committee. We will have two places to fill so why not think about joining us please contact Kate Page on 020 7405 9200 ext 5144 if you are interested or you are coming to the talk. Again quality at a fiver - can't be bad!

All that is left is to wish you all a Happy Christmas and let's all hope for a Peaceful New Year

JEANNE HARTLEY

SCOTLAND

The programme for the Study Day on 14th November 2003 has been finalised and application forms with this programme have been sent out to all the members in Scotland. Plans are well under way for our A.G.M.

next March, which we hope to hold in Lynnebank Hospital in Dunfermline. This is a central location with easy motorway access from all parts of the country. The programme will include contributions from the Scottish Muscle Network Group and a presentation on non Cerebral Palsy-related Orthopaedic Surgery.

For the Study Day 26th November 2004 we are delighted that Dr Margaret Mayston, Clinical Director, The Bobath Centre, London, has agreed to come to speak to us on her research into the place of muscle strengthening in the treatment of children with Cerebral Palsy from the Bobath perspective. We hope that Penny Butler will also be available to present on Targeted Training, to complete the picture.

At our last Scottish Committee Meeting we discussed the need for physiotherapists from all parts of the Country, to share information on the work they are doing on clinical effectiveness projects .The following Committee Members have asked me to highlight their projects, in the hope that physiotherapists of like mind will contact them.

In Highland Region, Julie Burslam is working on developing clinical guidelines for the provision of lycra splinting.

In Fife Region, Katie Kinch is working towards developing a Care Pathway for Duchennes Muscular Dystrophy patients.

In the Glasgow Area, Laura Wiggins is setting up a clinical audit on the standard contents of patient's notes.

In Edinburgh and Lothian, Alison Gilmour is looking for information on developing a physiotherapy protocol for the management of children with complex needs, following elective orthopaedic surgery.

In Borders Region, Catherine Masters is developing a Care Pathway for the treatment of children with Downs Syndrome. Catherine has already responded to a letter on this subject from Cathleen Hunter in our September Journal.

I am happy to forward any responses to the Scottish Committee Member by e-mail- alison.gilmour@graysmill.edin.sch.uk

ALISON GILMOUR

NORTH EAST

We had a very successful study day in September in Leeds on Legal Issues and Caseload weighting. Unfortunately, Pen Robinson let us down as the speaker for legal issues but we were extremely grateful to Di Coggings who stood in for Pen at the last moment. Her presentation was excellent and generated much discussion during the session (and afterwards!). The topic was worthy of a full day, borne out by comments from the course evaluation.

The AGM and Study Day will be on Saturday 6th March at North Tyneside General Hospital, North Shields. We are delighted to have Naomi Davis, Orthopaedic Paediatric Consultant and the Team from Booth Hall, Manchester presenting theory and practical sessions on the Ponsetti Approach to Talipes. Details for the course went out on the October flyer.

New members will be required for the regional committee after the AGM. Please send nominations (proposer and seconder) to our secretary, Karen Roach, 7 Kielder Road, Elwick Grange, Hartlepool, TS26 OQF before the AGM date. We would welcome nominations from West Yorkshire.

Attendance at study days during the summer term has been poor so a decision was taken to avoid that time of year for study days. So for 2004, the next study day after the March one will be 2nd October at Harrogate District Hospital on Paediatric Hydrotherapy (has been requested by many members!)

Our membership for 2003 was slightly down on the previous year. It is the time of the year again to renew subscriptions to APCP - direct debit is most convenient for all concerned and do encourage your non-member colleagues to join NOW to get the whole year's advantage.

Many thanks to those of you, who returned your completed questionnaires by the deadline date. They will help us to formulate future study days.

HAPPY CHRISTMAS AND PROSPEROUS NEW YEAR TO YOU ALL!!!!!

MARY HARRISON

SOUTH WEST

Sorry for not getting a report into the last journal in case anyone had noticed!!

To make amends I hope that you had seen the flyers for the SW course on integrating disability into PE. We have used 3 venues, and if this proves to be very popular we will try to organise it again in the New Year. Is there anyone keen to hold it at a more westerly site or on one of the islands? Please let me know.

On Friday 18th January we are holding a Botulinum Toxin day at Poole. The morning will have speakers on research and the afternoon we hope to look at evidence of good practice. It seems from our conversations on the committee that there is such variability in practice that we were wondering how we can make it more standardised. Contact Rob Shaw at Poole.

Sue Moll from Basingstoke is planning a learning disability course with NAPOT in March or April. It will address factors such as behaviour, communication and transfer of care to adult services. Watch for flyers.

If you have any unused equipment including Piedros can you contact Vivienne at Lord Mayor Treloars. She is organising a container for the townships in South Africa.

Finally have a good Christmas

RUTH DAVIES

EAST ANGLIA

Since my last report we have held two more study meetings, one in September on the legal aspects of record keeping, and one in November on orthotics and gait analysis. The numbers were a little disappointing, but nevertheless, both were extremely well received by those attending, prompting some interesting discussion, with very practical and relevant ideas to take away.

Our next event is to be our annual AGM, to be held again in Cambridge, on the 6th March 2004. Detailed information will be forwarded to individual members in the new year. We appreciate members' support at the AGM, and at other study days, as they take time and effort to organise, all of which is done on a voluntary basis. They are a great opportunity to meet and share ideas with colleagues from around the region, as well as supporting CPD. Also, it is important to us, as your committee, to receive your ideas on topics for future study days, whether you prefer weekdays or Saturdays, and the location of venues.

We are still working hard on next year's programme, and are in the process of arranging a study day on talipes/BPL/torticollis in 19th June 2004, as well as an introductory day on Sensory Integration in the Autumn. More details to follow!

SUE COOMBE

SOUTH EAST

Very little news to report this time. The new committee has been busy, on your behalf, arranging study days for the next 12 months. We hope you will support us in what we think is a lively and very interesting programme.

The first of these is a follow-up day at Charlton Park School on 27th November, following the two very valuable and successful days that were held there earlier in the year on various aspects of 'School Physio'. It is hoped from a general consensus and review of available evidence we will be able to draw together some criteria for interventions, prioritising and care pathways for physiotherapy intervention within a school setting that will be consistent throughout the region.

Our next event is very exciting. A study day to be held at the Post-graduate Centre, Brighton Hospital on Thursday 22nd November 2004. It is entitled 'No one can have the ball all the time'. The lecturer is Pilla Pickles, and those of you who attended APCP conference in Birmingham will remember her for her dynamic and enjoyable lecturing style. Pilla is a teacher who has worked for many years as a SENCO and has a wonderfully rational grasp of the issues involved when health and education staff comes together. This day is also open to our paediatric OT colleagues and SALT as well as Education SENCO's,

so why not bring your team with you! It is expected to be extremely popular and unfortunately there are limited places available and so I suggest if you want to be sure of a place please apply early to avoid disappointment. Cost is £40.00 for APCP members and £55.00 for non-members. For further details and application please enter interactive csp website paediatric section events and documents section where there is a downloadable flier and application form. Or contact Nikki Crockford at Charlton School, Charlton Park Road, London SE7 8HX. Tel: 020 8857 2057.

Plans are a foot for a study day on the 'buzz words' of the moment, 'muscle imbalance' lead by Liz McKay, for later in the New Year, so watch this space for further details.

May I take this opportunity to wish you all a very happy festive season and every good wish for the coming year. Membership renewal forms are wending their way to you and it would be appreciated by the membership secretary if these are dealt with promptly if you do not pay by direct debit. How about trying to encourage your colleagues who aren't members to consider joining us.

Please don't hesitate to call me on 01227 783042 if any of you have any matters you would like me to take forward to National Committee on your behalf.

PETA SMITH

WALES

Our APCP Wales Committee are well into the arrangements for Conference 2005, which we have decided will be held in Swansea. We feel that rail and road connections are good and there are now quite a few flights into Swansea airport, and perhaps more by 2005. We are hoping that one of the new hotels will provide accommodation and conference facilities and, given good weather, a walk on the beach and a paddle might also be on the cards. We have a great deal of expertise locally on a range of paediatric subjects to interest you all and are looking to our Welsh membership especially for support.

Some of the committee visited the Eisteddfodd, held this year near Wrexham. The CSP having taken a stand for the week holding daily exhibitions of various Physiotherapeutic specialities and we attended for Paediatric day. A report is published elsewhere in the journal together with photographic evidence of a very enjoyable day.

Our first lecture for the Autumn season took place on November 28th. Manual Handling v Therapeutic Handling - The Facts. This was well attended. Another date for your diary is May 17th and 18th 2004 when Elaine Owen will speak on Gait Analysis, to be held at Llandough Hospital, Penarth, Post Graduate Centre. Maximum thirty people so please ensure your place early. Cost will be approx £120 for two days. For further information contact Anne Baldwin, Children's Centre, Llandough Hospital.

News of the eight-week Bobath Course to be held next summer 2004. We have been advised that all who wish to attend should apply to the waiting list for Bobath in London to ensure that they will be considered for the Welsh Course.

I and all the committee wish you a very Happy Christmas and look forward to seeing and hearing from you in the New Year.

JILL WILLIAMS

NORTH WEST

I'll start by sending everyone Season's Greetings. This year has absolutely flown by and has been a very busy one for the regional committee.

We started the year with a very successful AGM in March with the well-received Study Day from Michelle Eagle. Our next AGM has been set for Saturday 13th March and our speaker for the day will be Jan Davies. Jan is a Paediatric Macmillan Physiotherapist and is going to talk about her unique post and also about some of the more common childhood cancers. The AGM and study day will be at the PostGraduate Centre, Warrington District General with a start time of 9.30 am and again we will be able to run this for members at no charge.

Our Respiratory Study Day in September was very successful and received very positive feedback. The local committee are at present working towards organising further days for later in 2004. We will keep you posted.

Of course our big event for 2004 is hosting the Annual Conference in Liverpool. The event is booked and we have already received our first applications. The conference, if you haven't already seen the adverts in last and this month's journal, is at the Crowne Plaza Hotel, Liverpool from April 30th to May 2nd. Please get your applications in early to take advantage of the reduced rate. The organising committee continues to work hard in the background to finalise details and to ensure that the event will be very successful.

Finally, it is that time of year when we are due to renew our memberships. Please make an effort to renew promptly and also encourage colleagues who aren't already members of the benefits of membership.

A very Merry Christmas and Happy New Year to you all.

ELAINE LLOYD

WEST MIDLANDS

After a quiet summer we are now planning our programme for the next year. We are holding a Paediatric Orthopaedic Study Day on the 12th March 2004 at the Birmingham Children's Hospital. We will also have our AGM during this day. For further information contact Jemma Mears on 0121 333 9999 bleep 55051.

This year the committee have awarded bursaries to two applicants. We would like to remind our members that they can apply for this if they have been a member for more than two years and require funding for appropriate study. Application forms for this can be obtained from myself.

LINDSAY RAE

NEONATAL CLINICAL INTEREST GROUP

(AFFILIATED TO THE APCP)

As you read this we will only recently have held our latest study day and first AGM in Bristol, since we started last year in London. It has been a very busy year with lots of exciting developments. Hopefully you will have been able to attend at least one of these meetings.

The regional meetings are for people to establish local networks and to be able to share and learn new information. Also they are to serve your training needs and so will require your input for you to gain what you want from them. From the databases, which were collected, you should then have access to a host of information to allow you to contact other members in your area aswell as further afield.

The contact people for regions are below and usually will be the host for the venue; it is not always the case that they are committee members. This way we can spread the work and also recruit new members and interest. At the meeting in June, Nicky announced that we had 100 members on the database! So lots of people out there working with, and an interest in, Neonates.

South West 23.09.03
Denise.Hart@suht.swest.nhs.uk
Committee Member Sally Jary – slj@badenhill.freeserve.co.uk Multiprofesional Liaison Officer.

Midlands 7.08.03
Stella.Dutton@voa-pct.nhs.uk

Transpennine 2.10.03
Committee Member Fiona Price – Fiona.Price@sheffch-tr.trent.nhs.uk
Education Officer

Northern Group 8.08.03
Patricia.Dulson@nuth.northy.co.uk

South East
Committee Member Peta Smith – Peta.Smith@ekht.nhs.uk
Chair

If you are interested in attending regional meetings in your area then contact any of the above and they should be able to help you. Alternatively, contact any of the committee members for information.

Chair: Peta Smith Peta.Smith@ekht.nhs.uk

Vice Chair: Allie Carter Allie.Carter@gstt.sthames.nhs.uk

Secretary: Nicky McNarry nicola.mcnarry@mail.qmcuh-tr.trent.nhs.uk

Treasurer: Jenny Poole Jennifer.Poole@cmmc.nhs.uk

PRO/Publications Officer : Hilary Cruickshank hilarycruickshank@hotmail.com

Research & Development Officer: Anna Simpson a.g.simpson@sheffield.ac.uk

APCP Liaison Officer: Barbara Haederle
petenbop@tesco.net

Don't forget that there will also be information on the CSP Interactive site at regular intervals.

Finally, I hope you all have a very Happy and Healthy Christmas and all the very best for the New Year.

Barbara Haederle

Neonatal Group APCP Southern Regional Meeting

The South region of the Neonatal Group held a very successful Neonatal Respiratory Care study day at St Thomas's Hospital, London on Friday 26th September, 2003.

28 members attended and travelled from as far a field as Scotland, Ireland, Birmingham, Southampton, Sheffield, Portsmouth and Bristol! Very cosmopolitan, and shows the amount of interest in the subject across the country.

The day consisted of an introductory lecture by Camilla Kingdon, Consultant Neonatologist at St Thomas's, on High Frequency Oscillation Ventilation. HFV was designed to limit inflation pressures and tidal volumes through the use of very rapid rates and therefore reduce volutrauma which is thought to be a major contributor in the development of chronic lung disease.

This was followed by an interactive session of information sharing facilitated by Allie Carter, Supt Paediatric Physiotherapist Guys and St Thomas's, on 'Respiratory Assessment of the Neonate.' Allie also shared with the group a teaching tool she uses which highlights various aspects of neonatal respiratory care. This includes such subjects as lung development, anatomical and physiological differences, potential risks as well as various aspects of assessment, treatment techniques, options and suction. She kindly gave permission for all members to use or adapt any aspect of this document for their own use.

This was followed by presentations of two very comprehensive and interesting respiratory case studies of babies they had treated whilst on the NICU at St Thomas's Hospital by Kerrie Crowlie and Steve Colthurst, both senior paediatric physiotherapists.

After lunch Nick Connelly, from Fisher and Paykel, presented the Neopuff resuscitator. He brought along a 'virtual' premature baby doll and demonstrated, with the use of a software programme, the difficulty in maintaining safe, consistent inflation pressures when hand bagging a baby. The software records and accurately measures the PEAK and PEEP when bagging or when breaths are given with a neopuff resuscitator over a 30 second trial. This was amazing and we were all rather alarmed how even the most experienced had trouble maintaining safe consistent pressure and 'i' times. The other advantage of using the neopuff is that as well as setting the PEAK pressures it is also possible to maintain a set positive end pressure to help prevent the lungs from collapsing right down.

The last session of the day, facilitated by Allie Carter and Peta Smith, consisted of problem solving session and a manual techniques workshop.

The feedback from the day was extremely positive which everyone felt was great value.

Our thanks go to Kerrie Crowley, Senior Paediatric Physiotherapist working at Guys and St Thomas's who organised this very successful, and interesting day

APPLICATION FORM FOR A.P.C.P PUBLICATIONS – 2003

New Publication:

2003 Special Educational Needs
Code of Practice 2001
Guidance for Paediatric Physiotherapists £10.00

2002 Paediatric Physiotherapy Guidance for Good Practice £5.00

2002 - Obstetric Brachial Plexus Palsy
A Guide to physiotherapy management £10.00

2002 Hip Dislocation in Children with Cerebral Palsy
A guide to physiotherapy management £7.50

Evidence Based Practice

- Management of Obstetric Brachial Plexus Palsy £3.00
- Hip Subluxation and Dislocation in Children with Cerebral Palsy £3.00

OR ..... £5.00 for the pair

Paediatric Manual Handling – Guidelines for Paediatric Physiotherapists £10.00

Human Postural Reactions – Lessons from Purdon Martin by Dr J Foley £5.00

Tests and Measures Resources Pack (2nd Edition) £3.50

Baby Massage £1.50

The Children Act 1989 "A synopsis for Physiotherapists" £1.00

Guidelines for Calculating Caseloads (not available at present, in process of being updated)

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Paediatric Therapy Resource List.

The • represents books which we feel are good first line resources i.e. books which you might read or buy first

General Titles:

Burns Physiotherapy in the growing child. McDonald.

Campbell S (Ed) (2000) Physical therapy for children. WB Saunders Co.

• Eckersley P (Ed.) (1993) Elements of paediatric physiotherapy. Churchill Livingstone, Edinburgh. ISBN 0-44-03894-S

O'Hagan M and Smith M (1998) Special issues in child care. Balliere Tindall, London ISBN 0-7020-1604-7

• Shepherd R (1997) 2nd edition. Physiotherapy in paediatrics. Butterworth and Heinemann.

Tecklin J S (1999) 3rd edition Paediatric physical therapy. Lippincott Philadelphia.

Development:

• Sheridan M (1997) From birth to five years – children's developmental progress Nfer Nelson

Haywood K M (1993) "Lifespan Motor Development" 2nd edition. Human Kinetics.

Lee H (2000) The Developing Child 9th Edition Allyn and Bacon

Neurology

Aicardi J (1998) Disease of the nervous system in childhood 2nd Edition Mackeith Press, distributed by Cambridge University Press

Bobath K (1984) A neurological basis for the treatment of cerebral palsy Clinics in Developmental Medicine. SIMP, Suffolk ISBN 0-4330-3335-5

Bobath B Development in the different types of cerebral palsy.

Bobath B (1985) 3rd edition. Abnormal postural reflex activity. Heinemann

Campbell S (Ed) (1991) Paediatric neurological physical therapy. Churchill Livingstone, London.

Campbell S (2000) Physical Therapy for Children. W B Saunders Co.

Crombie S Home programmes for children with motor delay. Winslow Press.

Dubowitz V (1980) 2nd edition. The Floppy Infant. Clinics in Developmental Medicine No. 76. Heinemann, London ISBN 0433-07902-9

• Edwards S (Ed) (1997) "Neurological Physiotherapy" Churchill Livingstone

Finnie N (1997) 3rd edition. Handling the young child with cerebral palsy at home. Butterworth and Heinemann, Oxford. ISBN 0-7506-0579-0

Griffiths M and Clegg M (Eds.) (1997) 2nd edition. Cerebral Palsy problems and practice. Human Horizon Series/Souvenir Press.

Illingworth R (1991) 10th edition. The normal child. Livingstone.

Levitt S (1984) Paediatric developmental therapy. Blackwell Scientific Publications.

Levitt S (1995) 3rd edition. Treatment of cerebral palsy and motor delay. Blackwell Scientific Publications.

Scrutton D (Ed) (1990) Management of motor disorders with cerebral palsy. Clinics in Developmental Medicine. Cambridge University Press.

• Shumway-Cook A & Woollacott M (1995) "Motor Control: Theory and Practical applications" Williams and Wilkins

Stokes M (Ed) (1998) Neurological Physiotherapy. Mosby.

Disability

Hall D M B, Hill P D (1996) The Child with a Disability 2nd Edition Blackwell Science

McCarthy G T (Ed) (1992) Physical Disability in Childhood An interdisciplinary approach to management. Churchill Livingstone, London. ISBN0-443-04288-8

Morris J (1998) Don't leave us out: Involving disabled children and young people with communication impairments. York Publishing Services, York. ISBN 1 899987 80 0

Robinson C and Stalker K (1998) Growing up with disability. Jessica Kingsley Publishers, London. ISBN 1 85302 568 2

Russell J (1988) Graded activities for children with motor difficulties. Cambridge University Press.

Orthopaedic

Benson, Fixsen and Macnicol (Ed) Children's orthopaedics and fractures. Churchill Livingstone.

Bleck E (1987) Orthopaedic management in cerebral palsy. Mackeith Press.

• Gage J (1991) Gait Analysis in Cerebral Palsy. Mackeith Press, Oxford. ISBN 0-9012-6090-8

• Whittle M W (2002) 3rd Edition Gait Analysis an Introduction. Butterworth and Heinemann

Respiratory

Dinwiddie R (1990) The diagnosis and management of respiratory disease. Churchill Livingstone.

Greenough A, Robertson C and Milner A (Ed) (1996) Neonatal respiratory disorders. Arnold.

Prassad S A and Hussey J M (Ed) (1994) Paediatric respiratory care – a guide for physiotherapists and other health professionals. Chapman and Hall.

Webber B and Pryor J (1993) Physiotherapy for respiratory and cardiac problems. Churchill Livingstone, London. ISBN 0-443-04471-6

Swimming and Hydrotherapy

Association of Swimming Therapy. Swimming for the disabled. E P Publishers.

Reid–Campion M Hydrotherapy in paediatrics. Blackwell.

Riding

V Britton (1991) Riding for the disabled. Batsford.

Play

Jowsey S E Can I play too? David Fulton.

Lear R (1990) More play helps: Play ideas for children with special needs. Butterworth and Heinemann.

Research

Beresford B (1997) Personal Accounts: Involving disabled children in research. The Stationery Office, London. ISBN 0 11 702148 2

Bowling A (1999) Research Methods in Health Investigating Health and Health Services. Open University Press, Buckingham. ISBN 0-335-19885-6

Bury T and Mead J (1998) Evidence based healthcare. A practical guide for therapists. Butterworth and Heinemann. ISBN 0-7506-3435-9

• Hicks C (1997) 2nd edition Research for physiotherapists: Project design and analysis. Churchill Livingstone, London. ISBN 0-443-04999-8

Polgar S, Thomas S (2001) 4th edition Introduction to research in the health sciences. Churchill Livingstone, London. ISBN0-443-06265-X

Searl J and Barnard S (1998) Therapy Research: processes and practicalities. Butterworth and Heinemann. ISBN 0-7506-3783-8

Education

Pickles P A C (1998) Managing the curriculum for children with severe motor difficulties. A practical approach David Fulton Publishers

Postural Management

Pountney T. Mulcahy C, Clarke S, Green E (2000) The Chailey Approach to Postural Management. Active design Ltd

Manual Handling

• Graham J, Hurran C, Mackenzie M (1999) Paediatric Manual Handling Guidelines for Paediatric Physiotherapists. APCP Publications

Eisteddfod Genedlaethol – Meifod 2003

Tuesday the 5th of August was the Paediatric day at the Eisteddfod. Paediatrics was one of the different specialities chosen for the CSP stand as part of the Celebrating Innovation in Physiotherapy week. The stand was manned by Physiotherapists from all over Wales mostly Welsh speaking (due to the nature of the event). The aim was to raise awareness of Physiotherapy within Paediatric care highlighting the different types of therapy on offer in the different settings. The stand also had information packs for the public for a variety of specialities. To entice people to the stand there was a "name the skeleton" competition and a free prize draw to win a signed Welsh rugby ball. Over 100 members of the public attended the stand with very positive feedback.

Dydd mawrth yr 5ed o Awst oedd diwrnod Pediatrig yn yr Eisteddfod. Roedd Pediatrig yn un o'r wahanol arbennigon wedi'l ddewis I fod ar y stondin fel rhan o wythnos Ffisiotherapi I Ddathlu Arloesedd. Ar y stondin roedd y mwyafrif o'r Ffisiotherapyddion yn gallu'r Gymraeg (achos o'r fath o sioe). Ein nod oedd I ehangu dealltwriaeth y cyhoedd o'r wahanol mannau a'r wahanol mathau o Ffisiotherapi ar gael I plant. Ar y stondin roedd yna sawl wahanol pecyn o wybodaeth ar gael l'r cyhoedd ar gyfer wahanol arbennigon. I helpu dod a phobol at y stondin roedd yna cystadleuaeth "enwi'r ysgerbwd" a raffl am ddim I ennill pel rygbi wedi'l llofnodi gan chwareuqyr Cymru. Daeth dros 100 o aelodau o'r cyhoedd l'r stondin a cawsom ymateb positif iawn.

Nesta McCluskey

ESTER COTTON

1912-2003

Ester Cotton died on the 22 August. She had a long, fascinating and productive life. Ester was born in Copenhagen, Denmark into a lively family with wide interests in the arts as well as in science. Her father, a professor of geometry, and her mother a teacher, raised the five children in a way common in Denmark at the time. Excellence in mind and body was encouraged and Ester and her two older sisters achieved much between them. One of her older sisters was a great beauty and an actress and the other became a well-known journalist. Oliver Cotton, Ester's son describes her family as 'brilliant, but highly strung' and likens the relationships with the Woody Allen film 'Hannah and her Sisters'. Ester was an excellent gymnast and was chosen for the Danish Olympic team, but the games were to be held in Berlin and were boycotted by the Danes in a protest against Hitler. Later on, in the early 1930s she left Copenhagen to settle in Berlin with her first husband Rolf Brandt, an actor who later became a painter. Ester was only 19 years old. In Berlin they were exposed to a formative mix of political, social, intellectual and artistic influences and they had a wide circle of friends, which included Bertolt Brecht. A few years later, Ester and her husband took the opportunity to leave Germany and moved to England. Later they separated, but remained lifelong friends.

In London, Ester continued her studies and worked as a physiotherapist in a number of London hospitals, including the Maudsley. In 1959 she started to work at the Western Cerebral Palsy Centre where she was taught by Karel and Berta Bobath, who encouraged her to make contact with Andras Petö when visiting friends in Budapest. That was the start of her devoted interest in Conductive Education (CE). She introduced the system in the UK in 1965 and for the next 30 years she lectured, ran courses and wrote, spreading CE throughout the world. Her husband, Bob Cotton, supported her with much humour and wisdom. They had a long life together and Bob died only a few weeks before her. Their children Frances and Oliver shared their interest in the arts.

Ester moved on in her thinking well beyond her 80th birthday. She had new ideas and made new connections with an astonishing appetite for learning and understanding. She enjoyed and learned from the writings of Oliver Sacks whose work elucidates the neurology of CE. It was significant that she became an Honorary Doctor of Education in Edinburgh in 1991 and with this recognition she had crossed professional boundaries. Her humane approach to children and staff alike and a deep trust in us all - she transmitted respect, confidence and interest in the human being.

Lillemor Jernqvist PhD
Director
Craighalbert Centre

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GILL HOLMES
CLINICAL SPECIALIST
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Telephone: 0151 228 4811 ext 2660
E-mail address: Gill.Holmes@RLCH-TR.nwest.co.uk

ESSAY COMPETITION

Sponsored by ALLERGAN

WIN A FREE PLACE TO CONFERENCE 2004

30 April to 2 May 2004

At the Crowne Plaza Hotel on Liverpool's waterfront

One full conference package, including travel, will be awarded to the winner of the best essay in each of the following two categories:

1. **A view of the Extended Scope Physiotherapy Practitioner**
2. **The Role of the Paediatric Physiotherapist in the Management of Spasticity**

Essays should be no more than 1500 words and be sent direct to: Allergan by **1st January 2004 –**

Carolyn Kelday
Reimbursement and Access Manager
Allergan
Coronation Road
High Wycombe
Bucks HP12 3SH

Don't miss your chance - Conference 2004 promises to be an exciting and stimulating event

SWEATSHIRT ORDER FORM

Fruit of the Loom raglan sweatshirts 70/30 cotton/ polyester printed with APCP Liverpool Conference Logo

Orders must be in by 25th March 2004 to be collected at Conference. Postage will be charged for orders received after this date.

NAME.....

ADDRESS.....

.....

CONTACT TEL .....

PRICE PER SHIRT: £15 SIZES: S38 M40 L42 XL46

COLOUR	S	M	L	XL	COST
NAVY					
RED					
				TOTAL	

SEND ORDER FORM WITH PAYMENT TO:

Linda Whitaker, 21, Hague Bar,
New Mills, High Peak SK22 3AT

Cheques payable to: APCP Conference Account 2004

NOT TOO LATE FOR LOWER RATES !

We have extended the earlybird deadline rates for Conference applications from 28 November to 28 December 2003 – See application form in this journal

ADDITIONAL OPTIONAL EXTRA – FRIDAY EVENING SEMINAR

We have added an additional optional extra Friday evening seminar. This will be on the management of abnormal muscle tone / movement disorders – See application form. Those who have already applied for conference will receive information about this with your application acknowledgement from the conference secretary

CONFERENCE DINNER

Don't forget to apply for Conference Dinner - price £25
We will have a range of exciting entertainment including a live band plus other novel entertainment!

TRADES EXHIBITION

We have had an excellent response from companies wishing to exhibit and Liverpool actor **RICKY TOMLINSON** will open the trade exhibition at the end of Friday afternoon

FRIDAY MORNING EXTRA

For those arriving on Thursday evening we can offer a tour of the Liverpool Tate gallery at 10 am on Friday morning. The gallery is only a 10 minutes walk from the Conference Hotel

If you are interested please contact-

Juliet Weston - Juliet.Weston@blueyonder.co.uk
(or put a note in with your conference application

TAILOR-MADE NEUROPAEDIATRIC COURSES

Are you interested in running a course like this in your department? These tailor-made courses have been running successfully in the West Midlands area. The courses are appropriate for all therapists and can be easily adapted for therapy assistants to provide formal and informal teaching centred around workshops, lectures, videos and patient demonstrations. Emphasis is placed on the Bobath approach to the management of cerebral palsy

For further information contact - Pauline Christmas MSc MCSP,
Rectory View Cottage, Churchill Lane, Churchill, Nr Kidderminister DV10 3LX
tel 07973362792

Email - pmchristmas@beeb.net

HYDROTHERAPY FOR CHILDREN WITH NEUROLOGICAL DYSFUNCTION

Venue:	CHASE, Children's Hospice Service, Guildford, Surrey
Date:	26th - 28th January 2004
Tutor:	Heather Epps MSc MCSP SRP HT Grad Dip Phys Clinical Specialist Physiotherapist in Paediatrics & Adolescence
Programme:	This 3-day course is designed to provide physiotherapists with the theoretical knowledge & clinical skills to assess & treat children with neurological dysfunction in hydrotherapy. Course includes a strong practical element & patient participation.
Cost:	£280.00 MAXIMUM 8 PARTICIPANTS

For an application form or details on future courses for Physiotherapists or Assistants,
Contact: Heather Epps Tel: 01306 880 693 or Mobile: 07930 318 477
E-mail: info@childrensphysio.co.uk or visit www.childrensphysio.co.uk

Symmetrikit Postural Care Pathway

The Family Centred Approach to Postural Care

Course and Pathway Co-ordinator : **Claire Johnson**

Tutors :
John and Liz Goldsmith, David Hill, Claire Whittle, Stuart Moore, Sheldon Jones

A forum for therapists developing 24 hour Postural Care

The Verzons Country House Hotel, Nr Ledbury, Herefordshire

11th, 12th & 13th February 2004

£350 (excl. VAT) for two nights full board inclusive of seminars and Pathway materials (first come first served for single rooms, then sharing twin bedded rooms)

This course will provide therapists with an opportunity to work with others providing postural care and developing Care Pathways to provide a structured and practical approach to:-

Identifying Need
Assessment and Training
Equipment Acquisition
Monitoring and support
Reassessment and Retraining

Discussion and guidance on piloting and implementing the Care Pathway along with materials for presentations to management on the introduction of changes to service delivery. Develop and justify Consultant status. Lead a structured Postural Care Service integrated across disciplines and providers by using the Symmetrikit Postural Care Pathway

The subjects will include:-
Biomechanics and measurement combined with physiology of chest distortion
Biomechanics and measurement of windswept body shape
The physiology involved in achieving thermal comfort
Sleep and the Family
Behavioural and positioning strategies
Photography and documentation of Postural Care
SPACE IS LIMITED

Applications to Claire Johnson : The Helping Hand Company (Ledbury) Ltd
Bromyard Road Industrial Estate, Ledbury, Herefordshire. HR8 1NS
Tel 01531 635388
email clairejohnson@helpinghand.co.uk

Institute of Child Health
and Great Ormond Street Hospital for Children NHS Trust
UNIVERSITY COLLEGE LONDON

Paediatric Physiotherapy Study Days

Monday 7 – Friday 11 June 2004

Fee: £475 (daily rate: £115)

Intended for all physiotherapists with an interest in paediatrics, primarily Senior II & above the course is run as five one day modules. The daily programmes will consist of lectures & interactive workshops allowing plenty of opportunity to discuss & share experiences. The course also looks at conditions requiring physiotherapy input at a tertiary centre & considers the interaction between local community services & some of the more complex & long term conditions currently seen in paediatrics.

Courses and Conferences Office, Institute of Child Health, 30 Guilford Street, London WC1N 1EH.
Tel: 020 7905 2135 / 7829 8692 / 7813 8394 Fax: 020 7831 6902
Email: Courses@ich.ucl.ac.uk

To apply & for further details on our wider programme of events visit our website at www.ich.ucl.ac.uk/shortcourses

CHELSEA AND WESTMINSTER HOSPITAL PHYSIOTHERAPY DEPARTMENT

The dynamic and friendly physiotherapy department at Chelsea and Westminster Hospital, London, is committed to personal and professional development. Research is actively encouraged and there is extensive in-service training and support for further post-graduate education.

We have an exciting opportunity to join our expanding, well established department of 13 paediatric physiotherapists, including paediatric orthopaedic physiotherapy practitioners, based at Chelsea and Westminster Hospital, working with the multidisciplinary teams providing acute and community services.

SENIOR I/II PAEDIATRIC COMMUNITY PHYSIOTHERAPIST

(Depending on experience)

Senior I: £27,345 - £31,731 pa inc.

Senior II: £23,611 – 28,975 pa inc.

36 hours full/part-time

We are looking for a physiotherapist who is dynamic and enthusiastic with at least 4 years' post-graduate experience including a minimum of 18 months' paediatric experience. This post may suit someone who is considering returning to work and who has had previous experience with children with complex needs or an experienced senior II physiotherapist who needs a period of transition with the support of more experienced paediatric physiotherapists to help him or her meet the level of competency required for the senior I post.

As a member of the paediatric multidisciplinary team based at St. Dunstan's Clinic, St Dunstan's Road, the senior I/II is one of five paediatric senior I and II physiotherapists serving children in Hammersmith and Fulham community, special and mainstream schools, nurseries and outpatients.

For further information or to arrange an informal visit, please contact Sue Hay, Paediatric Superintendent on 020 8846-1615, e-mail susan.hay@chelwest.nhs.uk

For an application form and job description please print an application form from www.chelwest.nhs.uk or email Emma.Winborne@chelwest.nhs.uk or telephone our 24 hour answering service on 020 8746 8375. Please quote reference EW/605.

Closing date: 26th January 2004

THE APCP RESEARCH GROUP REGISTER

If you would like to be a member of the APCP research group, please fill in the form below and return it to Sarah Crombie, Research Officer, 10a Record Road, Emsworth, PO10 7NS.
This information will be used to inform you of research study days and help us to learn more about our members' research interest.

Name

Contact
Address

Post Code

Tel. No.

Fax No.

E-Mail:

What are your research interests?

Are you undertaking any type of research project small or large? **YES/NO**
If so please give a brief summary . . .

Would you be happy for other physiotherapists with similar research interests to be put in touch with you? **YES/NO**

Thank you for completing this form.

The National Committee
wishes you all the
Very Best for
Christmas
and a Prosperous
and Successful 2004

LOOK OUT FOR THE NEW FORMAT APCP JOURNAL IN MARCH 2004

IT IS YOUR JOURNAL AND ALL YOUR CONTRIBUTIONS ARE WELCOMED FOR CONSIDERATION BY THE EDITORIAL BOARD

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