

Searching for Evidence

Internet Approaches that are
Quick, Painless and Effective

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- ✦ Early Intervention
- ✦ NICU
- ✦ School-based
- ✦ Adults
- ✦ Aquatic PT

Agenda

- ✦ Asking the right question
- ✦ Medline
- ✦ Hooked on Evidence
- ✦ Cochrane
- ✦ CINAAL
- ✦ Real Live On-Line Adventure

Real Live On-Line Adventures

- ✦ PWBTT
- ✦ Theratogs
- ✦ Adeli Suit
- ✦ Your challenges/experiences

Phrasing Your Question

- ✦ Use quotation marks
 - "cerebral palsy" vs cerebral palsy
- ✦ Shorten the word (omit ending)
 - child vs children
 - Stand vs standing
- ✦ Use the word "and"
 - "cerebral palsy" and "child"

Let's go online and play

- ✦ Log on to www.apta.org
- ✦ Enter your name and password
- ✦ Click on Research
- ✦ Click on APTA's Medline Search Page
- ✦ I want to do my own search of the MEDLINE database at the National Library of Medicine

Getting to Medline

- ✦ <http://www.nlm.nih.gov/>
click on MEDLINE/PubMed, MedlinePlus, NLM Gateway
- ✦ <http://www.nlm.nih.gov/hinfo.html>
click on MEDLINE/PubMed
- ✦ <http://www.ncbi.nlm.nih.gov/entrez/query.fcgi>
- ✦ Now you are in. You can go right here if you don't want full text articles from PT Journal

Now Let's play

- ✦ Cerebral Palsy -11037 hits
- ✦ Cerebral Palsy and children -6819 hits
- ✦ Cerebral Palsy and children and stand -121 hits
- ✦ Cerebral Palsy and children and standing -72 hits
- ✦ Cerebral Palsy and children and stander -2 hits

Medline - <http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?CMD=Search&DB=PubMed>

- ✦ Get the abstracts
 - ▢ Search constraint induced therapy
 - ▢ Click on reference
- ✦ Get similar articles
 - ▢ Click related articles
- ✦ Look by Author

Getting the Full Text Article

- ✦ Configure your proxy for you local university library (call for help)
- ✦ Buy them (approx \$10-\$15 per article)
- ✦ Stick to journals you already subscribe to

PT Journal

- ✦ Must be an APTA member
- ✦ If article on Medline is from the Journal then click on full text.
 - ▢ Dumas HM, Haley SM, Ludlow LH, Carey TM. Recovery of ambulation during inpatient rehabilitation: physical therapist prognosis for children and adolescents with traumatic brain injury.

Pediatric PT Journal

- ✦ IS NOT ON MEDLINE!
- ✦ www.pediatricapta.org/members/peds-publications.cfm
- ✦ You must be a member of the pediatric section and enter your APTA membership number and password

Hooked on Evidence

- ✦ Apta.org
- ✦ Research
- ✦ Hooked on Evidence
- ✦ Must be APTA member
- ✦ Cerebral Palsy and Strength

Hooked on Evidence

- ✦ Hunted, Gathered and Entered by People Like Us
- ✦ Includes references not on Medline

Cochrane

- ✦ <http://www.cochrane.org>
- ✦ International non-profit and independent organization, dedicated to making up-to-date, accurate information about the effects of healthcare readily available worldwide. It was founded in 1993 and named for the British epidemiologist, Archie Cochrane.
- ✦ Treadmill

CINAHL

- ✦ <http://www.cinahl.com>
- ✦ Clinical Index of Nursing and Allied Health Literature
- ✦ Started in 1994, now 3,442,915 citations in the database
- ✦ Need access thru your library

Joe Schmoe

- ✦ You are not a member of APTA, and not affiliated with a university library
- ✦ Stuff off the regular Internet may be biased and just plain lies
- ✦ Search Engines
 - Dogpile.com is a metasearch engine
 - Google can find just images

PWBTT

- ✦ Let's begin with Medline
 - BWS
 - Lufband
 - Supported and "Treadmill Training"

PubMed/Medline

- ✦ "partial weight bearing" and treadmill
 - Yields 3 hits
- ✦ "weight support" and treadmill
 - Yields 79 hits
- ✦ Laufband and treadmill
 - Yields 6 hits

PWBTT and CP

- ✦ "cerebral palsy" and treadmill
 - Yields 22 hits
- ✦ Schindl MR, Forstner C, Kern H, Hesse S. Related Articles
 - Yields 356 hits

Dynamic Lycra Splinting

- ✦ Benik (www.benik.com)
- ✦ Theratogs (www.theratogs.com)
- ✦ Adeli Suit
- ✦ Upsuit
- ✦ Spio

Compression Garments

- Gracies JM, Maruszczek JE, Renton R, Sanderson J, Gandevia SC, Burke D. Short-term effects of dynamic lycra splints on upper limb in hemiplegic patients. *Arch Phys Med Rehabil.* 2000 Dec;81(12):1547-55.
- Hyton N, Allan C. The development and use of SPIO Lycra compression bracing in children with neuromotor deficits. *Pediatr Rehabil.* 1997 Apr-Jun;1(2):109-16.
- Blair F, Ballantyne J, Horsman S, Chauvel P. A study of a dynamic proximal stability splint in the management of children with cerebral palsy. *Dev Med Child Neurol.* 1995 Jun;37(6):544-54.
- Nicholson JH, Morton RE, Atfield S, Reenie D. Assessment of upper-limb function and movement in children with cerebral palsy wearing lycra garments. *Dev Med Child Neurol.* 2001 Jun;43(6):384-91.
- Reenie DJ, Atfield SF, Morton RE, Polak FJ, Nicholson J. An evaluation of lycra garments in the lower limb using 3-D gait analysis and functional assessment (PEDi). *Gait Posture.* 2000 Sep;12(1):1-6.
- Gracies JM, Fitzpatrick R, Wilson J, Burke D, Gandevia SC. Lycra garments designed for patients with upper limb spasticity: mechanical effects in normal subjects. *Arch Phys Med Rehabil.* 1997 Oct;78(10):1066-71.
- Palop G, Hubbard S, Brie E, and K O'Donnell. Dynamic Trunk Splints and Hypotonia. *Physical Therapy Case Reports* vol2 No. 3 May 1999 pp122-4.

- ✦ Stabiligraphic investigations of children afflicted with
- ✦ 30 children with spastic CP
- ✦ Prior to, immediately after, and in a delayed period after this treatment.
- ✦ 11 healthy controls.
- ✦ Application of ADELI increases the role of visual analyzer in the control of standing pose. Following the treatment, the stabilimetric indices of patients changed for the better and approached those in healthy subjects.

Sologubov EG, Iavorskii AB, Kobrin VI, Barer AS, Bosykh VG.
[Role of vestibular and visual analyzers in changes of postural activity of patients with childhood cerebral palsy in the process of treatment with space technology]
Aviakosm Ekolog Med 1995;29(5):30-4

- ✦ 70% of patients showed improvements in walking and self-care ability.
- ✦ The positive effects of this method were demonstrated objectively using electroencephalography, electroneuromyography, studies of somatosensory evoked potentials, and studies of the vestibular system.

Semenova KA. Basis for a method of dynamic proprioceptive correction in the restorative treatment of patients with residual-stage infantile cerebral palsy. *Neurosci Behav Physiol* 1997 Nov-Dec;27(6):639-43

✱25 children with spastic diplegia.

✱Decrease of an amplitude of bioelectric activity in spastic muscles

✱Increase of an amplitude of agonists' biopotentials at arbitrary movements.

✱Improvement of motor functions

Semenova KA, Antonova LV • [The influence of the LK-92 "Adeli" treatment loading suit on electro-neuro-myographic characteristics in patients with infantile cerebral paralysis]
Zh Nevrol Psikhiatr I m S S Korsakova 1998;98(9):22-5[Article in Russian]

✱ Results were obtained using a new method, based on the "Adeli-92" therapeutic space suit, for the rehabilitation of patients with movement disorders due to acute lesions of the cerebral circulation, head trauma, and other causes. A variety of methods was used to assess the state of patients before and after treatment, including clinical studies, psychological tests, EEG recordings, evoked potential studies, stabilography, and heart rhythm analysis. The results obtained demonstrate the high efficacy of this new method.

Shvarkov SB, Davydov OS, Kuuz RA, Aipova TR, Vein AM. New approaches to the rehabilitation of patients with neurological movement defects. *Neurosci Behav Physiol* 1997 Nov-Dec;27(6):644-7