



Your Therapy Source News

**Digital magazine for pediatric
occupational and physical therapists.**

Issue 17 - August 2010

www.YourTherapySource.com

New and Popular Products



Print and Create Fine Motor Projects - Back to School

Download of the materials to create 10 fine motor activities with a back to school theme.

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www.YourTherapySource.com/grasshoppersnip



ABC's and Simple Shapes/ Following Directions Kits: 2 kits in one to get children ready for school.

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Functional Skills of Children with Cerebral Palsy

A

cross sectional study of 562 Swedish children with cerebral palsy (ages 3-18 years) was performed from 1990-2005. The researchers analyzed data regarding how a child sits, stands, stands up, sits down and the use of assistive devices.

The results indicated the following:

- 57% of children used standard chairs
- 62% could stand independently
- 62% could stand up without external support
- 63% could sit down without external support
- 42% used adaptive seating
- 31% used external support to stand
- 19% used external support to stand up
- 13% used external support to sit down

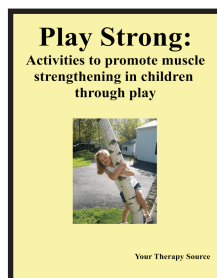
Combining the children who used external support (including adaptive seating) with the children who could perform the skills independently the results indicated the following:

- 99% of the children could sit
- 96% could stand
- 81% could stand up
- 81% could sit down.

The Gross Motor Function Classification System was a good predictor of the ability to sit and stand. Children ages 3-6 years old used support more frequently.

To read the full text article go to <http://www.biomedcentral.com/1471-2474/11/131>

Reference: Elisabet Rodby-Bousquet and Gunnar Hägglund. Sitting and standing performance in a total population of children with cerebral palsy: a cross-sectional study BMC Musculoskeletal Disorders 2010, 11:131doi:10.1186/1471-2474-11-131



Play Strong - Activities to Promote Muscle Strengthening in Children Through Play

More information at

www.YourTherapySource.com/playstrong

Exercise Levels of Adolescents with Cerebral Palsy

A

According to the Summer issue of Pediatric Physical Therapy 9.4% of adolescents with cerebral palsy (126 males and 104 females) studied participate in weekly levels of moderate physical activity. Only 11.4% of the sample participated in weekly levels of vigorous physical activity. Gross Motor Function Classification System Levels did have a significant effect on light to moderate exercise. Females stretched more than males.

The researchers recommended that pediatric physical therapists need to encourage exercise programs for adolescents with cerebral palsy.

Read blog post on exercise and cerebral palsy at <http://yourtherapysource.blogspot.com/2010/06/part-3-exercise-participation-cerebral.html>.

Additional research indicates that function declines in adolescents with cerebral palsy. Read more at <http://yourtherapysource.blogspot.com/2010/03/decline-in-function-in-adolescents-with.html>

Reference: Brunton, Laura K. Bkin, MSc; Bartlett, Doreen J. PT, PhD Description of Exercise Participation of Adolescents With Cerebral Palsy Across a 4-Year Period Pediatric Physical Therapy: Summer 2010 - Volume 22 - Issue 2 - pp 180-187 doi: 10.1097/PEP.0b013e3181db8aaa

Aerobic Fitness for Youth With Cerebral Palsy

P

hysical Therapy published reference values for aerobic fitness in children, adolescents, and young adults who have cerebral palsy and are ambulatory. Three hundred six youth (ages 6-20), who were classified as Gross Motor Function Classification System levels I and II, were tested on the 10 m shuttle run. Based on the test scores, 4 reference curves were established. For any therapist working on aerobic fitness in children with CP, this article would be helpful to compare the children to a homogeneous group.

Reference: Verschuren, Olaf, Bloemen, Manon, Kruitwagen, Cas, Takken, Tim
Reference Values for Aerobic Fitness in Children, Adolescents, and Young Adults Who Have Cerebral Palsy and Are Ambulatory PHYS THER 2010 0: ptj.20090318

Family Priorities for Children with Cerebral Palsy

Physical Therapy has published research on family priorities for activity and participation of children and youth with cerebral palsy. Caregivers (80% mothers) of 585 children with cerebral palsy completed the Canadian Occupational Performance Measure. This measure identified priorities for daily activities, productivity and leisure. Gross Motor Function Classification System levels (GMFCS) were determined for each child.

The results indicated that daily activities had the most priority for all children GMFCS levels II-V. Caregivers of the children prioritized self help skills with the most priority in the sub categories. Increased priorities for productivity was higher for caregivers of school aged children and youth compared to parents of younger children. At least one priority related to mobility was recorded by 61% of caregivers.

This research provides physical and occupational therapists with important reminders. Family priorities are daily activities, self help skills and mobility. Translation - keep therapy goals and outcomes functional and purposeful!

Reference: Chiarello, Lisa A., Palisano, Robert J., Maggs, Jill M., Orlin, Margo N., Almasri, Nihad, Kang, Lin-Ju, Chang, Hui-Ju
Family Priorities for Activity and Participation of Children and Youth With Cerebral Palsy *PHYS THER* 2010 0: ptj.20090388

Adapted Constraint Induced Therapy

Clinical Rehabilitation published research on an adapted version of constraint-induced movement therapy to promote functioning in children with cerebral palsy. Sixteen children with cerebral palsy (mean age 5 years 6 months) participated in constraint induced therapy for 2 weeks. The control group received the usual rehabilitation services during the 2 weeks. The intervention group had the non-involved extremity restricted for 10 hours per day with 3 hours of intensive training with the affected extremity. The experimental group also received bimanual functional training for one week following the constraint therapy. The self care domain of the Pediatric Evaluation of Disability Inventory and an adapted version of the Jebsen—Taylor test were completed at the start of the intervention, following completion of the intervention and at one month follow up.

Results indicated higher gains in the experimental group for functional skills and independence. No differences were found in manual dexterity between the two groups.

References: Marina de Brito Brandão, Marisa Cotta Mancini, Daniela Virgínia Vaz, Ana Paula Pereira de Melo, and Sérgio Teixeira Fonseca Adapted version of constraint-induced movement therapy promotes functioning in children with cerebral palsy: a randomized controlled trial *Clin Rehabil* 2010 24: 639-647

DCD and Risk of Obesity

The *Canadian Medical Association Journal* published research on a study of over 2000 children from 4th through 6th grades. The children were screened for coordination disorders. One hundred eleven children had a potential diagnosis of developmental coordination disorder (DCD). The 111 children exhibited a higher body mass index and waist circumference in 4th grade which persisted throughout the two years they were followed. In addition, the children with potential DCD were at greater risk of being overweight or obese.

As pediatric therapists, we can help educate parents and teachers on the signs and risks of DCD. In addition to providing therapeutic treatment for children with DCD, therapists can suggest modifications, accommodations and suitable sports/recreational/leisure activities to encourage physical activity in this population of children.

Reference: Cairney, John, Hay, John, Veldhuizen, Scott, Missiuna, Cheryl, Mahlberg, Nadilein, Fought, Brent E Trajectories of relative weight and waist circumference among children with and without developmental coordination disorder CMAJ 2010 0: cmaj.091454

Developmental Coordination Disorder, ADHD and Emotional Problems

Current Opinions in Psychiatry published a review of motor coordination and emotional-behavioral problems in children. The authors begin by discussing measurement issues with regards to developmental coordination disorder (DCD) i.e. lack of specific definition of exactly how much a child needs to be delayed to get a diagnosis of DCD and lack of consistent terminology to describe motor delays.

Almost half of all children with ADHD have DCD, this leads the authors and others to question whether they are separate diagnoses or sub categories of ADHD. It is discussed how these disorders feed off of each other - motor skill delay may result in decreased attention span.

Studies are discussed that have established a connection between DCD and internalizing disorders such as anxiety and depression.

The researchers recommend additional research on motor coordination problems and mental health issues.

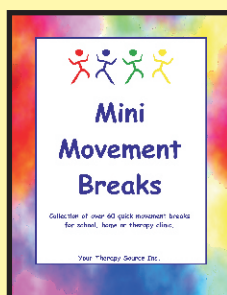
Reference: Cairney, John; Veldhuizen, Scott; Szatmari, Peter. Motor coordination and emotional-behavioral problems in children. *Current Opinion in Psychiatry*: July 2010 - Volume 23 - Issue 4 - p 324–329 doi: 10.1097/YCO.0b013e32833aa0aa

Screen Time and Attention Span

Pediatrics will be publishing a study on the effects of television and video gaming on attention problems. One thousand three hundred twenty three children (6-12 years old) were followed for 13 months. Television and video gaming use were recorded. The average screen time use (TV and video games) was 4.26 hours. Teachers reported on attention problems in students. The results indicated that exposure to television and video games was associated with attention problems in middle childhood. The association existed for television and video game use.

Turn off the television and the video games! Need ideas for TV free activities? Check out <http://yourtherapysource.com/freestuff.html> for loads of free downloads and activity ideas.

Reference: Swing, Edward L., Gentile, Douglas A., Anderson, Craig A., Walsh, David A. Television and Video Game Exposure and the Development of Attention Problems *Pediatrics* 2010 0: peds.2009-1508



Mini Movement Breaks: 60+ quick sensory motor activity idea cards

More information at
www.YourTherapySource.com/minimove

Parietal Cortex Involved in Proprioception

Recent research published in *Current Biology* reports on proprioception. Subjects had to determine information regarding touch AND location. The posterior parietal cortex was the brain area responsible to determine touch AND location. When magnetic stimulation was used to impair the subject's parietal cortex, the perception of touch or location alone was not decreased. It was only when the subjects were asked to define touch AND location, that the results were impaired. This information could play a key role in determining how children develop a map of the body in space.

Reference: Part of the brain that tracks limbs in space discovered. Retrieved from the web on 7/26/10 at <http://www.physorg.com/news198391893.html>

Hot Topics

Non Surgical Intervention for Flat Feet

A Cochrane Review was published entitled "Non-surgical Interventions for Paediatric Pes Planus". The research indicates that custom foot orthoses may improve pain and function slightly. Three studies were included in the review. In one study, children with juvenile arthritis reported significant reduction in pain and reduction in disability while using the custom foot orthoses. The second study revealed no differences following the use of orthoses for children with bilateral flat feet. The authors concluded that due to the limited trials, no conclusions can be made regarding non surgical interventions of pes planus.

Reference: Rome K, Ashford RL, Evans A. Non-surgical interventions for paediatric pes planus. Cochrane Database of Systematic Reviews 2010, Issue 7. Art. No.: CD006311. DOI: 10.1002/14651858.CD006311.pub2

Shadows and Autistic Children

Researchers in Italy studied 20 high functioning children with autism compared to neurotypical children regarding picture/ shape identification with and without shadows present. The presence of shadows hampered the children with autism's ability to recognize the objects. The researchers hypothesize that the children may hyperfocus on the shadows distracting their attention. The researchers recommend using multiple light sources for children with autism to reduce shadows.

On an additional note, during the study, the researchers observed that the children with autism had strict routines regarding snack time i.e. food placement, type of snack, etc.

Reference: Charles Q. Choi, LiveScience Contributor. Shadows Distract Autistic Children. Retrieved on the web on 5/21/2010 from <http://www.livescience.com/health/Shadows-Distract-Autistic-Children-100520.html>

Right and Left Motivation?

An interesting study was published in Psychological Science regarding motivation in adults. Using a computer screen and subliminal images, the researchers determined that motivation can occur on only one side of the brain and body at a time. For example, the subjects were shown a subliminal image of a coin on one side of the computer screen. The subjects were instructed to squeeze a pressure sensing hand grip to get more of the coins. When the image appeared on the right side of the computer screen and the subject was squeezing with the right hand, then the subject would squeeze harder to get more coins. If the coin image appeared on the left side of the screen and the subject was squeezing on the right, the subject did not squeeze harder. The researchers concluded that motivation can occur on the right or left side of the brain therefore motivating only one side of the body as well.

This research raises some interesting questions for motivation in children. Children's behaviors can often be altered based on motivational levels. When individuals are strongly right or left side dominant does this consistently effect motivation levels? What about motivation levels in children with hemiplegia?

Reference: Physorg.com Is your left hand more motivated than your right hand? Retrieved from the web at <http://www.physorg.com/news197039212.html> on 7/10/10.

On the Web...

Information on Technology Supports for Writing

The Texas Assistive Technology Network has published online information regarding technology supports for struggling writers. The objectives of this module are to

"understand a framework for the writing process, identify research-based, technology supported strategies to assist struggling writers and to locate available technology resources that will assist those struggling writers".

The module also offers many ideas for universal design and accommodations for the classroom. You can view the training module for free at the Texas Assistive Technology Network website at

<http://www.texasat.net/default.aspx?name=trainmod.writing>.

Measuring Inclusion in Early Childhood

If you are a teacher, parent or therapist for children in an early childhood inclusive setting you may want to check out two new resources that can assist you in determining the quality of your inclusion program. The SpeciaLink Early Childhood Inclusion Quality Scale was developed in 2009 to assess inclusion quality in early childhood settings.

The Inclusive Classroom Profile was developed to assess daily classroom practices that support students with disabilities. This tool appears to be a great measurement of adult involvement with the child, social interactions of the child, communication, adapting of activities and more. You can download this assessment tool at <http://community.fpg.unc.edu/resources/community-contributed-content/Inclusive-Classroom-Profile-final-3-23-2010.pdf>

For more information on these tools visit the Early Childhood Community website at

<http://community.fpg.unc.edu/discussions/blog-speaking-of-inclusion/measuring-the-quality-of-inclusion>

Free Download on Teaching Life Skills

Parents, teachers and therapists who instruct teens and young adults, may want to check out Ready, Set , Fly A Parents Guide to Teaching Life Skills. This electronic book was created with foster parents in mind in particular but it is very useful for all parents and therapists. The activities are graded using different levels based on age (activities are developed for children ages 8 years old and up). The book is divided into several chapters on topics such as Daily Living Skills, Housing, Transportation & Community Resources, Money Management, Self-Care, Social Development and Work & Study Skills. The book includes many simple ideas for parents to carry out at home. Great resource and FREE!!! You can find Ready, Set, Fly! A Parent's Guide To Teaching Life Skills (published by Casey Family Programs) at <http://www.caseylifeskills.org/pages/res/rsf%5CRSF.pdf>.

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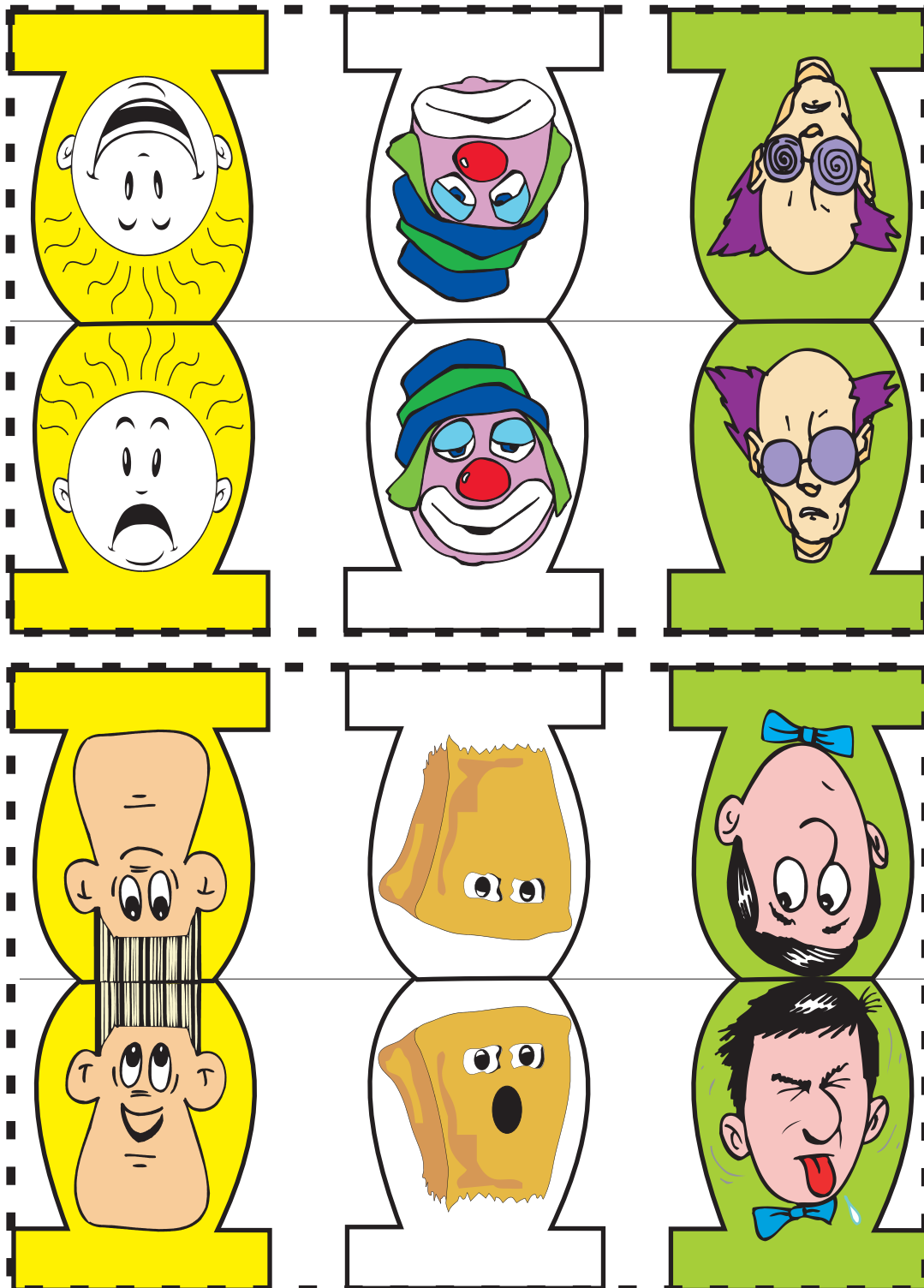
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Pencil Toppers

Directions: Print out page. Cut out along the 2 dashed rectangles. Fold in middle at thin black solid line. Cut out each pencil topper. Place on top of pencil and tape bottom flaps together tightly. Spin pencil in between palms of hands to watch the faces change.

Sample page from *Print and Create Fine Motor Projects - Back to School*



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