



Digital magazine for pediatric occupational and physical therapists.

## Issue 25 - April 2011

## **New and Popular Products**



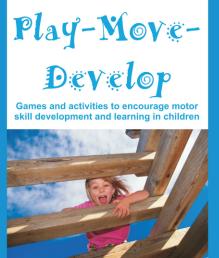
#### Active Arms:

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## **Benefits of Gardening With Children**

ith Spring upon us, why not get children started with some gardening. Gardening offers children excellent sensory motor exploration. Think of all the senses that are involved in gardening:

1. Tactile - touching the rough seeds, feeling the dry dirt, experiencing cold, wet mud, handling the soft fuzz of a green bean or the smooth skin of a melon

2. Proprioceptive - digging in the dirt, pushing a seed into the ground, carrying watering cans, hauling watermelons and pulling weeds

3. Olfactory - smelling the flowers, herbs and vegetables

4. Taste - enjoying a crisp bite of a carrot or a warm tomato from the sun

Now think of all the motor experiences:

1. Fine motor - handling the small seeds or picking a berry or bean

2. Gross motor - kneeling in the garden, quadruped searching for cucumbers, squatting and standing

3. Coordination - using garden tools with both hands or maneuvering a wheelbarrow

4. Balance - avoiding stepping on plants or walking on the uneven ground

Why not start a garden this Spring. Here are some tips to creating a successful garden experience with children.

\* Make sure you get the children involved. Ask what types of food or flowers they would like to grow.

\* Look for seeds with short germination periods to keep the children interested.

\* Give each child a small area that they can plant their seeds. Mark each child's with a self decorate garden marker (i.e. large paint stirrer stick) in the ground.

\* Use good soil to ensure growth of the plants

\* Remember to water and weed (fertilize if necessary).

\* If you do not have the space to garden, how about creating a large container garden for the children to nurture and watch grown.

\* If necessary, adapt the garden tools with bigger handles or velcro straps. If a child can not get to the ground to garden, bring the garden to them by starting a container garden.

Happy Gardening!

For more Spring activities check out: <u>Sensory Motor Activities for Spring</u>, <u>Spring Handwriting Activities</u> and <u>Print and Create Fine Motor Projects - Spring</u>

## Happy OT Month!

## inute to Win It for OT Month

Here is a fun idea to celebrate occupational therapy month this April. Have you heard of the hit television show Minute to Win It on NBC? Basically, the contestants are given challenges that they must complete in 60 seconds. The challenges usually involve sensory motor skills of varying degrees of difficulties. The materials for the challenges are common household items. Why not have your very own Occupational Therapy Minute to Win It challenges? You can vary the challenges to reflect different areas of occupational therapy. Have some prizes on hand for your contestants. Our local school is doing a fund raiser with Minute to Win It and charging admission to the show. Why not try and raise some money for occupational therapy supplies or your favorite charity. You can view all the "blue prints" (basically the directions for the challenges) at the Minute to Win It website.

Here are some ideas specific to occupational therapy:

1. Fine Motor Challenges

How high can you build a tower of marshmallows and toothpicks in one one minute? How many paper clips can you chain together in one minute? How many coins can you flip over from heads to tails in one minute? How many stacks of 10 pennies can you build in one minute?

2. Sensory Challenges

From the show - unroll two rolls of toilet paper and wrap it around yourself in under one minute How many times can you push a therapy ball through a tunnel in one minute?

3. Activities of Daily Living Challenges

How many times can you tie and untie your shoe in one minute? How many times can you put on and take off your coat completely in one minute?

You get the idea. Vary the challenges as necessary based on the motor skills of the children at your school. And, if you still don't get it, visit the Minute to Win It <u>website</u> for loads of ideas! Have fun.

Here is a previous blog post entitled 10 Things to Do to Celebrate Occupational Therapy Month



#### herapy Cushions in the Classroom

The *American Journal of Occupational Therapy* published a small study on the use of therapy cushions during math class for 2 kindergarten students with autism. Using a single subject A-B-A-B-C design the children used a regular chair (A) - cushion (B) - chair (A) - cushion (B) - free choice (C) during math class followed by assessment of the teachers and children's preferences. The results indicated that no clinically relevant changes during in seat or on task behaviors were seen with the use of the therapy cushions. The researchers concluded that therapy cushions may not provide enough stimulation to be effective and further research was recommended.

Do you find therapy cushions to be effective for in seat or on task behaviors? To collect data on whether your sensory strategies are effective check out the <u>The Scale of Sensory Strategies (S.O.S.S.) Tool Kit™</u>

Reference: Caroline Umeda and Jean Deitz. Effects of Therapy Cushions on Classroom Behaviors of Children With Autism Spectrum Disorder. 10.5014/ajot.2011.000760 American Journal of Occupational Therapy March/April 2011 vol. 65 no. 2 152-159

## imple Steps to Increase Preschool Physical Activity

NAEYC.org has published a great hand out on increasing physical activity for preschoolers. It includes 12 simple tips on how to encourage preschoolers to move. For example: hang pictures on the wall of children moving, use regular objects in the classroom for movement play, teach children how to use different objects for multiple uses and more. It is an excellent resource to provide preschool teachers with because all the suggestions are very easy to carry out. You can download it <u>here</u>

Check out our latest ebook Action Alphabet to get preschoolers moving.

#### evelopmental Coordination Disorder and Physical Education Class

CanChild, Centre for Childhood Disability Research has published a great flyer to provide to physical education teachers of students with developmental coordination disorder (DCD). Then hand out explains DCD, describes the symptoms, and offers teaching tips. Check it out <u>here.</u>

## Hemiplegia

#### **Bracing and Hemiplegia**

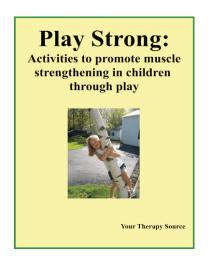
*Developmental Medicine and Child Neurology* published research on the use of a wrist and thumb brace on bimanual activities in children with hemiplegia cerebral palsy. Twenty five children with spastic hemiplegia cerebral palsy (with mild to moderate hand deformity) performed bimanual activities wearing a brace and not wearing a brace. Assessment results indicated that when the children were wearing the brace the ability to complete the bimanual activities improved significantly compared to when the children were not wearing the wrist and thumb brace.

Reference: LOUWERS, A., MEESTER-DELVER, A., FOLMER, K., NOLLET, F. and BEELEN, A. (2011), Immediate effect of a wrist and thumb brace on bimanual activities in children with hemiplegic cerebral palsy. Developmental Medicine & Child Neurology, 53: 321–326. doi: 10.1111/j.1469-8749.2010.03849.x

#### Mirror Therapy and Children with Hemiplegia

*Developmental Medicine and Child Neurology* published research on mirror therapy in children with hemiplegia. Mirror therapy involves the use of a mirror to provide the illusion that the paretic arm is functional. This type of therapy has been used with adults who have had a stroke. For this pilot study, 15 children with hemiplegia were randomly assigned to complete 15 minutes of bimanual training for 3 weeks of therapy with and without the mirror. Training with the mirror significantly improved grasp strength and upper limb dynamic position. Training without the mirror significantly improved pincher strength.

Reference: GYGAX, M. J., SCHNEIDER, P. and NEWMAN, C. J., Mirror therapy in children with hemiplegia: a pilot study. Developmental Medicine & Child Neurology, no. doi: 10.1111/j.1469-8749.2011.03924.x



Play Strong: Activities to promote muscle strengthening in children through play

List Price: \$7.99

www.YourTherapySource.com/playstrong

## **Hot Topics**

#### **Obesity, Gait Patterns and Vision**

Gait and Posture published research comparing the walking patterns of normal weight children versus obese children. Gait analysis was performed on 32 children in light and dark conditions. Both groups of children exhibited changes in their walking patterns in the dark conditions. Although in the dark conditions, the obese group spent more time in the stance phase of walking. With the removal of vision, the obese children's gait patterns were affected more than their normal weight peers. The results indicated that obese children rely more on their vision to control walking.

Reference: Eva D'Hondt et al. The role of vision in obese and normal-weight children's gait control Gait & Posture Volume 33, Issue 2, February 2011, Pages 179-184

#### **Orthotics Affect on Upper Extremity Use**

The Spring 2011 issue of *Pediatric Physical Therapy* published an interesting study on the use of supramalleolar orthoses and how they affect upper extremity use. Seventeen children with Down Syndrome were divided into two groups of treadmill training - one group of children wore supramalleolar orthoses and the other group did not. Both groups of children were followed every other month to video tape the use of the upper extremities during table top play. The children were followed from when they could pull to stand until independent walking. The results indicated that wearing supramalleolar orthoses did not affect hand support while standing.

Reference: Looper, Julia PT, PhD; Ulrich, Dale PhD Does Orthotic Use Affect Upper Extremity Support During Upright Play in Infants With Down Syndrome? Pediatric Physical Therapy: Spring 2011 - Volume 23 - Issue 1 - p 70–77 doi: 10.1097/PEP.0b013e318208cdea

#### **Balance and Dyslexia**

Recent research attempted to determine is there is a connection with balance skills and reading speed. Ninety four children with a familial risk of dyslexia were compared to 85 children without a risk of dyslexia. The results showed that children with a risk of dyslexia had more problems with balance and reading. Testing indicated that attention, IQ, hyperactivity and motor functioning were not related to balance problems although attention and IQ were related to reading speed. The researchers concluded that balance problems alone do not produce reading difficulties and that perhaps there is a genetic mechanism between balance and reading problems.

Reference: VIHOLAINEN, H., ARO, M., AHONEN, T., CRAWFORD, S., CANTELL, M. and KOOISTRA, L. (2011), Are balance problems connected to reading speed or the familial risk of dyslexia?. Developmental Medicine & Child Neurology, 53: 350–353. doi: 10.1111/j.1469-8749.2010.03856.x





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## **On the Web...**

#### **Typing or Writing?**

CanChild has a research based, informative hand out for school staff and parents on whether children with coordination problems should learn how to use a word processor or continue to focus on handwriting. It answers questions such as:

Why should children with DCD use a computer or word processor?

Does keyboarding mean we are giving up on handwriting?

Printing versus cursive writing?

Can children with fine motor problems learn how to type?

When is the best age to introduce key boarding?

What is the best way to teach keyboarding?

When is voice to text a good option?

You can view the handout from <u>CanChild</u>.

#### **Jackpot! SPD Information**

I previously posted on an article that was written by David Brown, from the California Deaf Blind Services, on <u>The Forgotten Sense - Proprioception</u>. Well, David Brown recently commented on that post to let us know that he has just posted all of the 6 articles he had written on The Forgotten Senses:

- \* The Forgotten Sense Proprioception
- \* The Vestibular Sense
- \* The Sense of Smell the Olfactory Sense
- \* The importance of having 'Good Taste'
- \* The sensory integration perspective and what it offers us in the field of
- deafblindness, Part 1

\* The sensory integration perspective and what it offers us in the field of deafblindness, Part 2

They are just as excellent and informative as the previous one on proprioception. You can find all six articles at the <u>California Deaf Blind Services website</u>. Thanks Mr Brown for letting us know and for sharing your articles. Great work!

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## **Sponge Curlers**

**Purpose:** To encourage fine motor skills, upper extremity active range of motion, counting skills and wrist/ finger extension to release objects

**Materials:** sponge curlers (available at Dollar Stores), velcro, recycled large coffee container, shoe laces or wooden dowels



Activity #1: Cut up the sponge curlers and lace onto the string or wooden dowel.

**Activity #2:** On the lid of the coffee container cut out a few holes big enough to fit the sponge curlers. Next to each hold write a different number i.e. 1, 2, 3, 4. The child should put the correct number of sponge

curlers through the hole. For example, put 2 curlers in the hole that has the number 2 next to it.

Activity #3: Put velcro dots on the curlers. Put them together and take them apart.

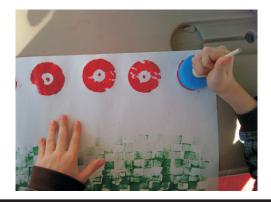
**Activity #4:** When done with the curlers they work well to adapt tools by building up the handles of utensils, paint brushes or markers.



Activity #5: Place the curlers in a bucket of water. The child can squeeze the water out of the curlers.

Activity #6: Have the child squish the curler inside a pool noodle that has been cut. Stick a dowel inside the curler now. Float them in water and have the child pick them up. Use it as a stamper to paint.





Free sample page from Active Arms: fine motor skills, upper extremity active range of motion and coordination activities for individuals with motor skill delays

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