



# **Your Therapy Source News**

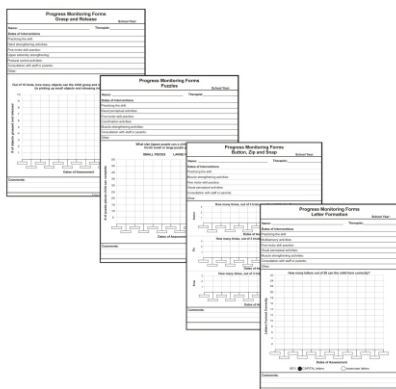
**Digital magazine for pediatric  
occupational and physical therapists.**

**Issue 53 - August 2013**

**[www.YourTherapySource.com](http://www.YourTherapySource.com)**

# New and Popular Products

## Progress Monitoring Forms Fine Motor Skills



Your Therapy Source Inc

**Title: Progress Monitoring Forms Fine Motor Skills**

By: Your Therapy Source

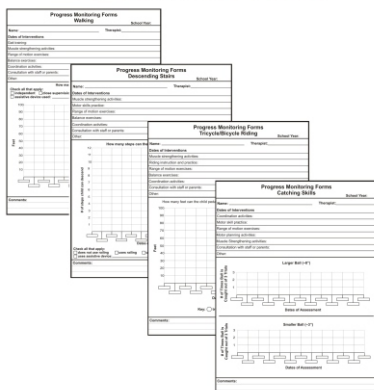
Summary: Download of an electronic book of 40+ progress monitoring forms for fine motor skills including handwriting.

Retail Price: \$9.99

**Sale Price until 8/30/13: \$6.99**

[www.YourTherapySource.com/pmffine](http://www.YourTherapySource.com/pmffine)

## Progress Monitoring Forms Gross Motor Skills



Your Therapy Source Inc

**Title: Progress Monitoring Forms Gross Motor Skills**

By: Your Therapy Source

Summary: Download of an electronic book of 26 progress monitoring forms for gross motor skills.

Retail Price: \$7.99

**Sale price until 8/30/13: \$4.99**

[www.YourTherapySource.com/pmf](http://www.YourTherapySource.com/pmf)

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# Autism, Motor Skills and Motor Planning

The *Journal of Autism and Developmental Disorders* published research on motor abilities in autism. Using a computational approach the researchers broke down motor control into different components.

They discuss altered motor behavior in children with autism such as:

- slower repetitive hand and foot movements
- slower and less accurate manual dexterity
- diadochokinesis - ability to rapidly perform alternating movements (ie between supination and pronation)
- decreased abilities with ball skills specifically aiming and catching
- unstable balance
- gait deviations (ie tandem gait, heel or toe walking)
- reduced coordination of higher level locomotor skills
- hypotonia

Their findings suggest the following:

- poor integration of information for efficient motor planning
- increased variability in basic sensory inputs and motor outputs

They concluded that motor learning processes are relatively intact and there is inconsistent evidence for deficits in predictive control. The researchers recommend future work on sensorimotor noise and higher level motor planning in individuals with autism.

Reference: Emma Gowen, Antonia Hamilton. Motor Abilities in Autism: A Review Using a Computational Context. *Journal of Autism and Developmental Disorders*. February 2013, Volume 43, Issue 2, pp 323-344

**Looking for motor planning and sensory motor activities? Check out these titles our updated sensory motor collection on a flash drive or as a download. Find out more here [www.YourTherapySource.com/CDsensorymotor](http://www.YourTherapySource.com/CDsensorymotor)**

# Tips for Follow Through for HEP



*Musculoskeletal Care* published research on adherence to home physiotherapy in children and young people with joint hypermobility. Twenty eight families participated in a qualitative study that included multidisciplinary treatment interventions including physical therapy for children (5-17 years old). The parents and the children reported that exercise helped the symptoms of joint hypermobility.

There was increased follow through to exercise programs with the following:

- Parental motivation
- adapting family routines
- making exercise a family activity
- seeing benefit increased adherence to exercise

When exercise programs were not adhered to the following was reported:

- lower levels of parental supervision
- not understanding the treatment
- not seeing benefit
- not having specific time to dedicate to doing the exercises.

Reference: Birt, L., Pfeil, M., MacGregor, A., Armon, K. and Poland, F. (2013), Adherence to Home Physiotherapy Treatment in Children and Young People with Joint Hypermobility: A Qualitative Report of Family Perspectives on Acceptability and Efficacy. *Musculoskelet. Care*. doi: 10.1002/msc.1055

For hand outs on how to explain to parents what, why and how certain skills are important check out What? Why? How? Series 1,2 and 3 at <http://yourtherapysource.com/wwh3.html>

# Lighten the Load - Therapy Ideas for the iPad or Tablet

Many school based therapists travel from school to school lugging equipment in and out of buildings. Perhaps you work in one school and bring equipment in and out of classrooms for push in services. We all know that if you have an iPad or tablet to use at work I am sure you have loaded with appropriate and fun therapy apps. I know I do. But at the end of the day, the bulk of my therapy services do not include the use of the iPad. I do have it loaded with ebooks though so that I have activity ideas right at my fingertips when I need them. You can download the ebooks directly from the Your Therapy Source link you receive in an email. If you have already saved the document to your computer, email it to yourself and save it in iBooks (pdf format) on the iPad.

Here are some suggestions for ebooks that can be downloaded directly to your iPad or tablet -

## **For therapy activity ideas without using the iPad:**

Play Strong: <http://yourtherapysource.com/playstrong.html>

50 Sensory Motor Activities for Kids: <http://yourtherapysource.com/50book.html>

25 Instant Sensory Motor Group Activities: <http://yourtherapysource.com/instant.html>

Get Up and Learn - <http://yourtherapysource.com/getuplearn.html>

Active Arms: <http://yourtherapysource.com/activearms.html>

Motor Magic - Turn Fine Motor Skills into Gross Motor Skills:  
<http://yourtherapysource.com/motormagic.html>

Don't forget that you can open a pdf document on your tablet and use an app to "write" on the pdf document.

## **For sensory motor activities:**

Sensory Motor Game Boards: <http://yourtherapysource.com/sensoryboards.html>

For added visuals you could use Classroom Activity Posters to show exercise ideas - <http://yourtherapysource.com/cap.html> or project it onto an interactive whiteboard

Roll Some Fun and use an app to roll dice: <http://yourtherapysource.com/rollsomefun.html>

For visual motor activities (may want to use a stylus for some):

Patterns, Patterns, Patterns: <http://yourtherapysource.com/patterns.html>

Follow the Path: <http://yourtherapysource.com/follow.html>

Letter and Shape Mazes: <http://yourtherapysource.com/lsmaze.html>

Visual Discrimination Puzzles: <http://yourtherapysource.com/visuald.html>

Monster Mazes: <http://yourtherapysource.com/monster.html>

Most of the seasonal handwriting activities would work as well especially with a stylus:  
<http://yourtherapysource.com/handwriting.html>

An added bonus to the above visual motor activities, is that some children enjoy completing worksheets on an iPad. If you print out the activities as well, you can practice on the tablet and then reinforce the skills with carry over using regular paper and pencil.

# 5 Ways to Develop Spatial Awareness

Spatial awareness is the ability to understand and interact with the environment around you. Whether it be avoiding obstacles when walking, reaching out to grab a pencil or determining left from right these are all examples of tasks that require spatial awareness. Developing the skills to express and understand spatial skills are the first step in understanding spatial ability and awareness such as math skills, visual perceptual skills and body awareness.



Here are 5 activities to help encourage the development of spatial awareness:

- 1. Obstacle Courses:** The ability to negotiate an obstacle course requires a significant amount of spatial awareness. Vary the courses grading them according to the child's ability to move over, under and around objects.
- 2. Build and Create:** Use Legos, blocks and puzzles. Try Tangam puzzles - <http://www.yourtherapysource.com/tangrams.html>. Try this free visual spatial puzzle crossing paths - <http://yourtherapysource.com/crossingpaths.html>. Research has shown that parents who participated in guided block play with their children had significantly higher proportions of spatial talk. Guided block play consisted of playing with the blocks along with guided instructions for how to build different structures. Read more in a previous blog post on block play and spatial awareness - <http://yourtherapysource.blogspot.com/2011/11/block-play-and-spatial-awareness.html>
- 3. Practice completing patterns.** You could try Follow the Path <http://www.yourtherapysource.com/follow.html> or Patterns, Patterns, Patterns <http://www.yourtherapysource.com/patterns.html>.
- 4. Movement Games:** Participate in any type of movement games where children have to move around obstacles or friends. The ability to move around stationary objects is quite different than around moving objects which are unpredictable. If you need ideas, try 50 Sensory Motor Activities for Kids! - <http://www.yourtherapysource.com/50book.html>.
- 5. Provide verbal descriptions.** Offer many opportunities for children to hear descriptions of where they are or where objects are in relationship to each other. For example - "The pencil is on the right side of the desk" or "Let's step over the log". Play games that require children to follow directions - ie Be A Robot (<http://yourtherapysource.com/freerobot.html>). Try worksheets where children how to follow directions of what colors to use for different letters or shapes ie Color Coding - <http://yourtherapysource.com/colorcoding.html>.



# Adaptations after Trampoline Use

Have you ever heard of "trampoline aftereffect"? It is that sensation that you have after jumping on a trampoline. You get off the trampoline and your legs feel a little woozy or jelly like. Pediatric therapy sessions that include motor skill development or sensory processing skills may include trampoline activities. Did you know that after jumping on a trampoline there are specific neuromechanical adaptations? Research that was conducted in 15 adults indicated that following jumping on an elastic surface the following was recorded:

- significant increase in EMG activity of knee extensors during the eccentric phase of the jump and significant increase in co-activation around the ankle jump during the concentric phase of the jump
- significant increase in leg stiffness
- significant decrease in jump height

The researchers suspect that the changes may be due to errors in sensory feedback comparing the elastic surface to the rigid surface.

This is small but important information when planning a therapy session that conjured up some questions for me. When do you use a trampoline? At times it is used for proprioceptive input, endurance activities or as a precursor to learning how to jump on the floor. Although this study was done with adults, we can take some information and perhaps avoid testing any jumping skills following the use of a trampoline since the research indicated a decrease in jump height and increase in leg stiffness. Does muscle stiffness increase in children with hypotonicity following jumping on a trampoline?

If (and I say IF) there are errors in sensory feedback following jumping on an elastic surface are trampolines the best proprioceptive input for children with sensory processing disorder?



Reference: Márquez G, Aguado X, Alegre LM, Fernández-Del-Olmo M. Neuromechanical adaptation induced by jumping on an elastic surface. J Electromyogr Kinesiol. 2013 Feb;23(1):62-9. doi: 10.1016/j.jelekin.2012.06.012. Epub 2012 Aug 9.

# App Review - Super Stretch Yoga



Here is another app, Super Stretch Yoga (<https://itunes.apple.com/us/app/super-stretch-yoga/id456113661?mt=8>), to get kids moving and it is free! This is a nice overall app with simple directions and a slow pace (great for those kids who need some extra time to learn a pose).

Here are benefits:

- combines technology with movement
- slower pace
- you can repeat the pose over and over again if you choose or go through all the poses at once
- there is a cartoon clip art associating an animal with the pose and there is video of children performing each pose
- after each pose you have the child take three breaths to calm the mind and build energy
- free!

Here are the negatives:

- some of the videos of the children do not provide a clear picture of the directions but it is a great start.

This is a nice app to add to your iPad collection to encourage physical activity in children.



# Cerebral Palsy Research

## Use of Hand Splints in Children with Cerebral Palsy

A systemic review was recently published on the effectiveness of hand splints for children with cerebral palsy. Six studies met the inclusion criteria and all were only on children with cerebral palsy. Five studies were on non functional hand splints and one study was on functional hand splints. The results indicated the following:

- in children with cerebral palsy, hand splints may have a small benefit for upper limb skills. results were diminished after splint wearing stops.

The researchers concluded that given the cost of a splint, potential negative cosmetic look and discomfort for the child, clinicians must consider whether hand splinting is clinically worthwhile. Further methodologically sound research regarding hand splinting was recommended.

Reference: Jackman M, Novak I, Lannin N. Effectiveness of hand splints in children with cerebral palsy: a systematic review with meta-analysis. *Dev Med Child Neurol*. 2013 Jul 15. doi: 10.1111/dmcn.12205. [Epub ahead of print]



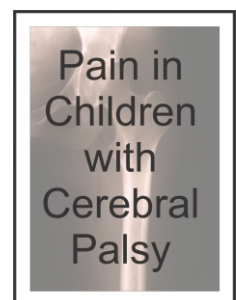
## Pain in Children with Cerebral Palsy

*Pediatrics* published research on the characteristics of pain in children with cerebral palsy. A cross sectional study was completed on 252 youth ages 3-19 years old, their families and their physicians. The results indicated the following:

- 54.8% reported some pain on the Health Utilities Index 3
- 24.4% of the caregivers reporting that their child experienced pain that affected some level of activities in the preceding 2 weeks
- 38.7% of the doctors reported pain and identified hip dislocation/subluxation, dystonia, and constipation as the most frequent causes of pain.

The researchers concluded that the potential causes of pain in children with cerebral palsy should be determined and addressed as early as possible to avoid a negative impact on their quality of life.

Reference: Melanie Penner et al. Characteristics of Pain in Children and Youth With Cerebral Palsy. *Pediatrics* peds.2013-0224; published ahead of print July 15, 2013, doi:10.1542/peds.2013-0224



# Hot Topics

## Physical Performance of Children who are Overweight

*Pediatric Physical Therapy* published research on 70 children (5-9 years old) comparing overweight/obese children to healthy weight children with regards to gait, balance, muscle strength, and physical activity. The results indicated that when compared to peers of healthy weight the children who were overweight/obese exhibited the following:

- a significantly increased base of support while walking
- decreased one leg stance test
- decreased vertical jump height

Reference: Pathare, Neeti PT, PhD; Haskvitz, Esther M. PT, PhD, ATC; Selleck, Marjane PT, DPT, MS, PCS. Comparison of Measures of Physical Performance Among Young Children Who Are Healthy Weight, Overweight, or Obese. *Pediatric Physical Therapy*: Fall 2013 - Volume 25 - Issue 3 - p 291-296. doi: 10.1097/PEP.0b013e31829846bd

## Dosing for Standing Programs

*Pediatric Physical Therapy* published a systemic review and evidence based clinical recommendations for dosing of pediatric supported standing programs. After reviewing the literature the following was recommended:

- standing programs 5 days per week, 60-90 minutes per day, positively affect bone mineral density
- standing programs 5 days per week, 60 minutes per day in 30° to 60° of total bilateral hip abduction positively affect hip stability
- standing programs 5 days per week, 45-60 minutes per day, positively effect range of motion of hip, knee, and ankle and spasticity (30 to 45 minutes per day).

Reference: Paleg, Ginny S. PT, MPT, DScPT; Smith, Beth A. PT, DPT, PhD; Glickman, Leslie B. PT, PhD. Systematic Review and Evidence-Based Clinical Recommendations for Dosing of Pediatric Supported Standing Programs. *Pediatric Physical Therapy*: Fall 2013 - Volume 25 - Issue 3 - p 232-247 doi: 10.1097/PEP.0b013e318299d5e7



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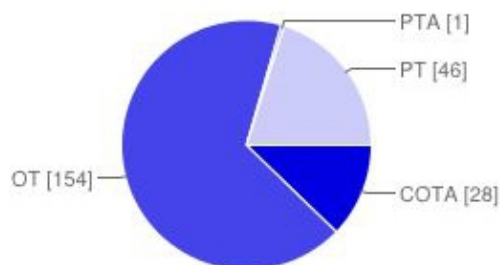
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# Frequency Survey Results

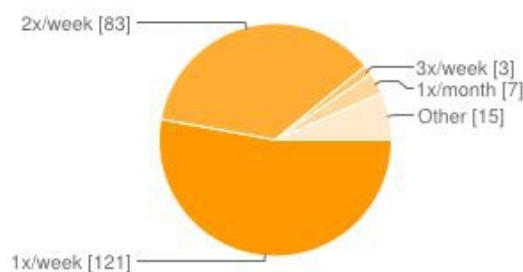
Here are the 229 responses from the latest survey on frequency:

**Are you a pediatric OT/COTA or PT/PTA?**



COTA	28	12%
OT	154	67%
PTA	1	0%
PT	46	20%

**What is the most common frequency of therapy sessions (group or individual) that you provide for your students? Only click one button please. Response: 1x/wk, 2x/wk, 3x/wk, 1/month or other?**



1x/week	121	53%
2x/week	83	36%
3x/week	3	1%
1x/month	7	3%
Other	15	7%

Answer the current survey on sensory processing disorder at  
[www.YourTherapySource.com/survey](http://www.YourTherapySource.com/survey)



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# Learning Pencil Grip



## **Let's Go** Learn Correct Pencil Grip



By Ingrid C. King MSc OT

A pediatric occupational therapist from Australia, Ingrid King, has created an adorable lesson on learning the proper pencil grip. She uses 5 animals to practice several finger movements. There is a story included to help the children learn the proper pencil grip. It is a free and you can download it here from <http://www.love2learnandgrow.com/images/newlove2learn.pdf>.

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# 10 Activities to Do with a Jump Rope



Try some of these fun activities to do with a jump rope besides jumping rope. Watch the video at:

<http://yourtherapysource.com/videojumprope.html>

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# "I Can" Cards

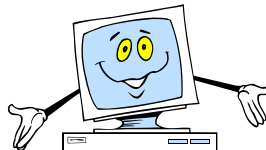
I Can Cards

I can...  Name _____	I can...  Name _____
I can...  Name _____	I can...  Name _____
I can...  Name _____	I can...  Name _____

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Print and use these "I can..." cards as a motivational tool or collaborative project. Check out how at [YourTherapySource.com](http://YourTherapySource.com) and download the template.

<http://yourtherapysource.com/freeicancards.html>



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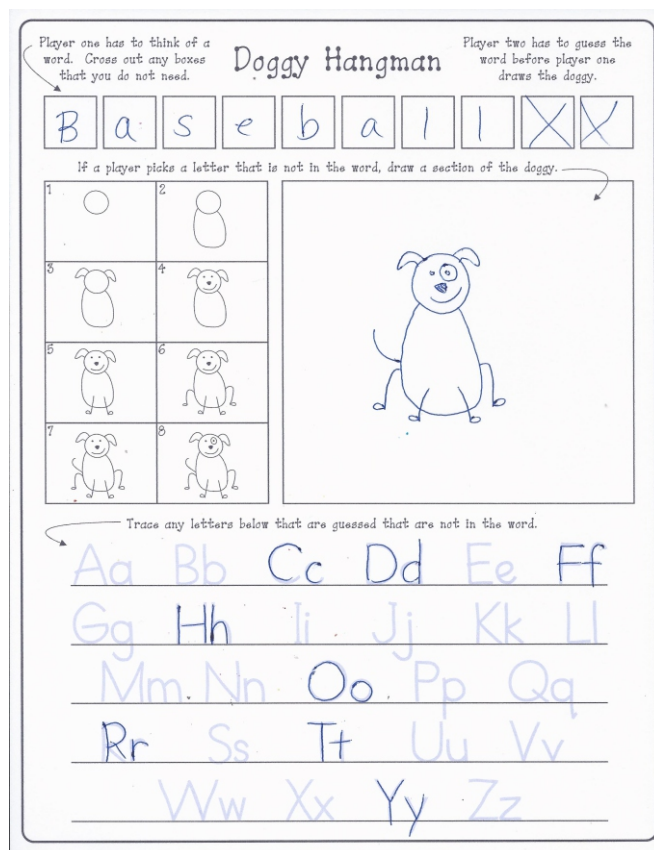
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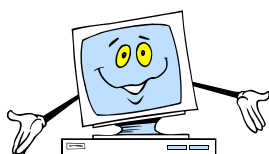


# Step By Step Drawing Hangman



Check out the latest ebook - Let's Hang Out. You can play hangman, learn how to draw and sneak in some handwriting practice! Get your free sample Doggy Hangman at YourTherapySource.

<http://yourtherapysource.com/hangmanfree.html>



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