The Role of Physical Therapy for Children with Autism Spectrum Disorder

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Meet Grayson

Age: 3 years, 1 month
Diagnosis: Autism
Favorite Color: Green
Favorite Food: Gold Fish
Favorite Toy: Tinsel

Names have been changed and these are NOT the photos of the actual client to protect his privacy—however, his story is true.

“But he has Autism, isn't this just normal?”
“Do you really think he can do these things?”

–Grayson’s Mom

Have you given up on certain activities or abilities because your child has Autism?

Movement Systems

Cardiovascular  Musculoskeletal  Endocrine (hormones)
Pulmonary  Integumentary (skin)  Nervous

Physical Therapy for children with Autism

Does my child need Physical Therapy?
Things to look for...

- Clumsy / Uncoordinated
- Falls or injuries
- Easily distracted
- Gives up easily
- Avoids activities
- Always in motion or fidgety
- Overly rough in play
- Difficulty imitating actions
- Unsafe at home or in the community
- Disruptive
- Impulsive
- Limited attention
- Resistive
- Difficulty moving from one activity to another
- 3 to 4 years old -
  - Is not able to jump down/forward feet together
  - Does not walk up stairs without handrail or 2 feet on same step
  - Does not attempt to pedal tricycle
  - Is unable to kick ball 5-6 feet or catch a ball thrown to them
  - Unable to stand on one foot for 5 seconds or on tip toes in place
  - Unable to walk narrow line without fall or step off
  - Unable to throw ball over and underhand with target contact
  - Unable to avoid obstacles with path change

- 5 to 6 years old -
  - Unable to do a somersault
  - Unable to skip or gallop
  - Unable to throw a ball to a target 12 ft away
  - Does not catch small ball with hands only
  - Unable to stand on one foot for at least 10 seconds
  - Unable to complete push ups
  - Unable to complete sit ups
  - Not able to walk on tip toes for 15 ft or more
  - Unable to do a somersault
  - Unable to skip or gallop
  - Unable to throw a ball to a target 12 ft away
  - Does not catch small ball with hands only
  - Unable to stand on one foot for at least 10 seconds
  - Unable to complete push ups
  - Unable to complete sit ups
  - Not able to walk on tip toes for 15 ft or more

- 7 to 12 years old -
  - Unable to demonstrate smooth movements with:
    - Riding a bicycle
    - Doing jumping jacks
    - Kicking a ball
    - Throwing and catching
  - Does not walk or run with a pattern that resembles and adult

Outpatient PT Options

- Traditional outpatient PT
  - Brick and mortar clinic, regular visits, and home exercise program
- Aquatic therapy:
  - Blend of water and land based treatment– often 50/50
- Home Exercise Program:
  - Sometimes a weekly PT session is not geographically possible. Find a clinic and ask for an eval and a home exercise program in the same visit. Follow up with clinic every 1-6 months as needed for progression and help.
- Telehealth:
  - Video chat with a physical therapist via the internet and work through HEP ideas. Check in whenever you need!
When in doubt an evaluation can only HELP!

Research shows there is a movement-control disorder that goes along with autism, even in children who appear high-functioning.

Let’s look at the research...

Social Skills MOVEMENT Activity 1

Everybody STAND UP- It's time to get your heart pumping!

* Stand on ONE foot
* HOP on ONE foot
* HOP on ONE foot in a circle
* SWITCH foot and directions

Effects of physical exercise on Autism Spectrum Disorders: A meta-analysis

→ For children and adults with ASD, individual exercise interventions improve motor performance –AND– social skills.

Motor Activity in Children With Autism: A Review of Current Literature

→ Impaired motor activity may be present in individuals with ASD.
→ Motor activity delays have been observed in infants & toddlers with ASD.

Published 2011

Published 2012
Physical Activity Levels, Frequency, and Type Among Adolescents with and Without Autism Spectrum Disorder

- Adolescents with ASD spent less time on moderate & vigorous physical activity.
- Need to identify enjoyable activities and make appropriate modifications.

Social Skills MOVEMENT Activity 2

Everybody STAND UP and find a stranger or friend.

- * Stand on ONE foot
- * Add Hand Motions
- * Now spell the word I say BACKWARDS

Relationships Between Gross Motor Skills and Social Function in Young Boys With Autism Spectrum Disorder

- Gross motor skills and social function are related in young boys with ASD.
- Motor impairments were predictive of social function deficits.

Motor play can have significant cascading effects on social skills.

Exercise and structured play groups

★ Improve
  ○ attention
  ○ academic abilities
  ○ communication skills
  ○ interactions with peers
★ Address problems with obesity
★ Promote and active lifestyle
★ Decrease maladaptive behaviors and aggression
★ Help children participate more fully in activities at school and recreationally
★★ And improve quality of life

Remember Grayson?

Let’s see what happened after 2 years of PT 1x per week for 60 minutes.
So... what does a physical therapy session look like for a child with autism?

Grayson’s Standardized Test - PDMS-2

That’s not all! What else happened?

Where is Grayson today?

Quiz Time!

Quiz Question #1
What are 3 common gross motor deficits seen in children with ASD?

Answer:
1.
2.
3.
Quiz Question #2
What role do physical therapists play as part of the medical team helping children with ASD?

Answer:
1. ___
2. ___
3. ___

Quiz Question #3
What are 3 areas of daily life that have been shown to improve with physical therapy intervention for children with ASD?

Answer:
1. ___
2. ___
3. ___

References
Physical Therapy for Educational Benefit
https://pediatricapta.org/includes/fact-sheets/pdfs/15%20PT%20for%20Educational%20Benefit.pdf

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Questions?

Thank you for coming!

If you want to get in touch, please contact one of us!

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