

# Processing Speed

*Is your child working at a snail's pace?*



Is your child:

- Working slowly?
- Doing great work but working so slowly that she falls behind?
- Complaining that it is hard to keep up with the teacher's lesson?
- Having trouble on timed math drills or tests of quickness?
- Not getting much on paper during writing time, in spite of good ideas?
- Falling behind on assignments?

## LET'S TALK ABOUT IT

Does your child work very slowly? Your child may feel tired after school. Your child might say that the pace of school is too fast. Often, these problems continue in spite of being smart. At school, teachers may say, "he has great ideas but just doesn't get them on paper" or "he doesn't show us what he knows" or "she has trouble getting her work turned in" or "she is not doing her best". Some inconsistencies tend to be present in their work. Kids with these issues tend to be able to do something great one day and then really struggle the next. They may refuse or avoid tasks. Homework may be a struggle. The child may sit for a long time at his desk and have very little to show for it.

In the morning, your child may have a hard time getting ready for school. You may feel frustrated that your child seems to take forever getting dressed, doing routine chores, or getting through the morning routine.

These issues may show up at school in terms of organizational skills and scholarly habits. Your child may be tardy to class, sauntering slowly to his locker and forgetting what binder to bring to math. You may feel like the parent who owns most of the items in the 'lost and found'. Your child may be the last one to finish the 'fun run' at school or to finish the obstacle course on field day.

## CLINICAL DESCRIPTION

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Clinically, these problems are referred to as deficits in cognitive processing. In psychology, this issue of 'mental quickness' is called processing speed.

*Processing speed* has been defined by famed psychologist Dr. John Horn as

*'An ability to rapidly scan and react to simple tasks'* [4].

Processing speed is the ability to work quickly and solve problems within a time limit. These tasks are neither deep nor analytical. Rather, processing speed is a measure of mental efficiency.

*Fluency:* Processing speed is also known as 'fluency' in the academic domain. Reading fluency is the ability to read quickly and smoothly. Math fluency is the ability to solve problems quickly and accurately. Any speed drill requires processing speed. In athletics, processing speed is required to react quickly as the game changes, to adjust one's strategy, and to move swiftly in a new direction.

*Working Memory:* A similar problem, related to 'working memory', occurs when a child has trouble processing and holding information in his or her mind, often forgetting the last part of instructions.

*Cognitive Proficiency:* The combination of both processing speed and working memory are captured under a term called 'The CPI' or "Cognitive Proficiency Index". This index addresses how an individual's brain works, or functions, not his or her factual knowledge or ability. Challenges in CPI are like a car engine with all the right parts that just doesn't run well.

Often, bright students, even gifted kids, have difficulty seeing or hearing, manipulating, and responding to all the information coming into their brains. This difficulty is clinically referred to as a problem with cognitive proficiency or cognitive processing.

## WHAT TO DO IF YOUR CHILD HAS A SLOW PROCESSING SPEED

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If you suspect your child has slow processing speed, it would first be important to consult with a [School Psychologist](#) or Clinical [Psychologist](#) and have an IQ test to confirm. School psychologists typically only administer IQ tests as part of an assessment for special education services. If your child is not being considered for school-based services, it may be necessary to consult a clinical psychologist instead.

Processing speed has been improved in some cases. For example, if a person is depressed and participates in treatment, his or her processing speed is highly likely to improve.

Individuals with [autism](#) tend to have 'catch up intellectual development', which means that their IQ scores, and often processing speed, tend to improve over time with adequate treatment [1].

Even though treatment can help, some of the skills tested on an IQ test, and processing speed is certainly one of them, are thought to be somewhat innate; intervention can limitedly improve or alter these traits for most people.

If your child has slow processing speed, some helpful strategies can be employed. First, remind your child the old adage from the tortoise and the hare, '*slow and steady wins the race*' [2]. In the classic fable, the hare starts out the race strong but is caught napping on the job. The tortoise keeps going and never gives up, eventually winning the race.

Many high achievers work slower than others. Often, in a family where there is one child who finds that school comes easy, and another child who may have to struggle and work hard to keep up, the one who struggles but never stops will eventually find more success. Regardless of your child's intellectual ability, focus on attitude and effort. Hard work will win the race in the end.

Another way to improve processing speed is to provide lots of *priming and practice* [3]. Remind your child to rehearse materials in advance. Prepare for success. Practice will increase automaticity, which will eventually improve the child's speed of processing, at least for that task.

For example, a child with slow processing speed will likely struggle on math fact drills, such as the 'mad minute' multiplication drill. However, practicing math facts with flash cards or computerized practice (ixl.com or multiplication baseball) will eventually improve the child's speed on such tasks.

*Accommodations:* If your child's reading is slow, more practice with grade-level sight words will increase reading fluency. Finally, if your child's skills are very low in terms of processing speed, a consultation with the school may help. A 504 plan or IEP may be

necessary. Both the 504 and the IEP can provide accommodations such as 'extra prompting and process time' and 'extended time on tests and assignments'.

## **SIMILAR SYMPTOMS**

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*If your child is struggling with a similar problem, not directly addressed in this section, see the list below for links to information about other related symptom areas.*

- [Verbal comprehension:](#) children who struggle with processing speed may also have difficulties with verbal skills or the understanding of spoken language
- [Auditory processing:](#) children who struggle with processing speed may also have trouble with discerning sounds and processing verbal information
- [Spatial:](#) children who struggle with processing speed may also have difficulties assessing how objects fit together, solving puzzles, or reading a map
- [Intelligence:](#) children who struggle with processing speed may also have difficulties with overall intellectual functioning

## **POTENTIAL DISABILITIES**

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*Children who have significant problems in this area may have any of the following potential disabilities. \*Note, this information does not serve as a diagnosis in any way. See the 'Where to Go for Help' section for professionals who can diagnose or provide a referral.*

- [Developmental Coordination Disorder:](#) challenges with fine motor likely including poor handwriting may cause a child to write very slowly
- [Autism Spectrum Disorder:](#) deficits in social communication and restricted interests or behaviors. Often, problems are observed with processing speed, even with high IQ
- [Dyslexia or Specific Learning Disability in Reading \(Educationally Identified Disabilities\):](#) challenges with reading may relate to processing speed deficits
- [Dysgraphia or Specific Learning Disability in Writing \(Educationally Identified Disabilities\):](#) challenges with writing may accompany slow processing speed
- [Dyscalculia or Specific Learning Disability in Math \(Educationally Identified Disabilities\):](#) challenges with mathematics may relate to processing problems
- [Depression:](#) depressed individuals often have a slower processing speed
- [Intellectual Disability \(Educationally Identified Disabilities\), may be diagnosed clinically as well:](#) individuals with low IQ scores often have slower processing speed

## WHERE TO GO FOR HELP

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*If your child is struggling with this symptom to the point that it is getting in the way of his learning, relationships, or happiness, the following professionals could help; they may offer diagnosis, treatment, or both.*

- [CLEAR Child Psychology](#): to obtain a *customized profile* of concerns for your child or to *consult 'live'* with a psychologist
- [Psychologist or neuropsychologist](#): to consider symptoms in a mental health context; to test IQ, including processing speed
- [School Psychologist](#): to help with learning problems, to test IQ, including processing speed, and to consider for 504 or IEP. (Generally only in the context of an IEP evaluation – parents cannot necessarily request an IQ test from the school psychologist)
- [Occupational Therapist \(OT\)](#): to help with slower speed on tasks due to motor skills or sensory problems
- [School psychologist](#): to potentially test IQ or to consider academic issues
- [Speech Language Pathologist \(SLP\)](#): to assess issues with receptive or expressive language

*These professionals may recommend the following tests for this symptom:*

- [MVPT-4](#): A test of visual perception
- [WISC-V](#): A test of cognitive ability (IQ)
- [Beery VMI sequence](#): A test of visual-motor integration
- [ADOS-2](#): A test of social and communication skills in consideration of autism
- [WIAT-III](#): A test of achievement and academic skills

## LEARN MORE

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[1] Kroncke, Anna P., & Willard, Marcy & Huckabee, Helena (2016). *Assessment of autism spectrum disorder: Critical issues in clinical forensic and school settings*. Springer, San Francisco.

Springer: <http://www.springer.com/us/book/9783319255026>

Amazon: <https://www.amazon.com/Assessment-Autism-Spectrum-Disorder-Psychological/dp/3319255029/>

[2] Stevens, Janet (1985). The tortoise and the hare: An Aesop fable.

Amazon: <https://www.amazon.com/Tortoise-Hare-Aesop-Reading-Rainbow/dp/0823405109/>

[3] Mather, Nancy & Goldstein, Sam (2015). *Learning disabilities and challenging behaviors: Using the building blocks model to guide intervention and classroom management, third edition.*

Amazon: <https://www.amazon.com/Learning-Disabilities-Challenging-Behaviors-Intervention/dp/1598578367/>

[4] Sattler, Jerome (2014). *Foundations of behavioral, social, and clinical assessment of children.* (p.141)

Amazon: <https://www.amazon.com/Foundations-Behavioral-Clinical-Assessment-Children/dp/0970267126>

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