

Not Just Clumsy Supporting Children and Young People with DCD in the Classroom



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Acknowledgement of Country

I'd like to begin by acknowledging the Traditional Custodians of the lands on which we gather today, the Wurundjeri Woi Wurrung people of the Eastern Kulin Nation. I pay my respects to Elders past and present, and extend that respect to all Aboriginal and Torres Strait Islander peoples here today.



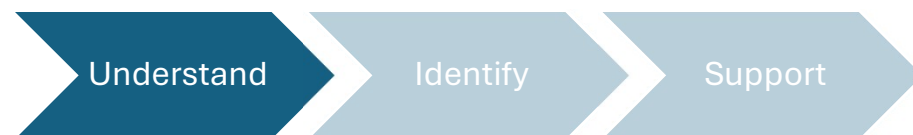
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When you hear "clumsy child"...





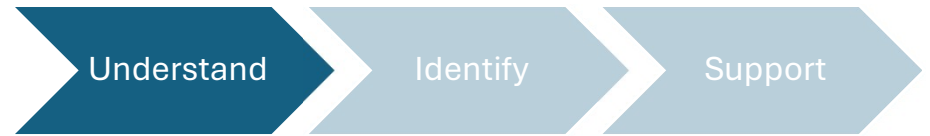
What is Developmental Coordination Disorder



*Developmental Coordination Disorder (DCD) is a **neurodevelopmental condition** affecting a person's ability to **learn and execute motor skills**. This makes it **difficult to perform common, everyday tasks**, like doing up buttons, writing, catching a ball, riding a bike or driving.*



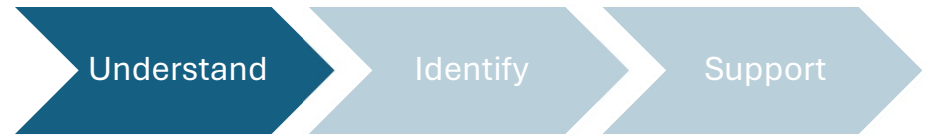
Understanding DCD



- 5% of the population
- More common in males (3:1)
- The causes of DCD are not well understood
- Does not affect level of intelligence, but...
- Lifelong disorder, not something a child will generally outgrow
- Often misunderstood



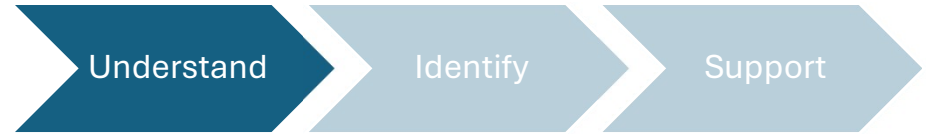
Core features



- Delayed motor skill development
- Difficulty learning new motor tasks
- Poor balance, coordination, and motor planning
- Executive functioning challenges (common co-occurrence)



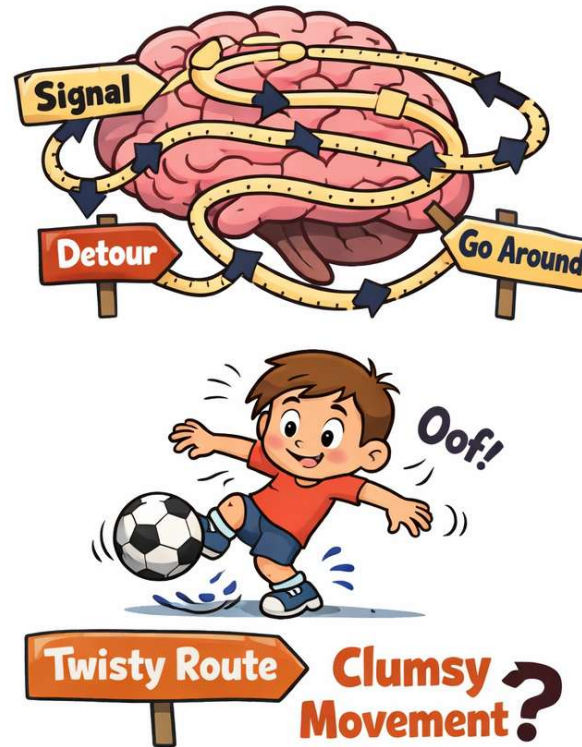
The scenic route..



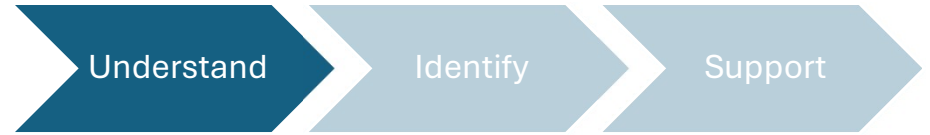
Typical Brain



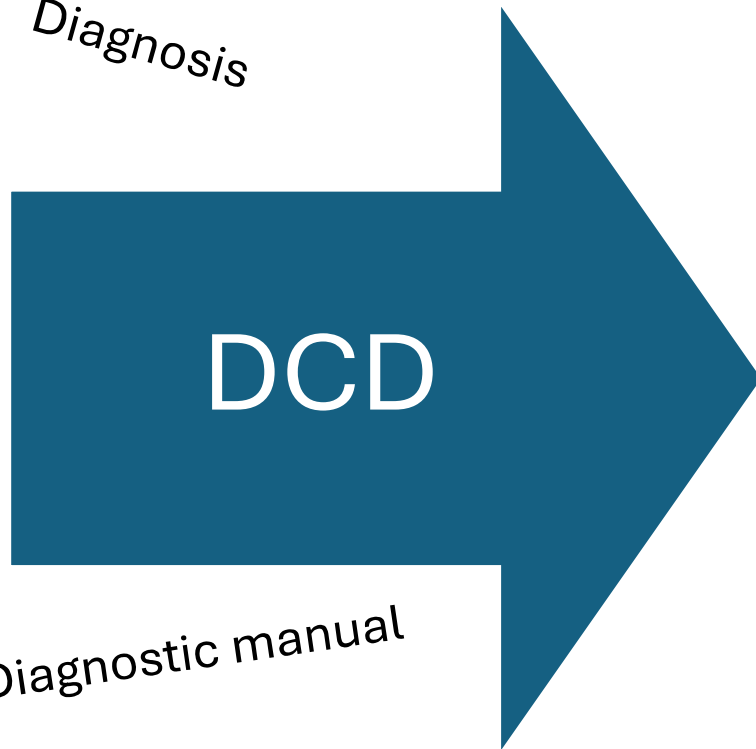
DCD Brain



DCD vs Dyspraxia

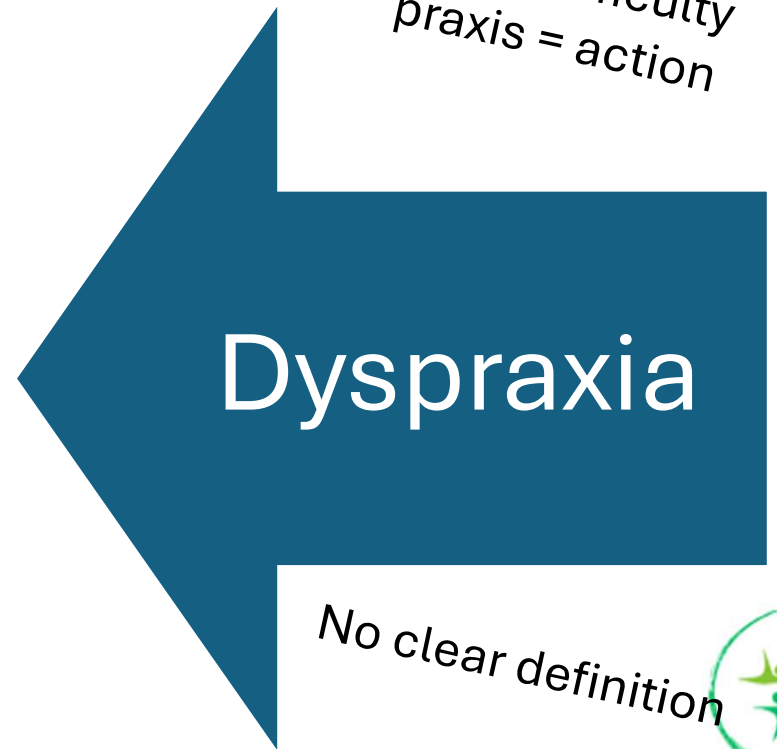


Diagnosis



Diagnostic manual

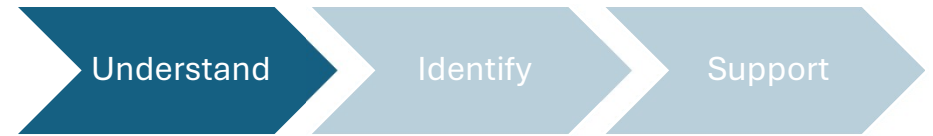
Dys = difficulty
praxis = action



No clear definition

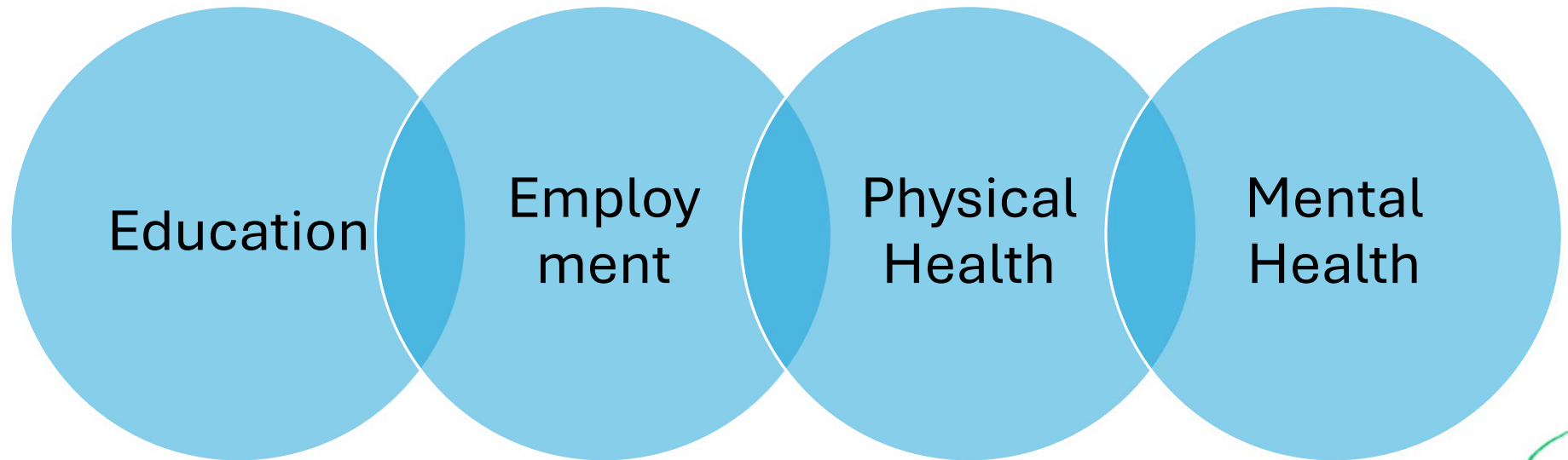
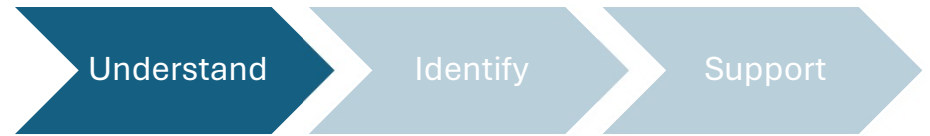


Co-occurring Conditions



- Overlap with
 - Attention Deficit Hyperactivity Disorder (ADHD)
 - (Specific) Language Impairment
 - Autism
 - Learning Difficulties
- Childhood Apraxia of Speech
- Handwriting difficulties in DCD vs Dysgraphia

Impact of DCD



Daily Participation Experiences of Adolescents With Developmental Coordination Disorder: A Qualitative Study (AJOT, 2026)

- Everyday tasks – effortful performance and inefficiency
 - motor coordination, organisation, and spatial orientation
- Participation is often exhausting. Many adolescents describe frustration and social comparison.
- Success and enjoyment came from choosing activities that matched strengths
- Ability and participation are not the same
- Strength-based approach can increase participation



Avoidance Behaviours

Understand

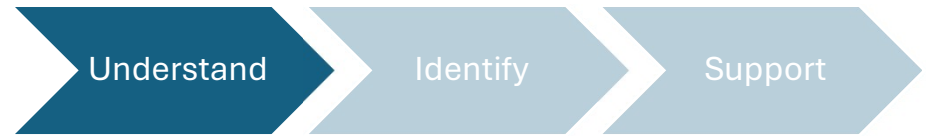
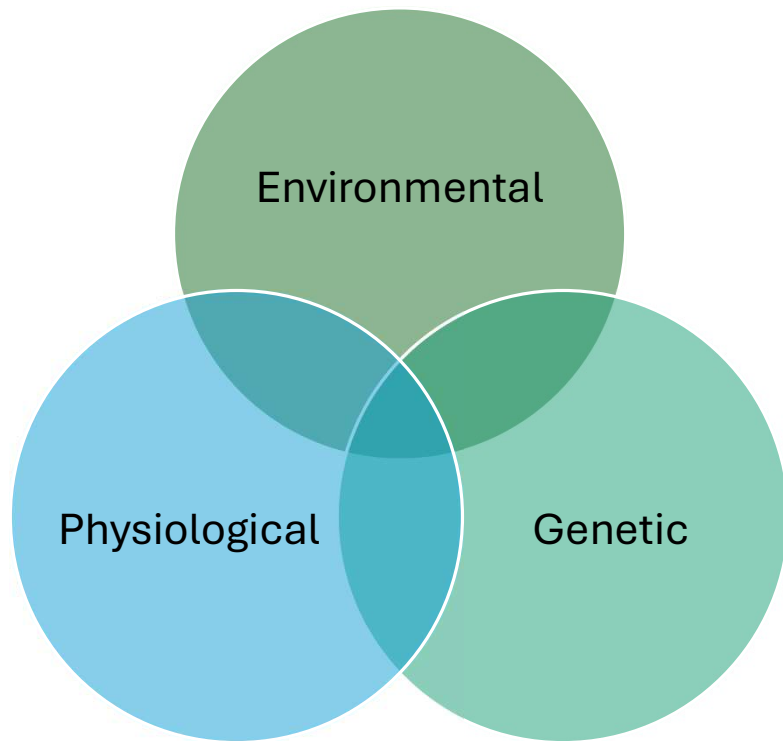
Identify

Support

Behaviour Observed	Could be misinterpreted as...	What it really means
Being overly assertive when playing with others	<ul style="list-style-type: none">• Bossy• Domineering• Bullying	I need to control the players and the game so I can understand what's going on and where I fit in
Pretending to be hurt e.g. I have a sore knee	<ul style="list-style-type: none">• Manipulative behaviour• Lazy	<ul style="list-style-type: none">• No one wants to play with me• No one wants to be my partner



Causes



- Pre-term birth
- Low birth weight
- Pregnancy hypertension (high blood pressure) and preeclampsia
- Emergency caesarean section
- Exposure to stress, high alcohol intake, smoking or cigarette smoke during pregnancy
- Genetic predisposition
- Brain lesion or impaired neurological processes

Dyslexia vs Dysgraphia vs DCD



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Understand

Identify

Support

Identify



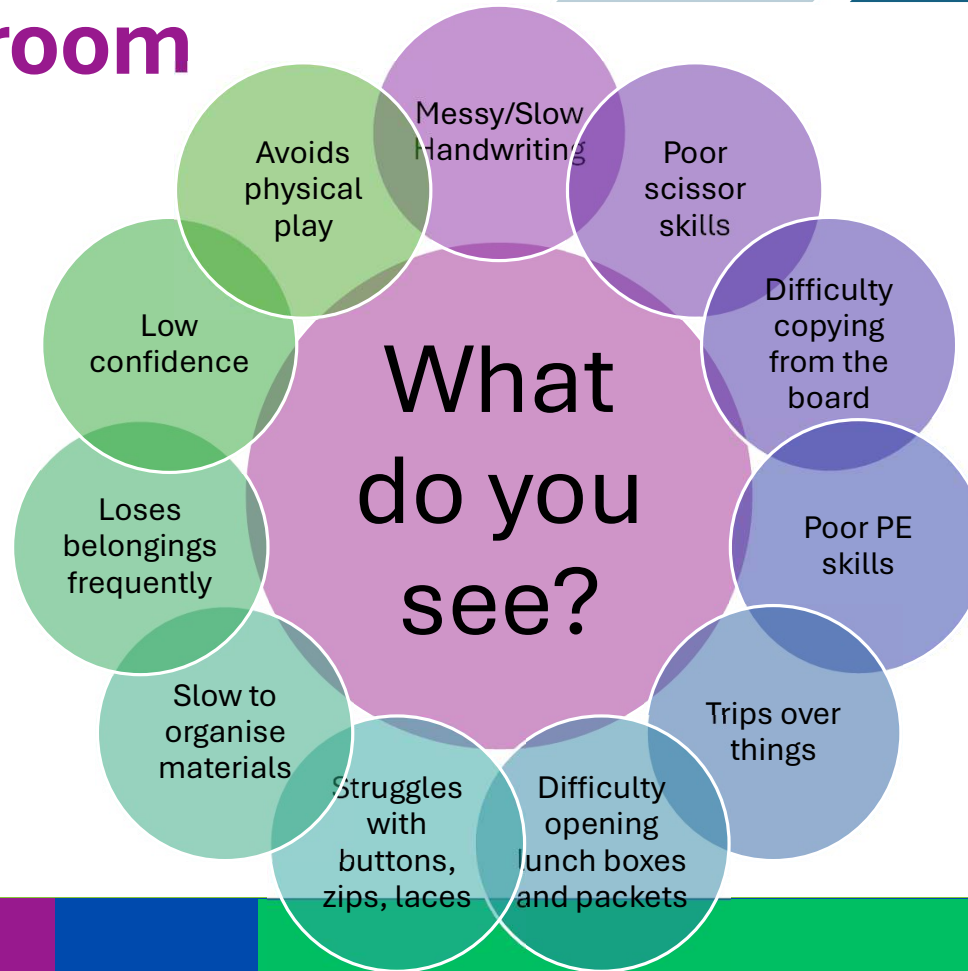
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How DCD shows up in the classroom

Understand

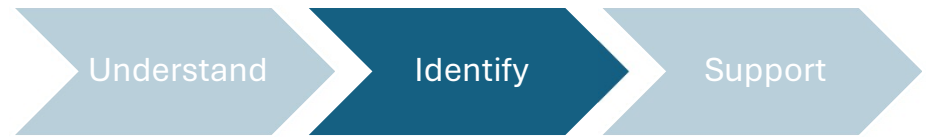
Identify

Support



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Diagnosis



Criterion A: Motor coordination is substantially below age-expected levels, causing clumsiness, slow, or inaccurate performance of motor skills (e.g., catching, writing, riding a bike).

Criterion B: The motor deficit significantly interferes with activities of daily living (ADLs), academic achievement, or work/leisure activities

Criterion C: Symptoms begin in the early developmental period (childhood).

Criterion D: Deficits are not better explained by intellectual disability, visual impairment, or another neurological condition.

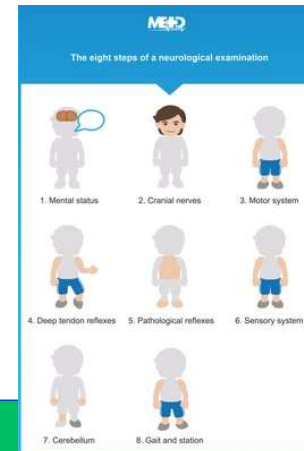
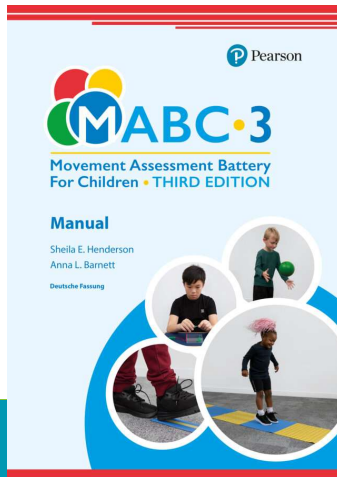
Diagnosis

Understand

Identify

Support

- Diagnosis of exclusion
- Diagnosed in early childhood (but not too early!)
- Lifelong condition
- Occupational Therapist or Physiotherapist + Paediatrician



Handwriting differences

Dyslexia vs Dysgraphia vs DCD



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The quick brown fox jumps over the lazy dog
The quick brown fox jumps over the lazy dog

The quick brown fox
The quick brown fox

I like my family they all help me and me
~~an~~ uncle and aunt, I like to visit my cousin and
play game. I love playing in the park with my
friends. I ~~to~~ going to go to somalia and get a
pet cat, rabbit, and I ~~also~~ get to ride on my mom
camel. My ~~favivibe~~ ^{favivibe} hobbies is play
cricket, football with brother and going somewhere fun
I like it when is my birthday & I went toys
and cake. I watch tv or play game on my ipad.
I sometime I do my homework with my friend.
I dont dance that much but I do dance
when something is ^{happening} happier. I in the middle of
my family. I got 3 ^{including} older and 3 younger.
4 boy and 3 girl idaly me. When my baby brother
cries I sing a nusary symet for him
and ~~law~~ laughs. I used to go the a

CF The fox quickly jumped over a dizzy brown mouse on the grass. The fox quickly jumped over a dizzy brown mouse on the grass. The fox quickly jumped over a dizzy brown mouse on the grass. The

walking through the damp old bush where litter blankets the forest. The never ending blackness envelops the sky bleaching black. The animals slowly stalk my shadow, oak trees sway gently in the wind gently speaking to each other.



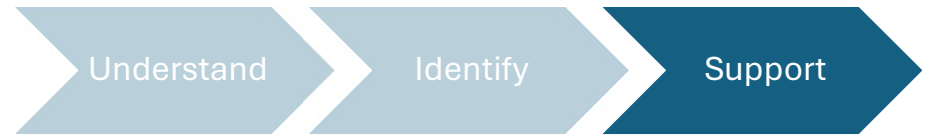
I ^{the} ~~my~~ Holidays I am going to Menorca near Spain
It's always really hot and I love it there. We have been
going to Menorca for 4-5 years now and my family still
love it. In my family there is my sister Maria, my mum
Nicole and my dad called Paul. We have a cat called
Bustle. But she's really old and fat. My hobbies
are playing on the playstation or going out with my
friends playing lots of sports like football and tennis.
I also like watching TV and one of my favourite
programmes is Top Gear. I like also like sports.

Prunty et al 2014

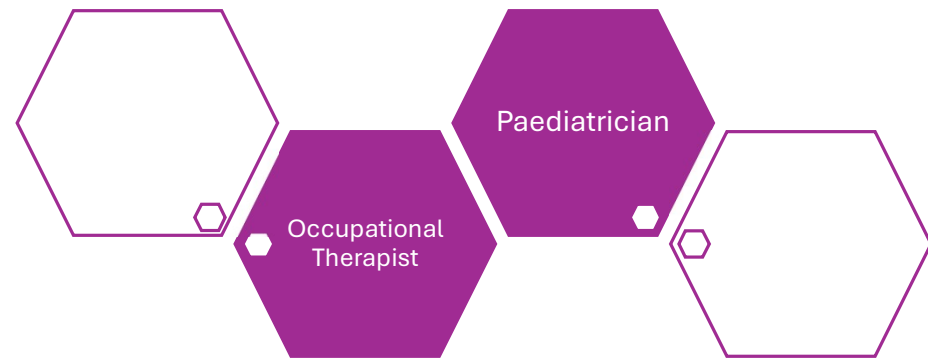


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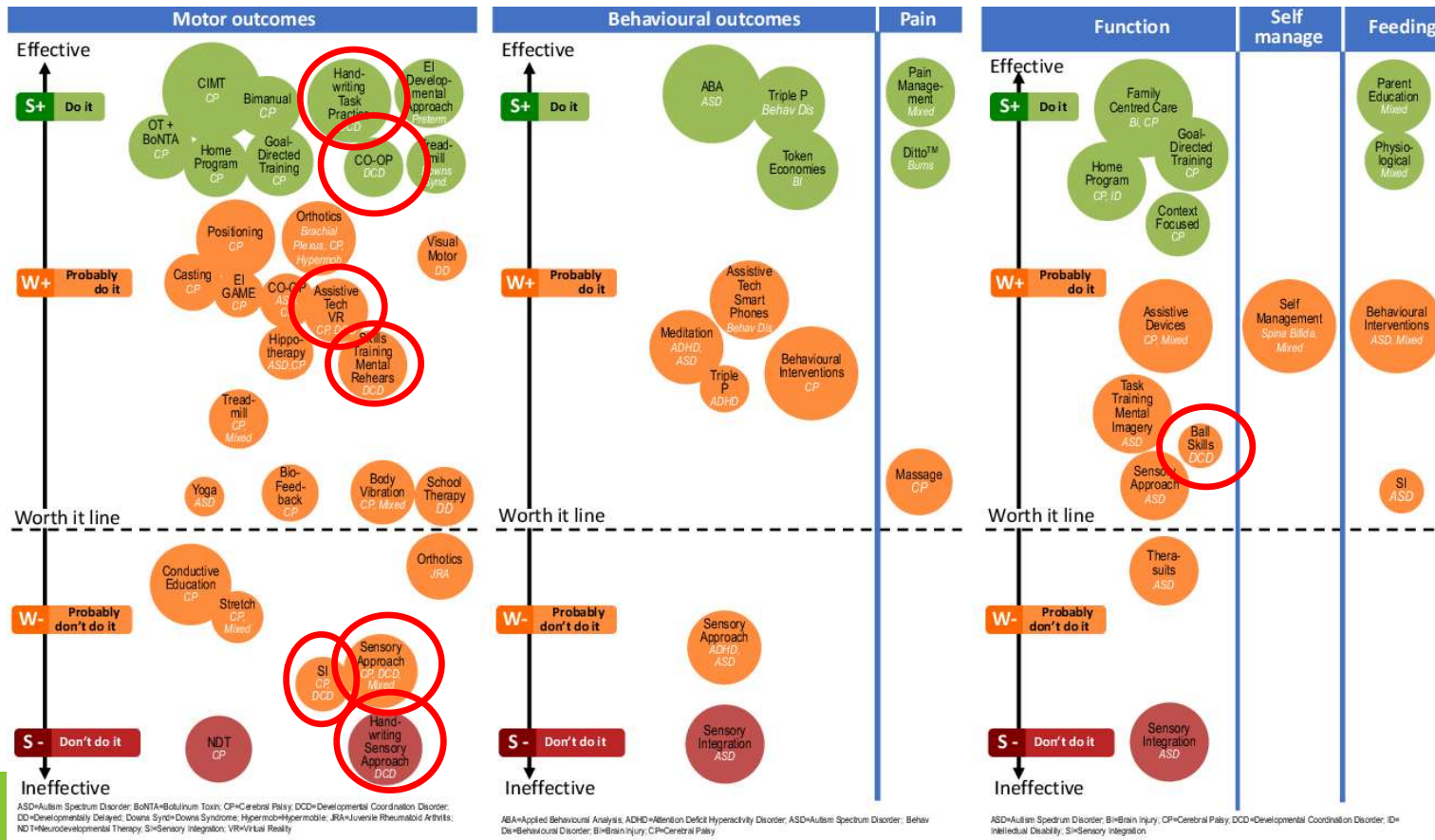
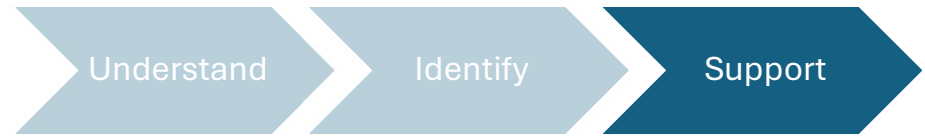
When to refer



- Motor difficulties persist despite practice
- Impact is seen across multiple domains
- Concerns are ongoing for ≥ 6 months
- Child shows distress or frustration
- Family expresses concerns



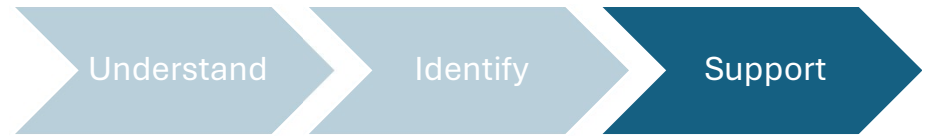
What does the evidence tell us?



Novak & Honan. “Effectiveness of paediatric occupational therapy for children with disabilities: A systematic review.” *Australian Occupational Therapy Journal* 66 (2019): 258 - 273.



What does the evidence tell us?



- **Do it**

- Handwriting Task Practice
- CO-OP

- **Probably do it**

- Assistive Tech/VR
- Skills Training Mental Rehearsal
- Ball skills (functional outcomes)

- **Probably don't do it**

- Sensory Integration
- Sensory Approaches

- **Don't do it**

- Handwriting sensory approach

Novak & Honan, 2019

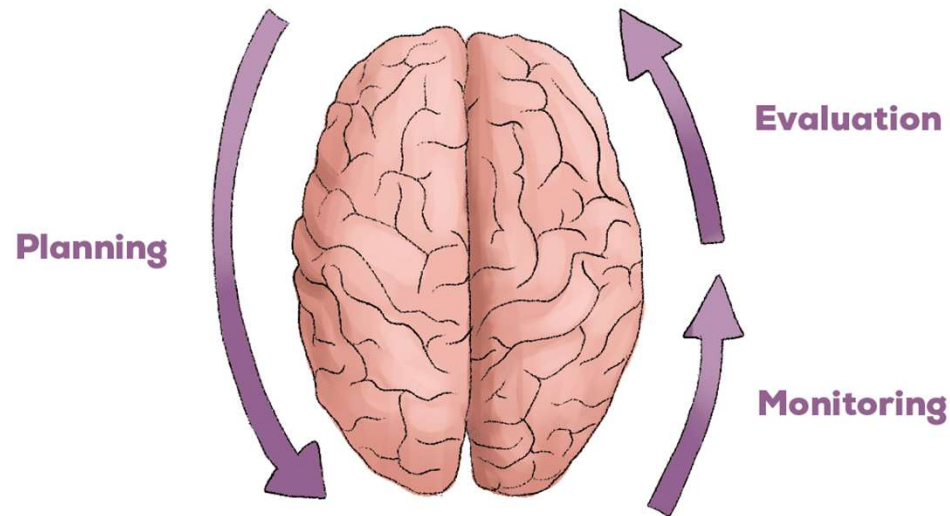
Support

Understand

Identify

Support

METACOGNiTiON



COGNiTiON

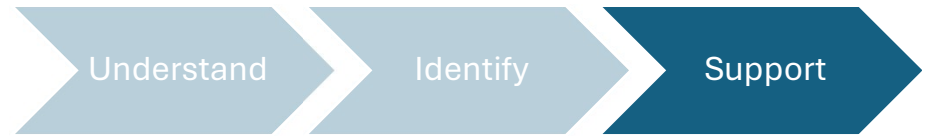


Metacognitive strategies in action

GOAL-PLAN-DO-CHECK



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M
Modify
the Task

A
Alter Your
Expectations

T
Teach
Strategies

C
Change the
Environment

H
Help by
Understanding

CanChild: http://elearningcanchild.ca/dcd_workshop/match.html



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Understand

Identify

Support



M

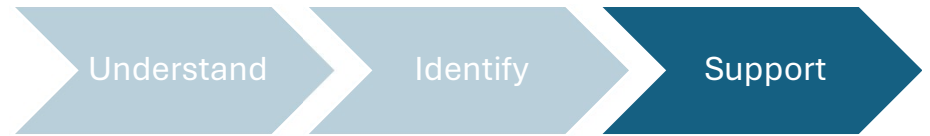
Modify
the Task

- Reduce handwriting load (typing, voice>text)
- Provide extra time
- Pre-teach steps using visuals
- Break down tasks into “chunks”
- Provide “finish later” options to reduce pressure
- Allow practice before group activities (PE)
- Teach motor skills explicitly
- Smaller, lighter equipment



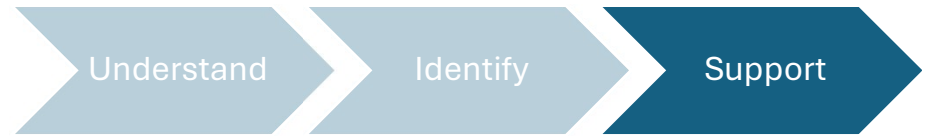
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- Assess based on **learning**, not handwriting quality
- Celebrate effort and strategy, not speed
- Use strengths (verbal reasoning, creativity)
- Offer alternative ways to demonstrate knowledge (videos, oral responses)
- ++++ Practice





- Think>Plan>Do>CHECK
- Checklists
- Coach, don't tell
- +++++ Practice





Understand

Identify

Support



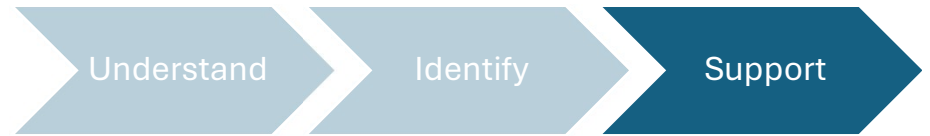
C

Change the
Environment

- Provide stable seating and foot support
- Minimise visual clutter
- Ensure consistent desk organisation cues
- Use quiet corners to reduce sensory load
- Label storage clearly with picture cues



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- Advocacy
- Validate effort (“I see how hard you’re working”)
- Build mastery through safe, success-based tasks
- Celebrate small wins
- Coach peers in inclusive play
- Understand the social-emotional impact



Resources for Schools

Understand

Identify

Support



Discover CanChild + Our Research + Get Involved + Diagnoses + CanChild World + Resources

M.A.T.C.H. Flyers: A Resource for Educators

The most important thing a teacher can do to help a child reach his/her full potential is to make sure the task and the learning environment

[Home](#) » [Resources](#) » M.A.T.C.H. Flyers: A Resource for Educators

Coordination Difficulties:

- [JK/SK](#)
- [Grades 1/2](#)
- [Grades 3/4](#)
- [Grades 5/6](#)
- [Grades 7/8](#)
- [Adolescents](#)

Developmental Coordination Disorder:

- [JK/SK](#)
- [Grades 1/2](#)
- [Grades 3/4](#)
- [Grades 5/6](#)
- [Grades 7/8](#)
- [Adolescents](#)

Developmental Coordination Disorder (French):

- [JK/SK](#)
- [Grades 1/2](#)
- [Grades 3/4](#)
- [Grades 5/6](#)
- [Grades 7/8](#)
- [Adolescents](#)

DCD: A Resource for Educators

Children with Motor Difficulties in Grade 1/2: A Resource for Educators



Kyle, a six-year-old boy, is starting to think there is something wrong with him. He looks like everybody else, but he feels different. He has trouble doing up the button on his jeans, he can't hit a baseball, his teacher can't read his printing, and he can't tie his shoes. It seems like all the other kids in his class can do these things easily and quickly. Kyle's parents sensed there was something wrong with their son from the time he entered the preschool program. They noticed some subtle problems with learning daily tasks, a very low tolerance for frustration and have seen him become more isolated from his peers. Kyle's teacher feels frustrated with him. He seems to be bright enough and can tell

very interesting and complex stories, but he really seems to struggle whenever he has to do anything. Printing, getting ready for recess, eating his lunch, arts and crafts and activities in gym class seem really laborious for him and he takes a long time to complete most tasks. She tells him to focus and to try harder, but it doesn't seem to make any difference.

RECOGNIZING MOTOR DIFFICULTIES

What is DCD?

Developmental Coordination Disorder (DCD) is a medical condition in which there is marked impairment in the development of motor coordination, and the impairment significantly interferes with academic achievement or activities of daily living (DSM IV, 2000). DCD may exist in isolation OR may co-occur with other conditions such as language-based or non-verbal learning disabilities or attention deficit hyperactivity disorder. Children with DCD usually have average or above average intellectual abilities.

What will a teacher see if a child has DCD?

- The child may appear to be clumsy or awkward in his/her movements. He/She may bump into, spill or knock things over frequently.
- The child may experience difficulty with gross motor skills (e.g., running, hopping, climbing), fine motor skills (e.g., pre-printing tasks, cutting with scissors, doing up buttons or zippers), or both.
- The child's motor skills might not match his/her abilities in other areas. For example, intellectual and language skills may be quite strong while motor skills are delayed.
- The child may have difficulty learning new motor skills. Once learned; however, certain motor skills may be performed quite well while others may be performed poorly.

Resources for Schools

Understand

Identify

Support



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COORDINATION
DISORDER
AUSTRALIA INC.

CLASSROOM ACCOMMODATIONS: HANDWRITING



Why is handwriting hard for a child with fine motor difficulties?

Handwriting relies on a complex set of fine-motor movements, which change along with varying demands on different days, in different writing contexts, and as children progress through the primary school years (e.g. moving from printing to cursive). The same amount of writing for a child with fine motor difficulties requires far more effort than for a child without such difficulties.



TEACHING TIPS AND CLASSROOM ACCOMMODATIONS

to help children with DCD to shine



NAVIGATING HIGH SCHOOL WITH DCD



TOP TIPS

to transition into high school

- 1 Start preparing your child for transition process early.
- 2 Meet with school staff before school begins.
- 3 Learn the school environment.
Ask to visit - multiple times.
Learn where lockers are, classrooms, toilets
Ask where to find support staff - get to know them



NAVIGATING UNIVERSITY WITH DCD



HOT TIP

Universities have dedicated staff who assist students with accessibility and inclusion. They will assist you with an individual access plan that provides teaching staff with understanding the accommodations or modifications you need.



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Resources for Schools

Understand

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DEVELOPMENTAL
COORDINATION
DISORDER
AUSTRALIA INC.

Developmental Coordination Disorder Information Sheet for Educators

What is Developmental Coordination Disorder (DCD)?

Developmental Coordination Disorder or DCD (sometimes referred to as dyspraxia) is a lifelong neurodevelopmental condition that causes problems with movement and coordination. People with DCD find it difficult to coordinate their bodies to perform everyday tasks, like dressing themselves, writing neatly, catching a ball or riding a bike.

While those who go on to receive a diagnosis of DCD may present with some movement delays or difficulties early in life (e.g., feeding, crawling and walking), these difficulties are often more noticeable when learning more complex movement tasks required for daily living, early education and playground activity.

What causes DCD?

The causes of DCD are not well understood. Like other neurodevelopmental conditions, the brain is thought to develop differently with these differences impacting on a person's ability to learn and plan movement. Research indicates a strong genetic and heritable basis for the disorder, and early life factors such as complications during pregnancy and birth are also associated.

While DCD can present as an isolated disorder, movement difficulties often exist with difficulties in other domains (i.e., language, socialisation, behaviour). Within current diagnostic models, it is not uncommon for a diagnosis of DCD to be made in addition to other diagnoses aligned to other difficulties or behaviours they may display (e.g., autism spectrum disorder, attention deficit hyperactivity disorder, child anxiety of speech).

How prevalent is the disorder?

DCD is estimated to occur in ~5% of school-aged children, roughly 1:2 children in every classroom. The disorder is more common in boys than in girls (3:1).

Difficulties experienced in the classroom

Children with DCD can present with a range of movement difficulties, including fine motor (using the hands), gross motor (using the body), or both. Common skills that they can have trouble with at school may include:

- Drawing and writing
- Cutting with scissors
- Turning pages in a book
- Navigating desks in the classroom
- Opening their school bag, lunchbox and unsmuggling lunch items
- Slower eating
- Dressing and putting on shoes
- Playground and sporting activities (i.e., climbing, catching, jumping, running)
- Walking up and down stairs
- Toileting

Children with DCD typically appear uncoordinated and awkward with their movement. Their movement can be disorganised, poorly timed, slow, unstable and sometimes rushed.

Children with movement difficulties like DCD must work very hard both physically and cognitively to move. It usually takes them longer to accomplish tasks and they fatigue more often as they try to do so.

Children with DCD will often show a lack of interest or excitement when they find difficult. They may be easily frustrated and may avoid engaging in activities with other children. They are also often excluded by their peers, particularly in the playground.

Handwriting and DCD Information Sheet for Educators

What problem with handwriting?

Children with Developmental Coordination Disorder (DCD) have difficulties with motor planning and adjusting motor plans to different situations. Handwriting is therefore a particularly challenging task for children with DCD. It relies on a complex set of fine-motor movements, which change along with varying demands on different days, in different writing contexts, and as children progress through the primary school years (e.g., moving from printing to cursive). Many adults with DCD therefore never "mastered" their handwriting technique during their early years. This can cause problems down the track during exams etc.

What does handwriting look like in a child with DCD?

Some of the common problems we may see in the handwriting of a child with DCD are:

- Slower handwriting – produce less written words within a set time frame [5]
- A speed-accuracy trade-off – when fast writing is required, writing quality drops considerably or when the quality of writing is key, writing speed is very slow.
- Poor organisation of space on the page – this may be both within and between words.
- Difficulty with appropriate letter sizing.
- Difficulty understanding the implicit rules of handwriting, like knowing where to start forming a particular letter.
- A change in the quality of writing when writing context changes – for example, writing on lined paper compared with a more functional task like writing on a greeting card that has no lines.
- Lots of eraser marks or words written over again [2].
- Difficulty copying writing from the board.

Difficulty with other subjects that require handwriting, like math.

Variability in performance – a child with DCD may write well one day, but the next, be physically or cognitively fatigued, leading to a significant reduction in quality.

How can you help a child with poor handwriting skills?

Handwriting tasks are physically and cognitively demanding for a child with DCD – much more so than for a child without it. This can impact their task performance, but also activities that follow a period of handwriting.

This fatigue may result in poor cooperation or avoidance of activities, which might make you think they are being uncooperative or lazy.

The fatigue, along with the inability to keep up or do as you ask of them, may make them frustrated and prone to acting out.

The focus required for them to write may result in them missing other instructions you give and you may think they are deliberately ignoring you.

How can you help a child with poor handwriting skills?

Children with DCD require individualised strategies to help them master handwriting. This is best supported by a paediatric occupational therapist working closely with teachers and parents.

If you have a child in your class that is struggling with handwriting, without a diagnosis of DCD, a handwriting assessment by a paediatric occupational therapist is the best way to determine whether there are any underlying issues, like DCD.

Classroom Setup for Children with DCD Information for Educators

How does classroom setup impact a child with DCD?

Children with DCD may have difficulty with their fine or gross motor skills (or both). They may drop objects, or knock into or fall over things, have difficulty opening containers or bags, fatigue easily and therefore have trouble maintaining a particular posture for a long time [1].

The set-up of a classroom can affect the functioning of a child with these types of difficulties in many ways. Some examples are:

- Tables too close together or too close to the door makes navigation difficult. The child may avoid getting up from their chair to move around or cause disruptions by bumping in to other children or tables when they do.
- Resources that are hard to access – they may be cluttered, not labelled, in a hard to open container or stored in a back corner or behind other objects. The child may avoid getting what they need, take a very long time to do so, or make a mess of dropping objects or falling over.
- Tables and chairs of a fixed height without any set-up flexibility. Incorrect seating posture may increase the difficulties for a child with DCD at their workstation and lead to earlier fatigue.
- Poor seating choice for the child. A child with DCD is isolated too far from the teacher, required resources and the board, it can impact their performance and motivation.

How can I make my classroom more accessible for a child with DCD?

- Minimise clutter in the classroom – create open spaces and clear pathways for students to move freely around the classroom.

- Provide student with DCD a seat in the classroom that is close to the entry, front of the room and near the resources.
- Provide appropriate seating and desk height, with feet able to be flat on the floor, footrests comfortable on the table.
- Label and create a central space for easily accessible resources, including options for adapted scissors, larger grip pencils, larger print or lines on pages and slanted writing boards.
- Provide easy storage (easy accessible locker or tub at an appropriate height and easily accessible hook for bag).
- Provide flexible seating options and supports as relevant for sitting on the floor, e.g. a supportive cushion, bucket seat or beanbag.
- Set classroom up with a variety of options for undertaking work, e.g. iPads, computers & whiteboards.
- Provide small whiteboards and whiteboard markers, these assist with easy correction of work.
- Create quiet working spaces that are distraction free by positioning furniture in corners of classroom to create a space that can allow a student to complete their work, without worrying about the distractions around them.

Find out more at dcdaustralia.org.au

References

Missiuna, C., Barend, L., & Pollock, N. (2004). They're Bright but Can't Write: Developmental Coordination Disorder in School-Aged Children. *Teaching Exceptional Children Plus*, 1(1), n1.

Physical Education and DCD Information for Educators

While most PE teachers have little to no knowledge of Developmental Coordination Disorder (DCD) or dyspraxia, they can no doubt describe many children at the lower end of the skill spectrum who perhaps, upon reflection, would truly meet the criteria for DCD.

Challenges faced in PE by a child with DCD

DCD is, by definition, a motor skill disorder and as such, participation in PE class can present many challenges for a child with DCD. The movement activities they are required to perform are often complex (e.g., running, hopping, jumping, catching, throwing, kicking) and the environment is such that they are frequently required to attempt these skills while being watched by their peers. They are typically much slower to acquire skills, have difficulty stopping or transferring them, and can't seemingly acquire a skill only to lose it again in the next class.

It can also be confusing for teachers because some children with DCD may perform very well in some sports or settings, but well below average in others.

Children with DCD are at an increased risk of physical inactivity

Young children with DCD are usually keen to be involved in PE classes, but repeated failures and judgement and ridicule from their peers erodes their perceived competence and self-efficacy in the physical domain [5]. This leads to withdrawal from activity, both structured and free play, and places them in a negative loop where less exposure means less opportunity to develop, further decreasing their self-efficacy.

This withdrawal from physical activity affects the physical health of children with DCD, impacting their body composition, cardiorespiratory fitness, muscle strength and endurance, anaerobic capacity and power [2].

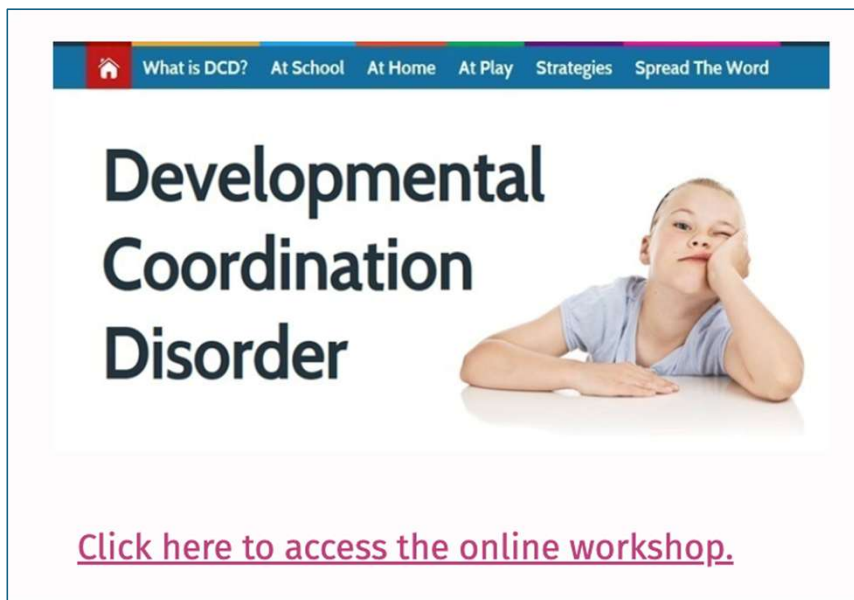
Children with DCD need to experience success early and often

Research has shown that perceived inadequacy in physical activity is the biggest contributor to the child with DCD's lack of enjoyment in PE [5]. Early and continued success can prevent children with DCD from entering this negative space. It requires teachers to work to a child's strengths, accept tasks where necessary, and provide greater level of support. It is important to realise that without these accommodations, a child with DCD may be reluctant to participate in PE or may not even start. Being able to see a teacher may perceive them as being lazy or uncooperative, and provide them with less support when what they actually need is more.

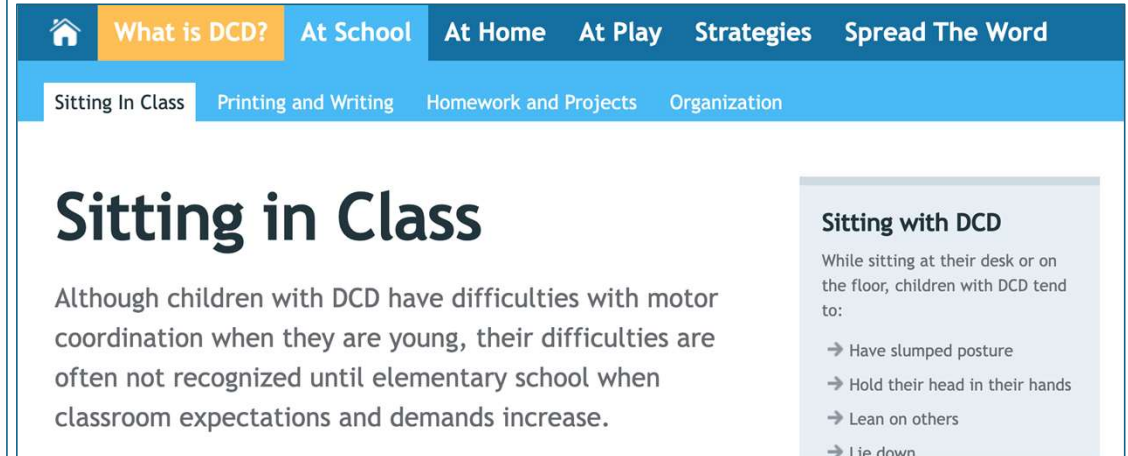
What to do if you suspect a child may have DCD

As a PE teacher, you may be one of the first people to become aware of a child's motor difficulties in comparison to their peers. If you notice a child in your physical education class who persistently displays difficulty performing activities in comparison to their peers, raise these issues with the class room teacher to see if the child is experiencing similar difficulties in the classroom (e.g., writing, cutting with scissors, zipping their school bag and, as a team, reach out to the family and recommend that the child see a relevant specialist to evaluate their movement (e.g., an occupational therapist).

Further learning module



[Click here to access the online workshop.](#)



Sitting in Class

Although children with DCD have difficulties with motor coordination when they are young, their difficulties are often not recognized until elementary school when classroom expectations and demands increase.

Sitting with DCD

While sitting at their desk or on the floor, children with DCD tend to:

- Have slumped posture
- Hold their head in their hands
- Lean on others
- Lie down

https://elearningcanchild.ca/dcd_workshop/index.html

One new thing you have learnt

One student you now see differently

One strategy you will try in the next week



More...

- [DCD for Children and Young People NHS Tayside \(video\)](#)
- [Understanding Dyspraxia/DCD video BRAINS \(video 6.45min\)](#)
- [MATCH E-learning \(CanChild\)](#)
- [MATCH Flyers](#)
- [Dyspraxia Foundation \(UK\)](#)
- [DCD Australia Resources](#)
- [DCD E-learning \(CanChild\)](#)
- [DCD Clinical Practice Recommendations \(EACD\)](#)
- [Children with DCD Booklet](#)

