

# Dyspraxia

## What is dyspraxia?

Dyspraxia is a difficulty with organising and directing the body to perform a motor skill (movement) needed to correctly carry out the steps in a process and to ensure that a task is performed in the most efficient way. In order to do this the brain must receive and register sensory information from the environment and one's own body (e.g. tactile (touch), kinesthetic (body position awareness), vestibular (balance awareness) and visual information). The brain must then process and interpret this information in order to generate an appropriate response: including how to interact with the environment, planning the movement necessary to proceed and finally executing the performance. Included in the organisation and planning of how to execute the task presented to the child, the child also requires the ability to effectively evaluate the success of the performance in order to refine it for next time.

## What are the common features of dyspraxia?

### ***Gross Motor (whole body) Skill Difficulties:***

- Delay in reaching normal milestones for crawling, sitting, walking, speaking.
- Difficulties with running, jumping and hopping compared to their peers.
- Takes longer to initiate movement when presented with a new task as they need time to process and plan (e.g. require a longer exposure to a new activity in order to learn it).
- May seem accident prone (e.g. trip frequently, bump into things).
- May have poor posture.

### ***Fine Motor (Finger) Skill Difficulties:***

- Difficulty with pencil-based tasks (e.g. holding and using a pencil for handwriting).
- Difficulty with self-care activities such as using cutlery, tying shoe laces, brushing teeth, using scissors and doing up zips or buttons.
- Perceptual Difficulties
- Poor spatial awareness showing confusion between left/right, back/front, b/d, p/q.
- Visual perceptual difficulties that result in difficulties with reading fluency, copying and writing.
- Auditory perceptual difficulties that result in not being able to follow a set of oral instructions or being easily distracted by background sound.

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***Language Difficulties:***

- Slow to respond to a question even if they know the answer.
- Speech can be slow and laboured.
- Poor expressive language skills (i.e. has difficulty organising thoughts and language to express themselves).

- Speech sounds are often not clearly articulated and the child may appear to have difficulties working out how to say specific sounds (i.e. mouth appears to be groping to find the sound to say).
- Words are sometimes articulated differently each time the child attempts to say the word.

### ***Organisation Difficulties:***

- Often loses/forgets things.
- Difficulty remembering sequences (e.g. months of the year) in order.
- Difficulty following a set of instructions (may appear to not be listening).
- Difficulty learning routines.
- Difficulty putting multi-step tasks together (e.g. obstacle course).
- Appears lazy and non-compliant (when in fact they may not know how to start the task).
- Difficulty getting things organised at school (e.g. getting out pencils, paper, glue and the right book for a classroom activity, getting all the equipment needed for an outdoor game).
- Struggles to get themselves ready on time.

### ***Emotional/Social Difficulties:***

- Poor self esteem and confidence often resulting in frustration and anxiety.
- Poor awareness of how to act in social settings with other people.
- Not fitting in with their peer group.
- Not picking up on non-verbal communication (e.g. facial expressions, gestures, body language) of others.
- Gets distracted easily or shows poor attention to a task.

**Common difficulties often (but not always) experienced by the child with dyspraxia:**

- May lack interest/motivation in physical activity or be hard to engage in particular activities they find difficult or in which they have experienced failure.
- May avoid socialising with peers or not be included by peers in physical games (e.g. on the playground for fear of failure or experience with repeated failure).
- Easily frustrated when completing tasks.
- Easily distracted
- Reduced self-esteem
- Anxiety when asked to participate in difficult activities.
- Tends to seek out younger children to play with as their skills are of a similar level and they feel more confident playing with them.
- May complain that 'this is too hard' or 'I can't do it' when presented with motor activities.
- May be resistant to changes in how or when tasks are done, as changes present new situations/tasks that require planning and new learning.

**Management strategies that support the child with dyspraxia (at preschool, school and/or home):**

- Provide lots of praise and encouragement.
- Use visual cues to support organisation and planning as well as attention to task.

- Allow extra time to process and learn when presenting the child with a new task.
- Recognise that additional practice is often required on an on-going basis to recall a previously mastered task.
- Break large tasks into smaller ones wherever possible, even if it seems silly (not only does this support skill development, but it also reduces the heightened anxiety that is commonly experienced with motor planning challenges).
- When teaching a skill, start with a movement that the child is likely to achieve and gradually increase the degree of difficulty.
- Provide opportunities to succeed by simplifying activities.
- Introduce new skills or environments on an individual basis before introducing peers.
- Use simple language and instructions.
- Recognise and reinforce the child's strengths.
- Ensure appropriate set up of school desk.
- Set realistic and achievable goals for all task performance and completion.
- Make participation, not competition, the goal.

**Occupational Therapy approaches and activities that can support the child with Dyspraxia and/or their carers include:**

- **Child's abilities:** Observing the child during play and formal assessment to determine the child's abilities with gross motor (whole body) tasks, what they find difficult and then making recommendations for management.

- **Devising goals:** Setting functional goals in collaboration with the child, parents and teachers so that therapy has a common focus beneficial to everyone involved.
- **Educating** parents, carers and teachers about dyspraxia, the age appropriate skills a child should be demonstrating and providing management strategies/ideas to assist the child in the home, at school and in the community.
- **Physical skills:** Providing ways/ideas to promote physical activity and participation in team/group activities.
- **Underlying skills:** Developing the underlying skills necessary to support whole body (gross motor) and hand dexterity (fine motor) skills, such as providing activities to support:
  - Direct skill teaching through a task based approach.
  - balance and coordination
  - strength and endurance
  - attention and alertness
  - body awareness
  - movement planning
- **Confidence:** Building self-confidence to enable a child to willingly participate (it is common for these children to shut down when they perceive the task to be too hard) in activities by:
  - Simplifying tasks: Educating parents and carers on ways to simplify tasks to the smallest possible components and using simple and concise language.
- **Providing the child with awareness** about why they may be experiencing difficulties with movement, their strengths as well as their weaknesses and providing and teaching them strategies to overcome obstacles they may face which otherwise may see an avoidance of activity.

- **Breaking down specific physical skills** into one or two step components to teach the skill and then gradually adding in components until the skill is doable in its entirety (e.g. skipping – start with a step, then a hop).
- **Providing opportunities and strategies** to master the same skill in different environments (home versus school versus therapy session).
- **Presenting the activities** at the ‘just right challenge’ level to provide success and then gradually increasing the demands of a mastered skill.
- **Non-verbal cues:** Using physical and visual models or instructions (wherever possible) not just verbal.
- **Sensory processing:** Improving sensory processing to ensure appropriate attention and arousal to attempt the tasks, as well as ensuring the body is receiving and interpreting the correct messages from the muscles in terms of their position and relationship to each other.
- **Multi-sensory approach:** Using a multi-sensory approach to learning new skills.
- **Modelling tasks** visually and using hands-on adjustment techniques to aid body awareness for the child.

**Speech Therapy approaches and activities that can support the child with dyspraxia and/or their carers include:**

- **Speech and language assessment** to help the family to understand how the child is processing, understanding, learning and using language and communication.
- **Communication strategies:** Providing the family with strategies and techniques to increase and enhance communication with the child.
- **Daily activities:** Helping the child to understand the environment, routines and language.

- **Developing language:** Helping the child to understand and use richer language and to use language more spontaneously.
- **Articulation:** Improving the child's ability to articulate sounds within words.
- **Conversation skills:** Developing conversation skills (e.g. back and forth exchange, turn taking).
- **Concept skills:** Developing concept skills, especially abstract concepts, such as time
  - (e.g. yesterday, before, after).
- **Visuals** can be used to help with understanding and the child's ability to express their needs, wants, thoughts and ideas.
- **Social skills:** Development of social skills (i.e. knowing when, how to use language in social situations).
- **Enhancing verbal and non-verbal communication** including natural gestures, speech, signs, pictures and written words.
- **Visual strategies:** Using visual information to help understand, organise and plan the routine for the day.
- **Liaising with educational staff** regarding the nature of the difficulties and ways to help the child to access the curriculum.

**If left untreated the child with dyspraxia may have difficulties with:**

- Learning to talk, speech intelligibility and clarity.
- Managing a full school day due to poor strength and endurance.
- Participating in sporting activities leading to an inactive lifestyle, increasing the risks of other health related issues such as obesity, diabetes, cardiovascular disease or similar conditions.

- Self esteem and confidence when they realise their skills do not match their peers.
- Bullying when others become more aware of the child's difficulties.
- Fine motor skills (e.g. writing, drawing and cutting) due to poor core stability, meaning they do not have a strong base to support the use of their arms and hands.
- Completing self-care tasks (e.g. doing up shoelaces, buttons, zips, using cutlery).
- Self regulation and behaviour as the child is unable to regulate themselves appropriately to settle and attend to a task for extended periods of time.
- Anxiety and stress in a variety of situations leading to difficulty reaching their academic potential.
- Academic performance: Developing literacy skills such as reading and writing and coping in the academic environment.
- Academic assessment: Completing tests, exams and academic tasks in higher education.