

## Dyspraxia

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I will provide you with a definition of dyspraxia, but there is one word which I would like you to hold in mind with compassionate understanding. That word is *INCONSISTENT*. When I say compassionate understanding, I mean that as the person working with the child with dyspraxia, you will need to apply patience, compassion and understanding from one day to another, from one time in the day to another; from moment to moment; from one activity to another; or from one environment to another.

This is because a child with dyspraxia will show variation in his or her abilities across different times of the day, different days, different activities, and different environments. It is possible that a child may be able to perform a task or action in the morning, but not later in the day; or show good skill on the sports field, but not be able to cope with tying his shoe laces, or be unable to pass over to you an object that is behind him.

When it comes to defining dyspraxia, or naming up a diagnosis for a child, there is inconsistency among the professionals around what terms to use. You might be told a child has Dyspraxia, Verbal Dyspraxia, or Developmental Dyspraxia of Speech. Also, the diagnosis is inconsistent across individuals and across ages. Dyspraxia may become evident in childhood as the child develops; it may occur as a result of brain injury (accident or stroke), or develop as part of a dementia disorder.

When we are considering children, we would usually consider dyspraxia as a Neurological Developmental Disorder. The word “praxis” means movement and “dys” indicates that it is out of order, or impaired in function. So simply, dyspraxia is movement that is impaired. When the term is applied to diagnose a condition, what it means is that we are looking at a motor (movement) planning disorder. Motor planning applies to anything that requires movement.

There are two types of movement: reflexive and volitional, and movement can be generated from either, or a combination of both. A reflex is an involuntary action or response to a stimulus, or it is an automatic response or reaction. Typically once a movement becomes automatic, we don't “think” about it, we just execute the movement.

Developmentally, movement begins as reflexive, and typically within the first 6 months of life resolves into patterns of movement that become more and more organised, and also smoother and more automatic. Movement is an interaction between the environment in which the movement occurs, and the internal “forces” which occur to ensure the movement occurs. The internal forces are neurologically based, and requires integration of the sensory (taste, vision, smell, hearing touch and motor (muscular-skeletal) systems. So from birth, babies interact with their environment through their senses, and they begin to explore their environment initially through reflexive movement. The interaction of reflexes, sensory information and environment stimulates cognitive development, and thus development progresses.

For a child, or person with Dyspraxia, movements do not completely resolve from reflexive patterns to more organised patterns; and thus Dyspraxia is a neurological disorder that is only noticed when the child tries to perform a movement (activity or skill) and finds that it is difficult to do so. Dyspraxia is believed to result from an immaturity of the motor cortex of the brain that prevents messages from being transmitted to the body.

Typically, the more a developing child practices movements, the more skilled and automatic the movements become, but for a child with dyspraxia, there may be too much “interference” neurologically for the movements to become consistent, smooth, skilled and automatic. The child knows what he/she wants his/her body to do, but can’t get his body to respond in the way it should.

There are 3 types of developmental dyspraxia: Oral, verbal and motor. A child may present with a combination of each type. Dyspraxia can vary in severity, affect different parts of the body, and manifest differently at different stages of development. It is, as I said, inconsistent.

**Oral Dyspraxia** - when asked to, children are unable to make mouth movements such as putting their tongue to the roof of their mouth.

**Verbal Dyspraxia** - children have difficulty making mouth, tongue and other oral and facial movements to make sounds and words.

**Motor Dyspraxia** – children have difficulty making movements in an organised way.

In order to make a movement, the brain signals the body to move according to the information it has received about, space, distance, obstacles, depth, width and height through the senses of vision, touch and hearing. Somewhere between receiving and storing the information, and also remembering information from past experience, the brain is blocked or interrupted.

The interruption prevents the brain from creating a sequence and pattern of muscle contractions and relaxations which produce movement. The more the child is required to think about the movement and how to do it, the more likely they are to be unable to carry it out. It is as if the brain becomes overloaded and unable to pull everything together to work in an organised and useful way.

Because of this, Dyspraxia may look like:

- Clumsiness.
- Poor balance in Gross Motor Coordination, and poor Fine Motor Co-ordination.
- Vision and perception difficulties.
- Emotional and behavioural problems.
- Poor social skills.
- Poor posture.
- Poor short-term memory.
- Taking longer to learn new skills.