

Planning and Sequencing (Praxis)



What is planning and sequencing (praxis)?

Planning and sequencing involves planning and ordering new muscle (motor) actions (known as praxis). It involves first generating an idea of *what* you want to do (ideation), figuring out *how* you are going to do it (motor planning) and then *doing* or carrying out what you wanted to do (execution). Integration of the brain and the senses (e.g. touch, movement, vision, hearing) are required for good planning and sequencing. People with poor planning and sequencing may have to think harder to complete new physical tasks due to poorly integrated information from the sensory systems.

Why is planning and sequencing (praxis) important?

Planning and sequencing is important to enable a child to perform many everyday tasks such as walking, running, playing on a playground and playing sports. Planning and sequencing skills are also required for everyday self care tasks such as dressing and eating, and impacts on a child's ability to organise themselves and learn new routines. Poor planning and sequencing can also influence skills required to achieve in an academic setting such as writing, drawing and cutting.

What are the building blocks necessary to develop planning and sequencing (praxis)?

- **Muscular strength:** An ability to exert force against resistance.
- **Motor (muscle) planning:** The ability to move the body with appropriate sequencing and timing to perform bodily movements with refined control.
- **Motor (Physical) learning:** A change in physical performance resulting from practice or past experience.
- **Postural control:** The ability to stabilise the trunk and neck to enable coordination of other limbs.
- **Sensory processing:** Accurate registration, interpretation and response to sensory stimulation in the environment and one's own body.
- **Body awareness:** Knowing body parts and understanding the body's movement in space in relation to other limbs and objects.
- **Balance:** The ability to maintain position whether that is static, dynamic (moving) or rotational.
- **Coordination:** Ability to integrate multiple movements into efficient movement.

- **Executive Functioning:** Higher order reasoning and thinking skills.

How can you tell if my child has problems with planning and sequencing (praxis)?

If a child has difficulties with planning and sequencing they might:

- Have difficulty learning new motor tasks (requires more practice than their peers).
- Appear clumsy or uncoordinated.
- Be unable to perform the same skills as their peers (e.g. catch, kick, hop and jump).
- Be less skillful than their peers in sports.
- Be unable to follow multi-step instructions to complete a physical task (e.g. obstacle course).
- Be generally 'disorganised'.
- Be late in reaching developmental milestones (i.e. sit, crawl, walk, run and hop).
- Move stiffly and lacks fluid body movement or alternatively looks awkward and appears clumsy.
- Avoid physical activity.
- Struggle to get themselves ready on time.
- Have difficulty collecting materials for school (e.g. getting out materials such as the right book for a classroom activity).
- Have difficulty collecting the materials needed for play activities.
- Have difficulty packing their bag for school.
- Appear lazy and does not complete work (when in fact they may not know how to start the task).
- Have difficulty getting thoughts down on paper.
- Be unable to plan and correctly sequence events or steps in a process (e.g. step forward before throwing).
- Fail to perform movement safely (e.g. climbing).
- Need to put in more effort than their peers to complete a task.
- Have difficulty knowing where their body is in relation to objects and people and frequently falls, trips, and/or bumps into obstacles.

What other problems can occur when a child has planning and sequencing (praxis) difficulties?

When a child has planning and sequencing difficulties, they might also have difficulties with:

- Drawing and pencil skills lacking in a skillful outcome.
- Activities of daily living (e.g. dressing independently, holding and using cutlery, tielting).
- Chewing and swallowing food.
- Sensory processing (responding appropriately to the environment).
- Articulation of sounds.
- Limited play repertoire
- Self-esteem

What can be done to improve planning and sequencing (praxis)?

- **Break new tasks into smaller steps** wherever possible, even if it seems silly (not only does this offer supported skill development, but also reduces anxiety).
- **Repetition:** Recognise that additional practice is often required to master a new task.
- **Physical guidance:** Physically guide the child through new motor tasks so that they learn what the movement feels like.
- **Visual cues:** to learn new tasks and routines.
- **Improve 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, their relationship to each other, the speed at which they move and how much force they are using.
- **Multi-sensory approach** (using as many of the 7 senses) to learn new skills will ensure a child has the best chance at learning appropriate strategies to respond to a physical demand or challenge.
- **Cognitive planning strategies** can be used to talk the child through tasks.
- **Strengthen the 'core'** (namely the large central muscles) of the body to provide greater body (especially trunk) stability.
- **General muscle strength** can be used as a coping strategy where "floppy" muscles are a challenge.
- **Break verbal instructions into parts:** Instead of "Go and get your lunchbox and your hat and go outside", say

“Get your lunchbox.” When the child has followed that instruction, say “Now get your hat” then “OK, now you can go outside”.

- **Repeat the instruction:** Ask the child to repeat the instruction to ensure that they have understood what they need to do (e.g. “Go and get your bag then sit at the table. What do I want you to do?”).
- **‘First/Then’:** Use this concept to help the child know what order they need to complete the command (e.g. “First get your jacket, and then put on your shoes”).

What activities can help improve planning and sequencing (praxis)?

- **Sequencing activities:** To help the child understand that things need to be completed in the correct order for the desired outcome.
- **Breaking activities into smaller steps:** Ask the child to write down the steps of an activity so that they can plan how to complete the task.
- **Simon Says:** To improve body awareness and movement planning.
- **Wheelbarrow walking:** For upper body strength.
- **Unstable surfaces:** Walking/climbing over unstable surfaces (e.g. large pillows) as it requires a lot of effort and increases overall body strength.
- **Catching and balancing:** Standing with one foot on a ball while catching another ball (encourages balance while practicing catching and throwing).
- **Small parts of activities:** Practice doing a small part of a task at a time as it is easier to learn new skills in smaller sections.
- **Observation:** Have the child observe other family members performing everyday activities.

Why should I seek therapy if I notice planning and sequencing (praxis) difficulties?

Therapeutic intervention to help a child with planning and sequencing difficulties is important to:

- Increase the child’s confidence in gross motor activities (e.g. playing on the playground, running, jumping).
- Increase the child’s confidence in fine motor activities (e.g. cutting, drawing, writing)
- Enhance the child’s self-esteem (so they aren’t ostracised or picked last for sporting teams due to their physical ability skill challenges).
- Increase sporting ability and confidence to engage in sports. Participating in sport enables a child to enrich their lives with positive people and develop strong friendships.
- Enable the child to be successful in demonstrating their true academic ability.
- Assist the child in developing self-care and independence skills.

If left untreated what can difficulties with planning and sequencing (praxis) difficulties?

- Avoidance and poor behaviour. Children with planning and sequencing difficulties are often very aware of their challenges and quickly learn to subtly (or not) avoid them. This only reinforces any skill delays that are emerging from lack of practice.
- Difficulty participating in sporting activities.
- Poor self esteem when they realise their skills do not match their peers.
- Bullying when others become more aware of a child’s difficulties.
- Poor fine motor skills (e.g. writing, drawing and cutting).

What type of therapy is recommended for planning and sequencing (praxis)?

If your child has difficulties with planning and sequencing, it is recommended they consult an Occupational Therapist.

If there are multiple areas of concern (i.e. beyond just planning and sequencing) both Occupational Therapy and Speech Therapy may well be recommended to address the functional areas of concern. This is the benefit of choosing Kid Sense which provides both Occupational Therapy and Speech Therapy.

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