



OT & role in schools

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Aims



- Discuss the role of an OT in paediatrics and specifically their role in schools
- What factors lead to referral to poor to an OT?
- Who refers?
- What is therapy?



What is OT?



- The purpose of occupational therapy is to help the child achieve or maintain their maximum level of independence and to develop practical life skills so that the child can participate to his/her full potential in the home and classroom environment. This occurs in partnership with the child's family or teacher within the child's home or school community.

What do OTs do?



Assessment

- **Developmental skills - developmental, neurological and behavioural assessment of babies** and young children.
- **Motor skills and co-ordination**
- **Sensory Processing** for children with co-ordination and sensory difficulties.
- **Self care and functional skills** such as feeding, dressing or toileting and the need for special seating
- **Fine motor skills** particularly in relation to functional tasks such as handwriting, using a knife or fork, use of scissors etc.
- **Visual perception skills** (in relation to handwriting & other functional tasks)
- **Handwriting**

What do OTs do?



- **Therapy** may be individual or in groups such as handwriting groups, specialist motor groups etc.
- Home and school programmes may also be provided.
- Consultation and training is provided for teachers and parents as appropriate.
- **Equipment** - assess and arrange for the provision of special equipment

What should your prep child be doing?



- **Pencil skills**

- Tripod grasp
- Clear hand preference -> dominance
- Non dominant hand is an active “assist”
- Connect dots, draw in basic mazes
- Attempt letters of their name without guide
- Draws a person with 7 body parts

- **Scissor skills**

- Thumbs up grasp
- Able to cut circle and square along lines

- **Visual motor control**

- Able to copy shapes – triangle, circle, square and + and x.
- Attempt to colour within the lines

- **Other fine motor skills**

- Pick up small pellets using pincer grip
- Folds paper with edges parallel
- Small construction play e.g. polly pocket, lego

What should your prep child be doing?



- **Daily Living Skills**

- Able to open lunchbox and containers
- Zips up bag
- Do 1-3 buttons (school shirt)
- Wipe own bottom
- Feeds self with fork (may attempt knife for soft foods)
- Brushes hair and teeth
- Un/dresses self (and orientate back/front/inside out)

- **Gross Motor Skills**

- Balance on each leg 10 sec
- Catch tennis ball with hands (and chest) 1.5 metres
- Rides bike with/without training wheels
- Runs fluidly, hops, skips
- Climbs stairs (up/down) 1 foot per step without holding onto bannister
- Jumps (forwards/back, down from 1-2 steps, over small obstacles)

Building Blocks

(internal factors)



Hand Function

Efficient Movement
Patterns/Praxis

Cognition

Vision

Motor:
tone/ROM/
Strength/
postural
control

Sensory Functions
(tactile &
proprioceptive)

Perception

OT in prep!



- Grasp patterns
 - Pencil, scissors, small objects
- In-hand manipulation
- Bimanual Skills
 - Co-ordination, lead-assist
- Sensory awareness
- Dominance
- Laterality/directionality
- Visual motor control
- Pencil control

OT in grade 1!



- Handwriting
 - Quality & quantity
 - Pencil control and grasp
 - Pencil, scissors, small objects
- Attention In-hand manipulation
- Sensory processing skills
- Functional skills – dressing, using K & F
- Gross motor co-ordination skills
- Posture, strength and endurance

OT in grade 2 onwards!



- Handwriting
 - Quality & quantity, writing at speed
 - Pencil control and grasp
 - Pencil, scissors, small objects
 - Composition
 - Copying from the board
- Attention
- Sensory processing skills
- Functional skills – dressing, using K & F
- Gross motor co-ordination skills
- Posture, strength and endurance

Why work on fine motor skills?



End of year 1 work sample:

Poor grasp, poor pencil control, incorrect letter formation, directionality difficulties, reduced confidence/esteem, greatly reduced speed & fluency, now a very reluctant writer.

The quick brown fox jumps over
the lazy dog.

The quick brown
The dog jumps over

Developmental sequence



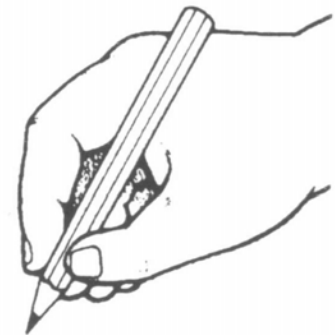
- o Pre-Writing skills → Handwriting
- o Tool Use: fingers/cars → pencils.
- o Forms: Scribbling → Colouring In → Drawing
→ Writing
- o Hand Preference → Hand Dominance.
- o Laterality → Directionality.

Why do difficulties develop?



- Lack of experience
- Decreased interest
- Low muscle tone
- Ligamentous laxity (hypermobility of joints)
- Poor stability
- Immaturity of grasp, poor in-hand stability, poor finger movements, poor in-hand manipulation

Development of Grasp



Correct Pencil Grip

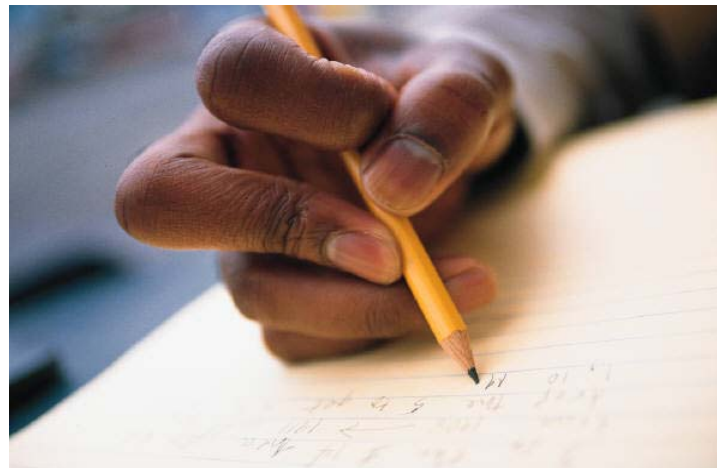
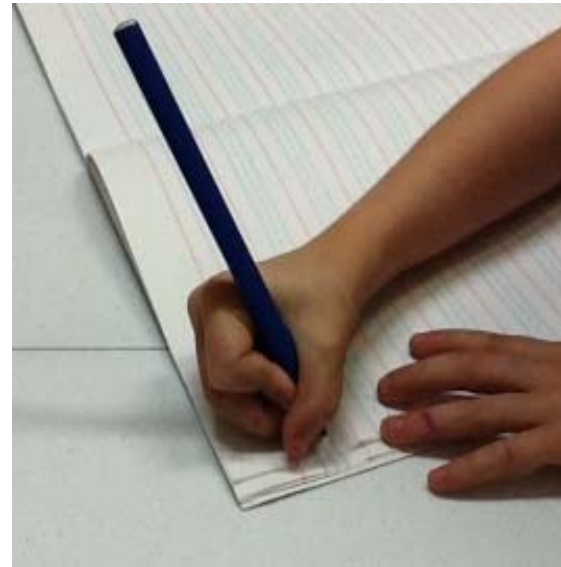


Tripod 3 finger grasp – index on top
Outer border of hand (ulnar) stabilised on paper.
Pencil on diagonal to the paper to allow vision to monitor and assist with pencil control.



Incorrect grasp despite pencil grip, incorrect pencil orientation to paper, reduced visual ability to monitor pencil control & legibility of work

Incorrect Grasps



In Hand Manipulation



- Manipulating an object within 1 hand
- Depends on motor control of forearm and intrinsic muscles of the hand.

If manipulation skills are poor you will notice:

- Using both hands to change orientation of a small object
- using their mouth or tummy to help change the orientation of the objects.

Bimanual Skills



- Effortless movement between 2 hands
- Lead-assist
- Automatic adjustment
- Development = initially non-dominant hand has a stability role and then develops so both hands are mobile in a task.



What Can Parents Do?



PENCIL/SCISSOR GRASP

- Educate child on correct grasp
- Use short chubby crayons/pencils, triangular pencils, ? pencil grips
- Verbal prompt – “Mum, Dad and kids in the back”, “birdie fingers”; “spyglass”; “thumb up”
- Play with a variety of writing utensils & paper!!!!
- Visual motor play – mazes, dot to dots, magic coin rubbings

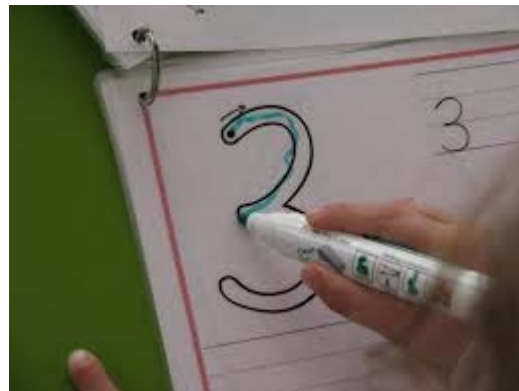
What can parents do?



Physical requirements:

- Appropriate **seating** to support posture
- Position paper - lefties should tilt more!
- Consider prompts to support **hand function** (**verbal cues to child**) Consider head posture - **visual monitoring**.
- Consider **type of tool** - which pencil and/or grasp?
- Encourage use of triangle pencil
- Encourage thumb web space "spyglass"

What can parents do?



What Can Parents Do?



SCISSOR SKILLS

- Educate child on correct grasp & hand position
– THUMBS UP!
- Craft play, sensory play
- Grade activity according to developmental sequence
- Novelty scissors, easy grip scissors, spring loaded scissors

Summary

- Development of fine motor skills involves practice and motivation as well as refinement of motor skills.
- Essential skills need to be developed prior to writing
- Pencil grips and drawings follow a developmental **sequence**





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