



OT and the importance of fine and gross motor skills for your children's development

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Aims of session

- ▶ To describe the role of an OT
- ▶ To describe the importance of gross motor skills
- ▶ To describe the importance of fine motor skills
- ▶ Handwriting
- ▶ Things to help develop gross and fine motor skills

The role of an OT

- ▶ To fully assess children in their human occupations (work/school, play, leisure), analyse their performance and identify why they may be experiencing difficulties, or not reaching potential.
- ▶ To provide therapy to remediate difficulties.
- ▶ To provide equipment and adaptations to overcome functional impairment.
- ▶ To provide advice/strategies to parents, teachers and pupils themselves.
- ▶ To liaise and work closely with parents, teachers, EP's and other therapists.

What do we look at?

Gross motor skills including

- ▶ Balance, static and dynamic.
- ▶ Muscle tone and strength, posture.
- ▶ Bilateral Coordination gross and fine.
- ▶ Eye hand co ordination
- ▶ Handwriting
- ▶ Sensory Processing
- ▶ Motor Planning (Praxis).

What do OT's look at:

Fine motor skills including...

- ▶ Hand function, strength, stereognosis, coordination.
- ▶ Pen grip and typing skills.
- ▶ Tool use e.g. scissors skills, ruler, science and DT equipment.
- ▶ Functional skills e.g. buttons, zips etc.

We also look at...

- ▶ Sensory processing
- ▶ Visual motor integration
- ▶ Functional skills
- ▶ Classroom skills

What are gross motor skills?

- ▶ Gross motor skill is using the large muscles in the body for example your arms and legs to complete activities such as jumping, running or skipping.

Gross motor skills

- ▶ Gross motor skills are really important for school success. That's partly because of the order and sequencing of development—the way new skills build on previous ones, and the way small muscles develop after large ones.
- ▶ It's also because kids need to be able to sit at a desk or stand at a whiteboard in order to write. And they need to be able to use balance and twisting skills to cross the midline (an imaginary vertical line dividing the right and left sides of the body), which they must do in order to read and write fluidly.

The importance continued...

- ▶ Typically your gross motor skills develop with age and they build upon each other.
- ▶ Delays in gross motor ability can have an impact on school activities such as sitting at a desk or reading and writing.
- ▶ Many different activities outside of school can be affected by delays in gross motor development.
- ▶ Often delays in gross motor development can impact fine motor development.
- ▶ As your gross motor skills develop so do your coordination skills.

How to help with gross motor skills

- ▶ Catching and throwing
- ▶ Jumping/ Hopping
- ▶ Balancing
- ▶ Getting outside!!!
- ▶ Sports
- ▶ Core and shoulder girdle activities

Postural stability and core strength

- ▶ Having a strong and stable posture provides the foundation for higher level skills to progress such as, balance, coordination, reading, writing, listening and learning.
- ▶ Postural muscles begin to develop from the moment we were born, by using developmental positions during play and daily activities.

Postural stability continued....

Developmental Positions include:

- ▶ Tummy time (prone on elbows)
 - ▶ All fours (crawling)
 - ▶ Tall kneeling (exploring and scaling furniture).
-
- ▶ These muscles continue to be utilised and strengthened when kids are engaged in daily activities such as crawling, climbing, pushing, pulling, lifting, carrying, catching and balancing.

Core strength and postural stability

- ▶ -Postural muscles develop the moment we are born and continue to be utilised in daily activities.
- ▶ -Children who have reduced physical activity often have limited postural stability.

Core strength and postural stability

Things you can do at home-

- ▶ Superman or silly bug
- ▶ Wheelbarrow walks
- ▶ Bridge pose
- ▶ Balancing games
- ▶ High kneeling

What are fine motor skills

- ▶ The ability to control small movements of the arms hands, and fingers
- ▶ Once formal schooling starts good fine motor skills will enable a child to learn to write with minimal effort. Many bright children struggle in the early school years because of poor fine motor skills which affects their pencil control.
- ▶ Poor pencil grasp can lead to difficulties with letter formation, fatigue, reduced speed, increased/decreased pressure when writing, all of which impact on school performance.
- ▶ The aims of fine motor activities are to develop in hand strength, in hand manipulation, and fluid movement all of which are essential for pencil manipulation.

Fine motor skills continued...

- ▶ Fine motor activities often require the use of both hands, but the focus is on the dominant hand, as good hand control is required for fluency and speed when using a writing tool. The non-dominant hand is the supporting hand, for example, to support the paper when writing.
- ▶ It is important for a child to be proficient in fine manipulative tasks so that they can carry out everyday tasks with skill. Such as writing, using scissors, tying shoelaces.

Fine motor skills continued...

To develop good fine motor control a child needs:

- ▶ Hand/arm sensory awareness
- ▶ Arm and hand strength
- ▶ To practice fine finger movements and eye-hand coordination activities.
- ▶ To practice writing and drawing skills

- ▶ A child with fine motor delays may have difficulty with everyday tasks such as, writing, tying shoelaces, or using scissors.

How to help with your child's fine motor skills

- ▶ **Hand and arm sensory awareness.**

Games to encourage sensory awareness-bowl of rice, pasta, beans and hide objects in this –get child to describe/find, Guess objects in a pillowcase and encourage children to feel without looking.

- ▶ **Upper Limb strength**

Bear walks, swimming, ball games, push ups, manipulating putty and Mr tennis ball.

- ▶ **Coordination skills and Fine finger movements**

Art work, typing, card games, finger soccer, nuts and bolts, tweezers, Hamma beads, Threading.

- ▶ (Crossing the midline- Ability to use limbs and eyes across the midline of the body).

Handwriting

In order that children eventually acquire a legible, fluent and fast handwriting style, they need to develop skills including:

- Good gross and fine motor control
- A recognition of pattern
- A language to talk about shapes and movements
- The main handwriting movements involved in the three basic letter shapes as exemplified by: l, c, r.

Handwriting continued...

More Specifically:

- **Sensory processing**- Body awareness
- **Fine motor control**- Ulnar stability/small finger side of your hand ,thumb stability, palmer arches, finger isolation and in-hand manipulation skills which consist of:
 - Rotation- turning an object round in the pads of the fingers and the thumb e.g. picking up a pencil
 - Shift- moving an object in a linear manner with the finger tips e.g. repositioning pencil in the fingers
 - Translation- The ability to move object from the palm to the fingertips or from the fingertips to the palm e.g. coins in a vending machine or picking up pennies
- **Postural stability**- Flexion/ extension, bilateral integration (needed for developing a dominant hand), shoulder stability and wrist extension
- **Praxis**
- **Eye- hand coordination**

Pre writing shapes

PRE-WRITING SHAPES

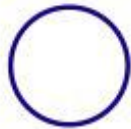
Children should be able to form these 9 pre-writing strokes before asking them to write.



2 years



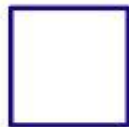
2½ years



3 years



3½-4 years



4 years



4½ years



4½ years



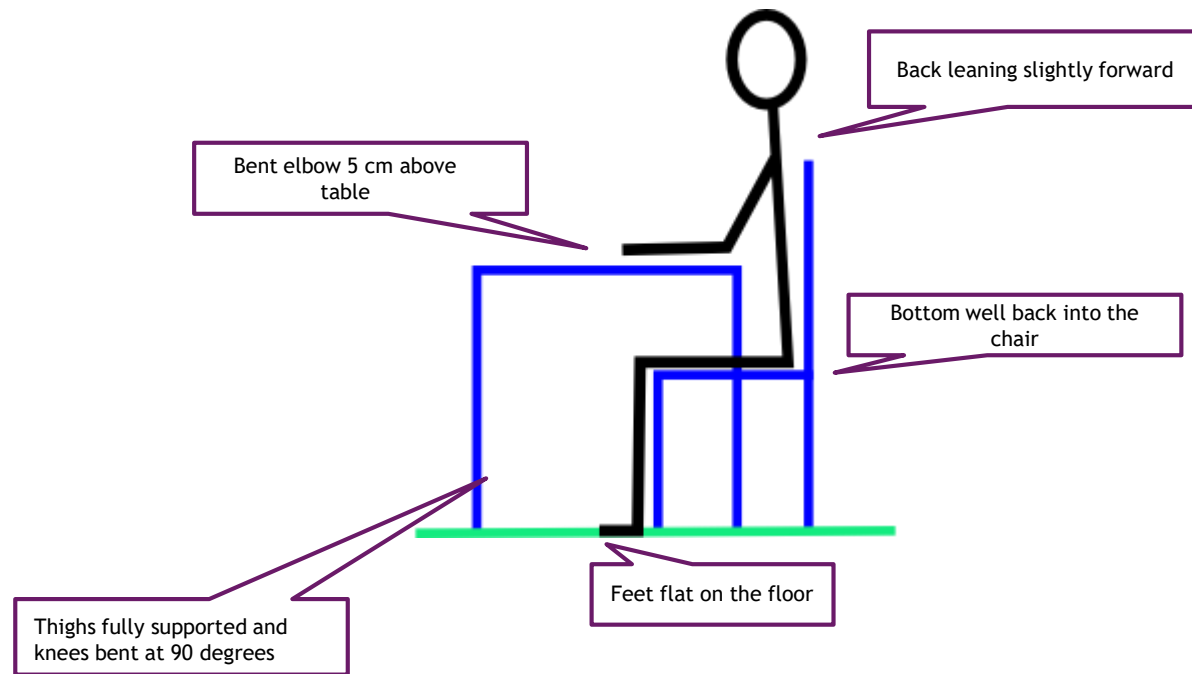
4 years
11 months



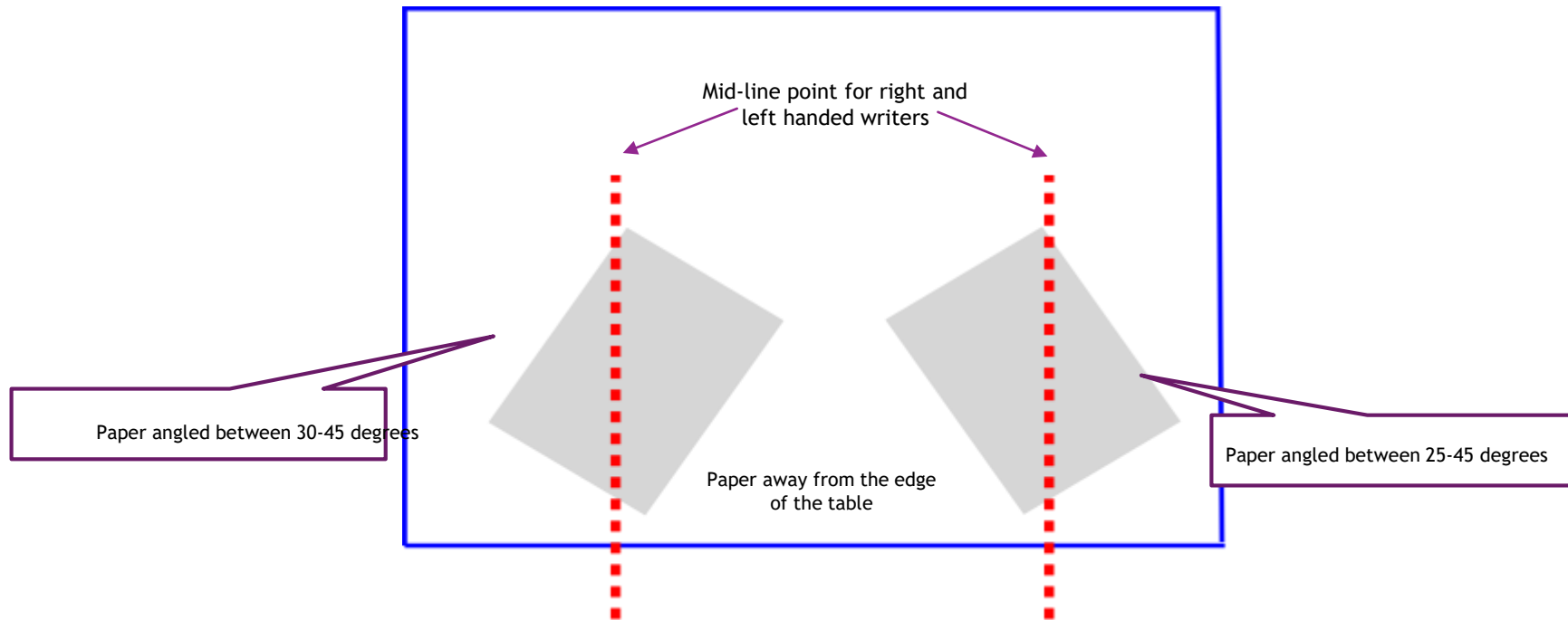
5 years
3 months

Children who can adequately draw the oblique cross can copy a significantly higher number of letters than little ones who cannot.





Positioning and seating



Paper position

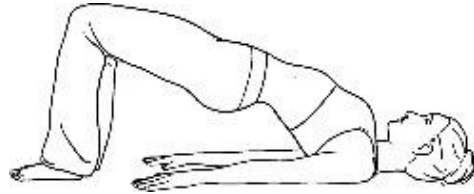


Pencil grasp

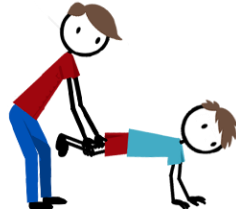
Functional	 <p>dynamic tripod</p>	 <p>quadrupod</p>
Non-functional	 <p>thumb wrap</p>	 <p>thumb tuck</p>

Activities to promote gross motor skills and postural stability

- ▶ Bridge pose



- ▶ Wheelbarrow walks

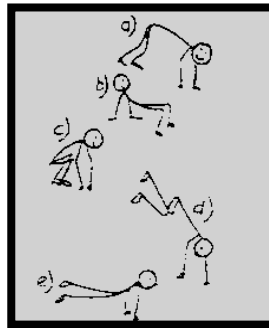


- ▶ Balancing games

- ▶ Crawling games

- ▶ Animal walks

e.g. bear, crab, bunny, donkey kick, seal



Activities continued...

- ▶ Catching and throwing
- ▶ Jumping/ Hopping
- ▶ Sports
- ▶ Completing activities in high kneeling or work at eye level

Everyday gross motor activities...

- ▶ Cooking-stirring, rolling/kneading dough
- ▶ Carrying, pushing/lifting heavy objects
- ▶ Moving furniture
- ▶ Sweeping, mopping, carrying laundry basket
- ▶ Playground
- ▶ Swimming, climbing, yoga, outdoor play
- ▶ Scooting, cycling
- ▶ Gardening, watering plants
- ▶ Get outside!!

Activities to promote fine motor skills

- ▶ Art work using stencils
- ▶ Making buildings with decks of cards
- ▶ Play games that require fine finger movements and eye hand co ordination skills
- ▶ Stringing beads
- ▶ Cutting activities

Commercial games such as ...

Examples of games for manipulation:

- ▶ Operation, Kerplunk/busy bees
- ▶ Pop up pirates
- ▶ Wiggly worms
- ▶ Pick up sticks
- ▶ Hamma beads
- ▶ Tiddly winks
- ▶ Hungry hippos
- ▶ Threading and lacing beads and cards
- ▶ Dressing up dolls
- ▶ Mr and Mrs Potato head
- ▶ Ludo and frustration
- ▶ Play doh and clay and toys/tools to play with eg rolling pin, cutters

Continued

Games for co-ordination and control

- ▶ Fishing game
- ▶ Bopit and bopit extreme
- ▶ Buckaroo Jenga

Construction Games

- ▶ Lego / K'nex
- ▶ Brio
- ▶ Mechano and train sets
- ▶ Marble runs

Jigsaws Games to encourage scribbling /drawing Etch a sketch Magna doodle Aqua draw

Everyday fine motor activities

- ▶ Gardening- digging, yarding
- ▶ Musical instruments e.g. piano, guitar
- ▶ Popping bubble wrap
- ▶ Cleaning!! Dust pan and brush and spray bottle
- ▶ Feeding pets e.g. scooping, opening packets
- ▶ Peeling fruit
- ▶ Baking- pouring, stirring, scooping, pinching e.g. cheese
- ▶ Handling money

Summary

- ▶ Gross and fine motor skills are a foundation for learning
- ▶ Without adequate gross motor skills, children will have more difficulty with fine motor skills and handwriting.
- ▶ Try and help your children develop their skills over the holidays and get outside as much as you can!