

CHILDREN'S OCCUPATIONAL THERAPY SERVICE

GENERAL INFORMATION AND SUGGESTIONS FOR HANDWRITING DIFFICULTIES



Many children experience difficulty at an early or later stage of their development with handwriting.

1-POSTURE AND POSITION AT THE DESK

Problems observed:

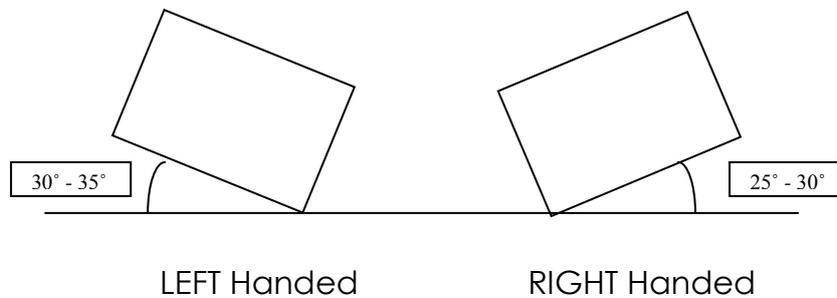
- Poor posture such as bending very close over work.
- Tendency to lean to one side or slouching in the chair
- Supporting their head on the chair with "non-dominant" hand instead of supporting the paper
- Constantly fidgeting and rocking on the chair

When the child puts lots of effort into sitting, this leaves less energy to look, listen and write.

Suggestions:

- **Check that the table and chair is at a suitable height for the child.** Ensure the child sits with his feet in contact with the floor (child can support feet on a box or firm item if necessary) with his/her hips and knees at a 90° angle. This will ensure a good base of support. Table height should be at elbow level.
- **Check the type of chair** the child is sitting on. A "flat bottom" chair is better than a "bucket chair" as the latter encourages a rounded sitting posture.
- **Use of a sloping board** and a **wedged seating cushion** may help the child to maintain an upright posture.
- **Check the working position of the child** in the classroom. Can he/she see the board? Does he/she have to visually follow the teacher around the room? Is the child sitting on an aisle, and may be more likely to get bumped every time someone goes past? If so, consider, changing the position.

- **Does the child have good vision?** Does the child need to have his/her vision checked? Does he/she wear glasses when needed?
- **Consider the position of the paper and the differences between a right and left hand writer:**



- **Use of non-slip mat** if stabilising the paper continues to be problematic (e.g. dycem).
- **Encourage the child to hold the paper with his/her non-dominant hand** by giving a visual prompt such as drawing an outline (stencil) of the “ideal position” using a permanent marker.

2-MOTOR CONTROL AND PRESSURE

A child may have difficulty writing legibly even then he/she is able to form the letter properly. The child may be slower than his/her peers and not be able to finish the written work.

Problems observed:

- The child uses his/her whole arm, wrist movements to make the letters, numbers and shapes instead of fine finger movements (thumb and index finger used to push and pull the movement when drawing and writing)
- The movements appear rigid (i.e. lack fluidity) and writing appears to be laborious and slow.
- The wrist or the whole arm raises off the table during drawing or/and writing
- The child is not able to hold the pencil with the first three fingers

(Note: only change a pencil grip if the child is unable to write legibly. Remember that some adults also use “atypical” style of grips and yet are able to write very well).

- The child is unable to maintain his/her fourth and little fingers inside the palm of the hand.
- Pencil pressure is heavy; this can slow down writing.
- The child has difficulty writing on the line or respecting the space between two lines
- The child appears to lack motivation when doing his work.
- There is decreased productivity compared to the rest of the class
- The child moves his body or paper to accommodate directional changes rather than moving his hand
- The child complains of pain in his hand, wrist or forearm

Suggestions:

- **Use a sloping board.** This will help the wrist to be in a more neutral position
- **Use warm-up activities** prior to handwriting. Activities such as “Brain gym”, or try the following:
 - “Fingers tug of war”, i.e. pulling on each finger with opposite hand
 - Fingers opposition (v  ened then closed)
 - “Push up” on the desk, or wall or use the chair
 - In standing, hold both arms out horizontally, ask the child to make small circles and gradually making them bigger. Try forward and backwards
 - Use a stress ball to squeeze five to ten times
 - Practice fluidity exercises: on a blank sheet; asks the child to do “spirals (starting with very small and getting bigger), “mountains”, “waves”. This will encourage the movement of the thumb and fingers.

- **Use of pencil grip.** Note that adding a grip is not always the solution. It can sometimes decrease the control rather than improve it. It is recommended that an OT review this.
 - Different pencil grips are available on the market. It is advisable to always try different types and find one that appears to help the child maintain a tripod grip and they find comfortable.
 - The child would be recommended to try the new grip when drawing over a period of couple of days to familiarise him/herself with it before using it when writing.
 - Before trying a pencil grip, it could be useful to try the following which will promote a more dynamic tripod grip:
 - Use a pencil with triangular barrel such as “Hand Hugger”
 - Use a small thin pencil e.g. Ikea type
 - Place an elastic band at the end of the pencil shaft to help maintain fingers position.
 - You can try an alternative position of the fingers: place the pencil between the index and the middle finger with the main shaft of the pencil on the upper surface of the hand. This is often more effective than pencil grips and is comfortable.

- **Allow regular rest breaks when writing**

- **Use print instead of cursive style** if it is found that legibility and fluidity of movement are easier for the child.

- **Use a roller ball pen:** the child may be able to produce more fluent writing if using a roller ball pen rather than a pencil or fibre tip pen.

- **Provide opportunity for the child to use different drawing/ writing positions** e.g. lying on their tummies on the floor, vertically on the wall.

- **Use of specific writing programmes** such as Callirobics or Write from the Start help to work on fluidity of movement. Callirobics is especially good for children who have motor planning difficulties as they only have to trace over the lines (reducing the planning of direction of the movement). Callirobics will also help to work on rhythm as it is done with music.

Where there is too much pressure:

You need to develop an awareness of the amount of pressure placed through the limb.

- **Try using a comfort grip**, which is sponge tubing. This may help to reduce the tension on the small muscles of the hand and reduce discomfort/pain.
- Provide a pad of paper to write on
- Use leaves of carbon paper under the writing page
- Use of a light-up pen, which can be bought from stationary shops. Challenge the child to draw/write so that the light does not come on.
- Use a hard leaded pencil such HB so that writing is not so easily smudged.

3-DIFFICULTY WITH LETTER AND NUMBER FORMATION

Some children are unable to form their letters properly. They may not remember where and how to start. Children may have persistent reversal (normal until around the age of 7).

Suggested problems:

- The child may have motor planning difficulties, which means that he does not know where and how to start and organise his motor movement.
- The child may have perceptual difficulties.
- The child may have a poor and immature pencil grip affecting his motor control

Suggestions:

- **Eliminate any visual acuity or perceptual problems** (the Occupational Therapist could advise on perception).
- **Use a multi-sensory approach to help motor memory when learning letters and numbers.** Draw the letter in sand, shaving foam or silly soap or do it in the air with big arm movements (eyes opened and then closed). This step is the most important. If the child is able to register the pattern with "big movement", it will

ten be easier for the brain to translate the information onto paper using a fine movement.

- Play activities to develop mental images of letters/words/shapes e.g. draw a letter on your back, feely bag games, using magnetic letters or shapes.
- Use "Rol'Write Alphabet" sensory forms to help direction of letter formation and for fun!
- Create shapes/number/ letters using dough or clay
- Try not to teach similar patterns at the same time e.g. d, b, p, q...
- There are specific handwriting programme that your OT should be able to further advice.
- **If the child has difficulties sitting the letters on the line** – use additional cues:
 - Raised lines writing paper
 - Mark lines more boldly with coloured pens – e.g. green for the grass line and blue for the sky line
- **Give visual cues where to start writing:** use stickers or a coloured line on the left side of the page.
- **Use squared maths paper** to help with spacing with numbers.

4-DIFFICULTY FINISHING WORK IN ALLOCATED TIME (SPEED)

Difficulty observed:

- Unable to finish the work in time (free writing, copying)
- Poorly organised content
- Lack of motivation

Suggestions:

As the amount of written work increases, so does the requirement of speed. If the child has difficulty finishing his/her work, the level of anxiety may increase. This may in turn lead to a reduction in motivation to participate in written activities.

It is at this time when an alternative method of recording may be considered, in parallel with handwriting. Usually, it is recommended to introduce this around 8-9 years old. It is important to introduce a

keyboard skills programme to fully appreciate the technology available to the child. An alphasmart (word processor) is often recommended for primary school, as it is robust and light. It is also simple to use and small amount of work can be used on it.

- Allow other method of recording, especially when the child is being tested on their knowledge gained rather than handwriting competence.
- Use of pre-prepared photocopied work sheets
- Use of a writing buddy
- Use of pictures rather than words to record such as diagram/story board
- Use a Dictaphone / Scribe

Where the child lacks motivation:

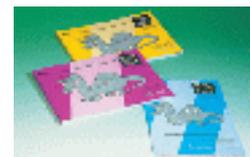
- Praise the child for every effort! Do not use word as “you are too slow...; you still haven’t finished...”
- Do not “punish” the child by having to stay during play time or finish at home because s/he did not have time to complete in class (use your judgement)
- Encourage informal pencil activities using vibrating pens, doodle pens, magic writing pads, magic painting books, stamper and roller pens...

HANDWRITING PROGRAMMES

Different handwriting programmes are available. If you are not sure which one would be best for your child, please seek advice from your child's OT.

The Teadorescu Perceptuo-Motor Programme – Write From The Start (www.ldlearning.com)

Structured activities to develop the muscles of the hand and improve perceptual skills required to orientate and organise letters and words.



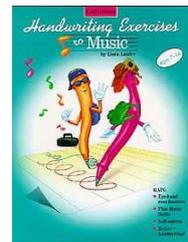
Speed Up (www.lidalearning.com)

Designed to provide an effective source of help for any child aged 8-13 years whose handwriting is illegible, slow or lacking fluency. The programme helps to developing kinaesthetic awareness through multisensory activities.



Callirobics – Pre-Writing Skills with Music (www.specialdirect.com)

Callirobics are a series of simple and enjoyable graphical patterns to be traced by the child while listening to popular melodies. These patterns introduce the basic elements of writing movements in a "stress free" method. Preparation for printing and cursive writing, Calm and relaxing exercises for children, improved small-muscle skills and eye-hand coordination.



The Roll'n Write letters

(www.littlesheep-learning.co.uk & www.nesarnold.co.uk)



Sloping board/wedge

www.backinaction.co.uk

www.lidalearning.com (LDA)



Handwriting

Pencil grips and other useful things (note that some pencil grips are also available from the OT service following an assessment)

www.taskmasteronline.co.uk

Hand Huggers

Triangular barrel pencils, pen and crayons
Available from Sanford UK, Norfolk, 01553 761221

“Right Line Paper” with raised lines

Available from Taskmaster Ltd.
Morris Road, Leicester, 0116 270 4286

Handwriting resources, pencil grips, fidget toys, wedge cushion and others!

www.ldalearning.com (LDA)

www.specialdirect.com

ICT

Alpha smart and other products such keyboard skills programs, sticky yellow letters, keyboard guard

www.inclusive.co.uk

Tel. 01457 819790

