



## Developing Hand Strength and Control

During the pre-school years, a child develops hand/muscle control in a rather aimless manner. However, for some children it is necessary for training, or extra stimulation in this area.

Children, who tend to avoid activities that are difficult for them, don't develop strength in their hands at the rate of children who do engage in fine-motor tasks at every opportunity.

It is a good idea to encourage all fine motor activities as much as possible in the child's spare time. If weakness is interfering with a child's ability to perform educational, recreational, or self-care tasks, encourage as many strengthening activities as possible throughout the day.

★ Some activities to develop hand and finger strength include:

- Encourage the child to practice touching their thumb to each of their fingers. If they can do this with their eyes open, try it with their eyes closed. To vary the activity, get them to make play dough or use plasticine. Have the child roll the plasticine into a snake and squeeze the snake between their thumb and each finger.
- Construction, using Lego, connecting blocks, copying block arrangements.
- Encourage the child to tear the edges of perforated paper eg computer paper.
- Play finger puppets. Make them out of toilet rolls and decorate them.
- Take lids off jars. You can turn this into a game by getting a number of jars and having the child fill each one with different levels of water. They then can hit the jars with a stick and see what different sounds come from the different levels of water.
- Picking up small objects one at a time from a pile, eg. pegs, paper clips, macaroni etc. Try larger objects first and work down to smaller objects. Can have them put the items into a small container like a jar. A variation of this activity is to encourage the child to use tweezers to pick up small objects and tongs for larger objects.
- Tearing off paper strips using both hands (ie hold the paper in both hands and tear by pulling hands in opposite directions). Can use the torn paper to make paper mache objects. Paper mache glue can be made using 1 part PVA glue and 1 part water.
- Practice folding paper into various shapes, you could make paper planes or simple origami patterns.

- Encourage play with marbles.
- Work on scissor skills. Encourage cutting between two paddle pop sticks (or pieces of sandpaper, straws, twine etc). This solid edge makes it easier for them to cut between the lines. Gradually bring the lines closer together and then when they can cut straight lines well move on to curved lines.
- Another idea is to punch holes at regular close intervals along a line, so that less cutting action is needed to complete the task, and this could be started with a straight line and then curves, corners and zigzags can be added. The child is more likely to participate in cutting activities if there is an outcome, ie cutting out shapes to make him a hanging mobile, or a king's crown to wear.
- Have the child draw on different surfaces, ie on mesh or on foam, or corrugated cardboard. This will encourage them not to press too hard, and to focus on controlling the shape they are drawing. It will also increase sensory feedback.
- Encourage making towers of blocks. See how high they can go. Continue the block activity by seeing what else they can make from the blocks, ie bridges, houses etc. Make a bridge, or rocket etc with blocks and see if they can copy this pattern of blocks.
- Get an old "piggy bank" or a box with a small slot in the top. Encourage the child to post coins or other small items into the slot. Try using larger coins or items to begin with, but progress to smaller coins as their ability improves. You may time the child and have them try to increase the number of items they can "post" in a certain time. Try to ensure they pick up the coins between their thumb and index finger.
- To increase their bilateral integration, have them post coins at the same time with each hand. (Obviously you will need two containers for this, you may use old margarine containers with slots cut in the lids)
- Play a game like "pick up sticks" or "Jenga", where items have to be removed very carefully to not disturb other items. You can use toothpicks for this game.
- Have 2 buckets and a sponge. Fill one with water. Encourage the child to pull the sponge out of one bucket and squeeze the sponge over the top of the empty bucket. Then put the sponge back into the bucket of water. Continue to do this for as long as they enjoy it, but aim to transfer all the water from one bucket to the other. The bath is a great place for this activity.
- Encourage the child to make a mosaic pattern using squares of coloured paper and glue. Encourage them to pick up the squares of paper with their thumb and index finger. You can use other materials for this such as fabric, feathers, shells etc, but encourage the child to pick up the objects between their thumb and index finger.
- Have the child screw/unscrew a jar lid, screw/unscrew a nut from a bolt, open/close a safety pin, and other common small objects we use in our lives.
- Do jigsaw puzzles.
- Playdough - rolling, squeezing, pinching and modelling.
- Pushing or pulling with the arms against resistance (will strengthen arms and hands).
- Playing with push or pull toys.
- Stress balls and other squeazy toys can be used whilst a child is watching television.

- Threading - beads, macaroni, fruit loops or cheezels.
- Finger games - or songs eg 'Incy Wincy Spider'.
- Finger painting or Gloop.
- Using clothes pegs - wash doll's clothes and hang on line.
- Writing or colouring is a good strengthening activity. Increased finger strength normally develops in all children as writing demands increase in school. During all writing times, stop when the child's hand is fatigued. Gradually build up the length of time in which the child is required to write.
- Squeezing a rubber ball or playdough in a fist.
- Musical instrument - start by tapping fingers in time to music
- Buttoning, zipping and lacing boards.
- Nuts & Bolts
- Stretching a rubber band between thumb and fingers, passing a coin between fingers and finger string games.
- Using a hole punch - threading string through punched holes.
- Woodwork with small hand tools.
- Construction sets and building blocks.
- Pegboard designs
- Any craft activity

**Tip:**

When completing activities that involve picking up small objects and manipulating small objects, it is important to encourage the child to use the thumb and the first two fingers of their dominant hand for most activities. To assist this action, provide them with a small object ( a power pellet!) they are to hold in their palm using their 4<sup>th</sup> and 5<sup>th</sup> finger, during these activities.

- ★ Make activities fun. This will encourage further exploration.
- ★ Guide the child if they find an activity difficult or try something easier; make the activity easier before choosing another activity.
- ★ Do not pressure the child, rather, reward with praise for trying as well as achieving. Reward completed steps within the activity. It is important to emphasise the importance of trying rather than the finished product.
- ★ Adapt activities to allow the child to achieve success:
  - Decrease the resistance of objects to be grasped or pinched
  - Increase the size of objects - larger objects allow a child to use more and larger muscles for grasping
  - Change the shape of objects
  - Stabilise objects during manipulation

It is important to remember that unless it has been determined that the child's grip or pinch strength will not improve to a functional level with practice, compensation strategies for within the classroom should be combined with strengthening activities/exercises. This will help to increase hand strength and reduce the chance of abnormal movement patterns becoming "fixed".