



## FINE MOTOR



### IN-HAND MANIPULATION

#### 1) Beginner Activities

This resource has been developed by a team of occupational therapists at Sunny Hill Health Centre for Children. The information and activity ideas included in this handout were compiled based on current research and expert clinical opinion.

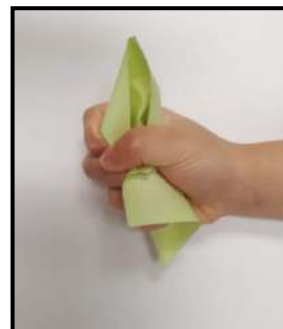
**Definition:** In-hand manipulation allows us to move or reposition small objects using just one hand. Examples include: moving a small cracker from the palm to the fingertips, flipping a page, turning a key, and fastening buttons.

To develop these skills, it is best to practice these activities regularly. If you are not sure which exercises to use, how often they should be done, or if you have any other questions or concerns, please talk to your occupational therapist.

**Most of the following activities should be done with one hand only. Encourage your child to do these activities without using their other hand, body or table to help.**

**Finger to palm** (moving an object from the fingertips to the palm):

- Play a magic trick!** Have the child pick up a small object and hide it in their hand. For example, a bead, coin, small fish cracker, or craft pompom.
- Paper attack!** Crumple pieces of paper using only one hand. Make it fun by turning it into a race against the clock. See who can make the most paper balls in a set amount of time or race against each other to see who can finish their pile of paper first.



**Shifting** (sliding an object along the pad of the finger):

- Flip the page!** Encourage the child to turn the page when reading a story or book. The thinner the paper, the more challenging the task.
- Push the peg!** Using only the fingers, push small objects like pegs or cut up straws into a ball of Playdoh or putty, then practice pulling them back out again. Softer dough will be the easiest and stiffer dough will be the most difficult for your child to do.
- Roll a worm!** Have the child take a small pea-sized ball of dough or clay and roll it between their index finger and thumb to form a worm.



- Button up!** Use both hands to do up and undo buttons. Larger 1-inch buttons will be the easiest to start with.
- Sort the deck!** Have the child sort a deck of cards into different piles using only one hand.
- String the bead!** Use one hand to support the bead while the other feeds the string through the hole. Larger beads are typically easier, longer beads will be more challenging and require the child to shift the string further.



**Simple rotation** (turn an object up to 90 degrees using the fingers)

- Spin the Puzzle Peg!** Practicing putting peg-style puzzle pieces into a board using one hand only.
- Spin the Top!** Spinning tops are a fun way to practice using fingers to get something turning.
- Wind it up!** Wind-up toys are a great way to practice this skill.
- Nuts and bolts!** Use fingers to loosen or tighten a nut onto a screw. Using large pieces will be easier.



**Palm to finger** (move an object from the palm to the fingertips)

- Fill the jar!** Work quickly to fill a piggy bank, jar, or other container before the time runs out. Small objects like coins, beads, pompoms or marbles will work best. Have the child place the object in their palm first, then using only one hand, slide it to their fingertips before placing it into the container.



**References:**

Bazyk, S., Michaud, P., Goodman, G., Papp, P., Hawkins, E., & Welch, M. A. (2009). Integrating occupational therapy services in a kindergarten curriculum: A look at the outcomes. *American Journal of Occupational Therapy*, 63,160–171.

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## 2) Intermediate Activities

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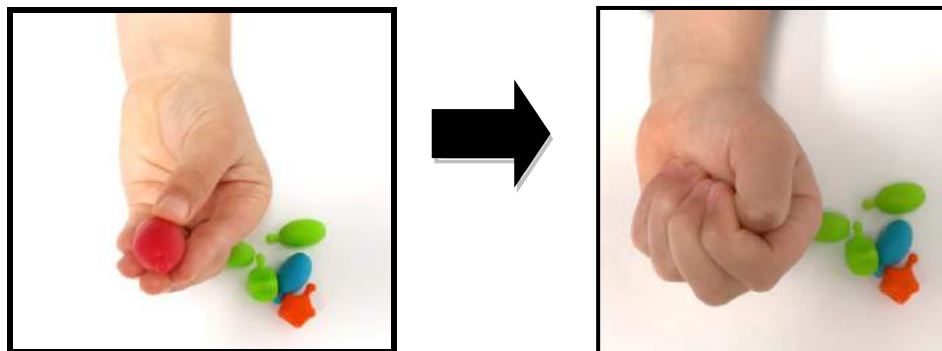
**Definition:** In-hand manipulation allows us to move or reposition small objects using just one hand. Examples include: moving a small cracker from the palm to the fingertips, flipping a page, turning a key, and fastening buttons.

To develop these skills, it is best to practice activities regularly. If you are not sure which exercises to use or how often they should be done, please talk to your occupational therapist.

**Most of these activities should be done with one hand only. Encourage your child to do these activities without using their other hand, body or table to help.**

**Finger to palm** (moving an object from the fingertips to the palm):

- Make it a fistful!** Have the child pick up small objects, one at a time and hide them in their hand. Examples of appropriately-sized objects include beads, coins, crackers, or pompoms). Make it fun by racing to see who can gather all the objects first or to see who can hold the most objects in their hand.



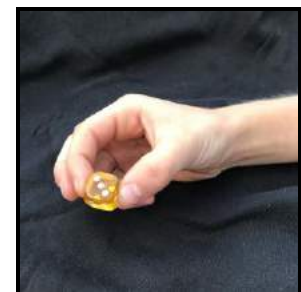
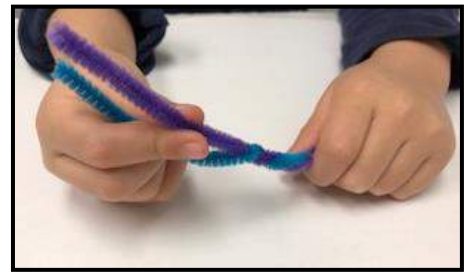
**Shifting with stabilization** (moving an object at fingertips while holding another object in the palm):

- Tops off!** While holding a pen or marker, pop off the cap using the fingers of the same hand.
- Show your cards!** Holding a few cards in one hand, fan them out so that you can see at least the corner of each.



**Complex Rotation** (turning an object more than 90 degrees using only finger and thumb movements):

- Unlock it!** Hold and twist a key to open a lock.
- In a twist!** Twist together pipe cleaners or twist-ties. Use the twists to seal up bags or turn it into a craft activity
- Peg Flip!** Rotate a peg by turning it over and place it in a peg hole. Other similar activities include Lite Bright and Battleship.
- Find the Number!** Use a die or place a sticker on one side of a small wooden cube. Encourage your child to hold the die or cube between the tips of fingers and thumb and to turn it around and over to find the sticker or a certain number.



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#### 3) Advanced Activities

This resource has been developed by a team of occupational therapists at Sunny Hill Health Centre for Children. The information and activity ideas included in this handout were compiled based on current research and expert clinical opinion.

**Definition:** In-hand manipulation allows us to move or reposition small objects using just one hand. An example would be moving coins one at a time from our palm to our finger tips, in order to put them into a slot.

To develop these skills, it is best to practice activities regularly. If you are not sure which exercises to use or how often they should be done, please talk to your occupational therapist.

**Most of these activities should be done with one hand only. Encourage your child to do these activities without using their other hand, body or table to help.**

**Palm to fingertips while holding an object** (move one object at a time from palm to fingertips):

- **Filling containers:** Work quickly to fill a piggy bank, jar, or other container that has a slot, before the time runs out. Small objects like coins, bingo chips, colored tiles, or cut up straws will work best. Have the child place the objects in their palm first. Then, using only one hand, they should slide each object to their fingertips, one at a time, before placing it in the container. Start with two objects and increase the number of objects as the child's abilities develop (up to 5). This activity can also double as a sorting or counting task. To make the task more challenging, make the opening smaller.



## Activities involving several types of in-hand manipulation:

- **Nuts and Bolts:** Have the child place a few nuts in their palm. Then, using only one hand, slide each nut to their fingertips, one at a time, rotate the nut and then place onto a bolt. Next, while continuing to hold the remaining nuts in their palm, screw the nut fully onto the bolt. Start with two nuts and increase the number of nuts (to 5) as the child's abilities develop.



- **Bracelets and necklaces:** Create bracelets and necklaces by threading beads or cut up straws into a pipe cleaner or sturdy string/lace. Have the child place the small beads in their palm first, then using only one hand, slide each bead to their fingertips, one at a time, before rotating it and then placing it on the pipe cleaner or string. Start with two beads and increase the number of beads the child can hold (to 5) as the child's abilities develop.



### References:

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#### 4) Pencil Aerobics

This resource has been developed by a team of occupational therapists at Sunny Hill Health Centre for Children. The information and activity ideas included in this handout were compiled based on current research and expert clinical opinion.

**Definition:** In-hand manipulation allows us to move or reposition a pencil for writing using just one hand, such as when repositioning a pencil to write after using a pencil top eraser.

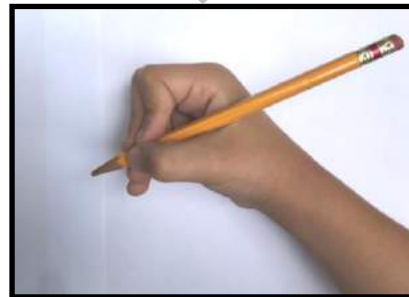
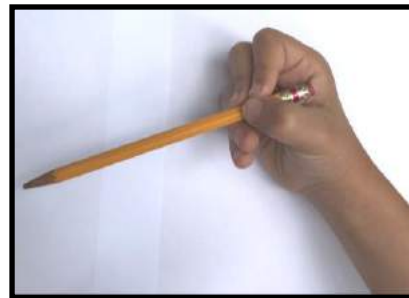
To develop these skills, it is best to practice regularly. If you are not sure which exercises to use or how often they should be done, please talk to your occupational therapist.

**These activities should be done with the dominant hand. Encourage your child to do these activities without using their other hand, body or table to help.**

#### Pencil Fun!

##### Pencil Shift and Rotation:

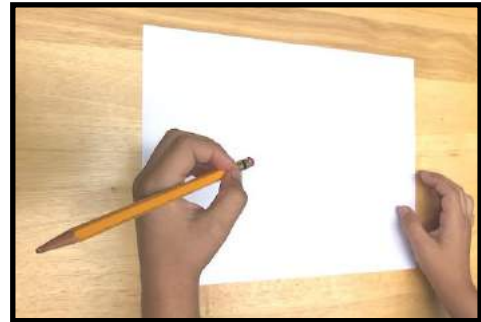
- Pencil Pick Up!** Grasp pencil with thumb, index and middle fingers and practice “walking fingers” (shifting) all the way up and down the pencil. Go slowly at first and then more quickly.
- Race with the Eraser!** Using a pencil with an eraser on the end, encourage the child to use one hand to turn the pencil back and forth from tip to eraser. Have the child spot mistakes in a word or pattern and race to erase and then fix each one.



- **Rainbow Drawing!** Place some pencil crayons on the table in front of your child. Ask your child to pick up a pencil crayon and draw the first section of the rainbow. Repeat using a different pencil crayon for each section of the rainbow. Change it up by having the child write out words using different colours of the rainbow for each letter or word.



- **Pencil Flip!** Hold pencil with eraser side down. At the word go, flip the pencil and write a letter, number, or word.



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