

Hand Play

A child with hemiparesis or hemiplegia may experience excessive muscle tone in his hand, arm, and shoulder, making it difficult for him to use his hand in daily living activities. She may have problems moving her fingers independently, turning her hand over (palm up), holding her wrist at a proper angle, and grasping and releasing objects. You may be able to help your child gain more functional use of his hand by working (playing) with him on hand movements. This fact sheet contains hand exercises and activities that have been gathered from parents and occupational therapists. They are meant to be a supplement to your child's current therapy and you should consult your child's physician or therapist before attempting these activities.

Pincer Grasp

Picking up items between thumb and forefinger

- Picking M&Ms out of an egg carton
- Water Bottle Fun. Use clear plastic bottles (labels removed and washed). Have the child use tweezers to place items in the empty bottle. Items can be anything that will tolerate being in water such as plastic flowers, glitter, metal confetti, etc. Next, fill the bottle with plain or colored water. If you are concerned about the child opening it, you can tape or glue the lid on. This activity engages the hands and is visually appealing.
- Place stickers on the non-affected hand/arm. This way the child has to use the affected hand to remove the sticker. Preschoolers love stickers and love to make pictures with them. A word of caution: to lessen the hold of the sticker, place it on a shirt or other surface to minimize the adhesive before placing it on the child. Some of the adhesives are really strong.
- Tissue paper scrunching is a really low tech exercise. Have the child crumple up bits of soft paper and then throw them round the room. Then they have to chase them by walking or crawling and pick them up with their toes. This helps with hands and feet!

Supination

Rotation of the wrist and forearm so that the palm of the hand is facing upward (toward the ceiling). Pronation means rotating so that palm is facing downward. Children with hemiplegia often have problems with supination of the hand.

- Ring water out of a towel by twisting it
- Turn the pages of a book
- "Guess which hand" games, where something is hidden in one hand, the partner guesses which by tapping the guessed hand, and the hider turns both palms up and opens her hands. If correct the guesser gets a point. If not, the hider gets the point, and so on.
- A simple "Slinky" is a great toy to encourage supination
- Build with cones. Build towers or set them up for "bowling", etc. You can place or have the child grasp the cone closest to the thumb, the child has to actively supinate at least to neutral to effectively place the cone.
- Have older children grasp a magnet (adapt type and size to the child's needs) and guide a magnetic "car" along a path (the path is drawn on oak tag or similar thin, yet sturdy paper). The path is held with the non-affected hand and the child holds the magnet in the affected hand, under the path to guide the car.
- Scoop up sand, water, or rice and pour into another container. Several sand/water wheel toys are on the market. Making sand castles uses pronation and supination.
- Use a snack activity such as scooping and eating pudding.

- Place stickers, stamps, etc. on the inner arm - turn to look at them
- Play with money and reach for change
- "Give me five"
- Fill plastic Easter eggs with various items; the easier it is to make a sound, the easier the child needs to work. Things that don't make sounds easily make the child work harder. You can actually do a number of motions with these: supination to pronation, flexion to extension of either the wrist or the elbow, and crossing the midline.
- Hide little stickers on the bottom of large pegs in a pegboard
- Neoprene hand splints with supinator straps may help children work toward supination

Sensory

Sometimes children with hemiplegia have difficulty processing sensory information. Some children may seek more sensory input, while other children may avoid sensory input. This can involve the classic senses of vision, hearing, touch, smell, and taste, as well as the sense of balance and movement and the sense of knowing the position of one's body in space.

- Play in rice, sand, different textures
- Weight bearing provides sensory input
- Be sure to include lots of bilateral (two handed) activities so she is actively using both hands together. Not a lot of two year olds tolerate direct handling to an affected side, so you need to be creative and fun. You may also want to consider a neoprene splint if she continually rests her hand in a fist position.
- A tray full of - chocolate pudding, whipped cream, jello - makes a great place to "paint" with two hands - also nice to lick the stuff off both hands.
- The classic containers of rice, beans, sand for weight bearing. Use a small plastic container and bury treasures in it. Weight bear on the affected hand into the container while she searches for treasures or search with the affected hand. (Also, works for toes and feet).
- Paint fingernails wild colors to stimulate interest in her hand.
- Have the child wear colorful hand splints and rings and bracelets
- Let him paint her arm with washable markers (make sure your markers are safe for this)
- Refrigerated cookie dough is wonderful for play with both hands
- "Indoor bean sandbox". Take a shoebox sized plastic container and filled it with all kinds of raw beans and macaroni noodles, etc. Use it just like a sandbox with shovels and pails. This is a great activity for scooping and pouring.

Other hand ideas

Bilateral Activities

Children with hemiplegia may not bring hands together in the middle of their body and they may not reach across the body with the affected hands. It's important for development to encourage them to use both hands in play and to reach across the body in both directions.

- Catch large balls with both hands
- Carry containers of toys and play clean up
- Open packages of CANDY (very motivating) and baggies of food
- Play with two handed baby toys - popping beads, duplos/legos
- Dress dolls
- Empty trash cans
- Clear the dinner table (buy non-breakable dishes)
- Play with zoom football on a string
- Trapeze bar swing in the backyard
- String beads

- Sew - get an embroidery hoop and place fabric in this - hold onto hoop with affected hand and sew with other hand
 - Hold paper down with affected hand and draw
 - Hold paper with affected hand and cut
 - Push a laundry basket with two hands on the floor. Fill with heavy phone books, cover with a baby blanket and then put baby doll inside. Do this on knees and this will also strengthen legs.
 - Bilateral upper extremity weight bearing activities and unilateral reach to both side (works on lengthening the involved side)
 - Twist and shout - trunk rotation (both ways)
 - Hold large lightweight objects when walking such as a ball
 - Push a swing with both hands
 - Lie down on a scooter and propel with both hands
 - Wave bubble wands in the air with the affected hand
-
- To encourage reaching with the involved hand, position the child so that the involved side is close enough to reach to touch a lamp which would turn on and off by touch.
 - Cozy coupe cars are great for children with left hemiplegia. Encourage the child to open the door by pushing with left arm. It also helps develop lower extremities to power the car.
 - Use squishy balls to squeeze or toys that required gripping in 2 hands. McDonald's Happy Meal toys often require two hands (I know you love this idea as much as I do!)
 - Finger foods like pizza and burgers were also helpful in getting the hand involved. Have the child pick up every other potato chip with the involved hand with assistance.
 - Try to incorporate these activities into everyday play and routines.

In the Kitchen

- Have the child hold onto the mixing bowl with the affected hand and stir with the other hand
- Help unload the dishwasher with the affected hand pulling out all of the silverware
- Putting up boxes of cereal, etc. when unloading the groceries.
- Pouring just about anything - hold cup with affected hand (find one that's the right size)

For the Wrist (Flexion and Extension of the hand)

Flexion of the wrist means letting the hand drop, fingers pointing downward. Extension of the wrist means letting the hand extend, fingers pointing upward. Children with hemiplegia often have problems lifting their hand toward extension.

- Finger painting on easel
- Shaving cream on the wall of the bathtub
- We also do the pudding on a marker board easel to help with her wrist
- Shapes cut from vinyl sheets - place on a mirror - child puts on and pulls off with affected hand.
- Leaning into the wall with the affected hand while she paints a picture.
- Batting a lightweight ball or balloon (like volleyball).
- Play dough activities, pretend cooking (flipping pancakes), and the shaker bottles with corn syrup and glitter, plastic confetti, etc. (can make your own with water bottle, or small plastic bottle).
- Toys with the keys you turn, toy oven knobs, etc.
- ...playing 'waiter' (hold the tray under the bottom side with one hand)...turn keys in a treasure chest to open it...

Weight Bearing

- Wheelbarrow walking is great for weight bearing.
- Side sitting and weight bearing while we play board games or do puzzles.
- Pretending we're animals and crawling through the jungle (I mean house!). Take the cushions off the sofa and chairs - jumble them up and hide toys underneath - have child crawl up and over cushions and weight bear on hand while reaching for toys.

Balance

- Look for SAFE toys that may help with balance - you may find these at medical or occupational supply companies
- Walking on curbs with arms extended
- Wrestling for fun
- Lots of swinging at the park
- Trampolines are NOT recommended because children can injure themselves

Including Music

- Percussion instrument like the marimba
- The glockenspiel
- A tambourine is also a great instrument to use for supination and pronation because it is so visual. Get one of those cute animal ones for children with a handle in the middle. The weight is more easily distributed
- He might be able to develop the fine muscle movements needed for writing by doing exercises on the keyboard/piano geared for strengthening. There are some great books available, and he can do the exercises whether or not he knows how to play the piano. The key thing is that he gets feedback-he makes sound when he plays.

Page content created by parents of CHASA and Jeanne Ross, OT, MT