

Anatomy of the Hand

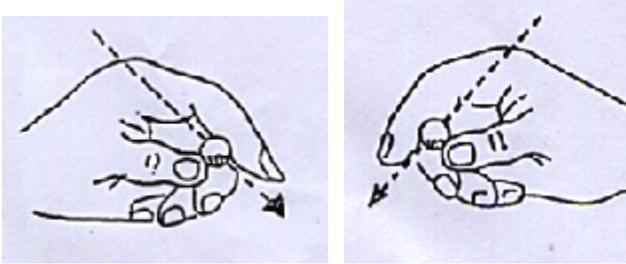


“pincer” grasp – used to hold small objects such as Cherios and beads, formed by the index finger and thumb in opposition

The Dynamic Tripod Grasp

Handwriting is influenced by the development of appropriate sensorimotor, perceptual and cognitive skills. One of the most common problems occupational therapists in the school are consulted about is improper pencil grasp. While the most efficient way to hold a pencil is the dynamic tripod grasp (figure 1) many other patterns are commonly seen in children and it does not always require intervention or modification. In the dynamic tripod grasp, the pencil is held between the thumb and index finger, with the pencil resting on the middle finger.

There are a variety of reasons why children hold their pencils in patterns other than the dynamic tripod. One common reason is participating in a lot of writing before their hands are developmentally ready for this activity. This is becoming more and more common as parents try to start preparing children to school with writing activities at an earlier stage.



(figure 1 - dynamic tripod grasp for right and left handed)

It is important to try to modify the pencil grasp as early as possible, since many students seem to have developed bad habits even before entering kindergarten. Adaptive pencil grips may be helpful in teaching students to modify their grasp and are used to facilitate an optimal pencil grasp (figure 2). There are many different types of grips available. For a pencil grip to be effective, the student needs to be involved in choosing the grip and to understand the importance of using it.

The most optimal position for writing includes the ankle, knee and hip at right (90 degrees) angles with the forearms resting on the desk. The top of the desk should be approximately 2 inches above the elbows when the arms are at the student's side.

Activities to Improve Pre-Writing Skills

- - Playing jump rope
- - Volleyball-type activities where hands, paddles, or rackets are in palm-up position
- - [Squirt bottles](#)
- - Slinky-shift back and forth with palm up
- - Bead stringing/lacing with tip of finger against thumb
- - Pouring from small pitcher to specific level in clear glass. Increase size of pitcher as strength increases.
- - Ich a pencil or chopstick positioned in tripod grasp toward and away from palm. The shaft should rest in open web space.
- - Practice screw and unscrew lids
- - [Pop bubble wrap](#)
- - [Play dough/silly putty activities](#)
- - Use a turkey baster or nasal aspirator to blow cork or ping pong balls back and forth. These can also be used to squirt water to move floating object/toys.
- - Tear pieces of construction paper into small pieces and paste the different colors of paper on simple picture from a coloring book, or make your own design.
- - Floor activities - large mural painting, floor puzzles, coloring when lying on stomach on floor.
- - Dot-dots, color by number, mazes.

- - Wheelbarrow walking-child's hands are the large ones from Bed Bugs game or kitchen tongs.
- - Finger plays/string games such as Cat's Cradle.
- - Use tongs/tweezers to pick up blocks/small objects.
- - Pennies into piggy back or slot cut in plastic lid. Coins can also be put into slots cut in foam.
- - Working on vertical surface, especially above eye level. Activities can be mounted on a clip board or tapes to surface or chalkboard/easel. Examples: pegboards, Lite Brite, Etch-a-sketch (upside down), Magna doodle, outlining, coloring, painting, writing.
- - Clothespins/pinching. Put letters on clothespins and spell words by clipping on edge of shoe box. Use a clothespin to do finger "push-ups" by using the pads of the thumb and index finger to open a clothespin and count repetitions.
- - Squirrel objects into palm (pick up with index finger and thumb, move into palm without using the other hand)
- - Squeeze sponges to wash off table, clean windows, shower, etc.
- - More activity ideas are available here <http://www.OTPlan.com>.