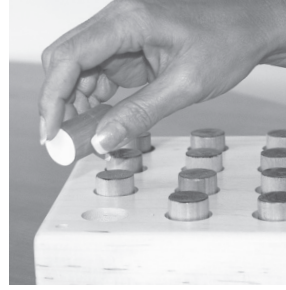
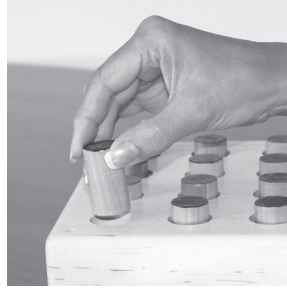


Indications

To evaluate fine motor dexterity in children. Provides information for pre-intervention planning, to quantify post treatment progress, and to track physiologic change over time from growth and development.

Instructions For Use

The examiner places the pegboard 3.9" (10 cm) from the edge of a height-adjusted table where the child is sitting. The examiner instructs the child to turn over and replace each peg, beginning with the peg farthest from the hand being tested, and proceeding in a zigzag manner. If the left hand is being tested, the child starts with the peg at the top row, right corner; turns over each peg in the top row from right to left, moves to the next row down (closer to the child) and completes it left to right. They would continue in this zigzag manner until they reach the bottom left peg. The direction is reversed for testing the right hand.



The examiner provides the following verbal instructions to the child:

"Make all the pegs change color with only one hand. Don't touch the pegs to the board or to your body, try not to turn your hand palm-up, and don't help with your other hand. Do it as quickly as you can without dropping a peg. Do it in this pattern...."

The examiner points to the starting peg and turns over two rows in the proper sequence to demonstrate. The child is asked to complete a full practice trial with their most functional hand. Verbal cuing and correction by the examiner is permitted during the practice trial. The test is then performed with the affected hand. The examiner times with a stopwatch the time it takes to turn over all of the pegs and records it in seconds. If a child drops a peg, time is stopped, and the peg returned to its starting position. The child is instructed to resume the test with the replaced peg. The stopwatch is restarted when the child makes contact with that peg.

Instructions For Scoring

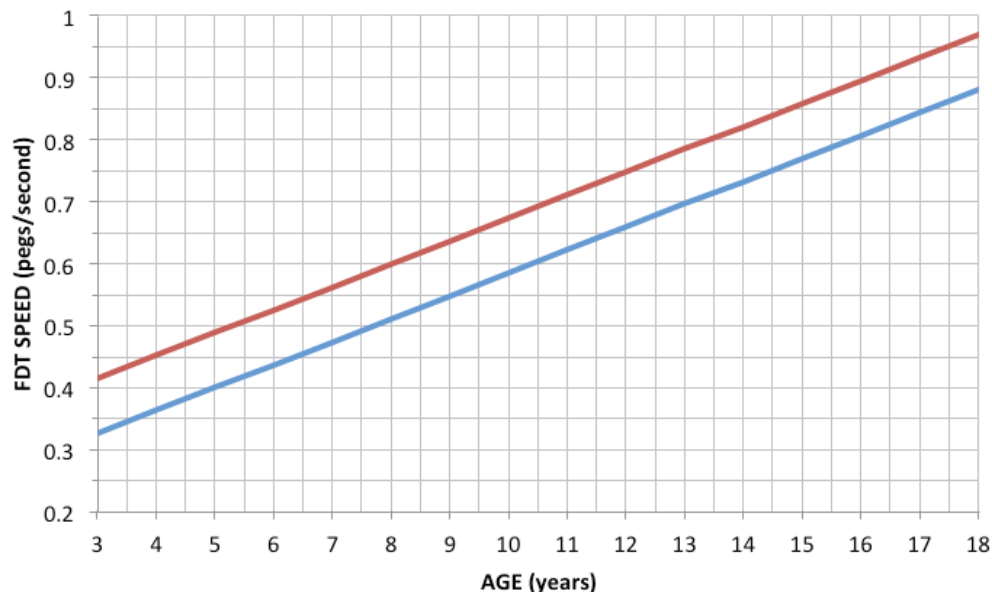
Unlike the adult FDT, no penalties are assessed when testing children under 18 years of age. The FDT is sensitive enough to detect functional inefficiencies in in-hand manipulation without additional penalties.

Two scores are obtained: (1) the time, in seconds, to complete the test and (2) the speed of test completion (speed = number of pegs completed / second). For example, if all 16 pegs are turned over in 32 seconds, the speed is 16 divided by 32, or 0.5 pegs per second.

Normative reference values for a functional test are particularly helpful with pediatric populations, as abilities change with age and development. Normative values for the FDT are available for children ages 3 to 17 years old. (Figure 1- Growth Chart)

To use the growth chart, find the child's age along the x-axis, then plot their speed vertically on the y-axis. Comparison can be made with normative speeds for each age according to hand dominance. Alternatively, expected normative speed can be calculated from the following formula: $\text{Dexterity} = 0.215 + 0.037(\text{Age in years}) + (0.088 \text{ if Dominant hand})$ The predicted speed is compared to the actual speed to assess a child's function.

FDT Speed Norms



References

Gogola, GR; Velleman, PF; Xu, S; Morse, AM; Lacy, B; Aaron, DH. *Hand Dexterity in Children: Administration and Normative Values of the Functional Dexterity Test (FDT)*, J Hand Surg Am., 2013;38: 2426-2431