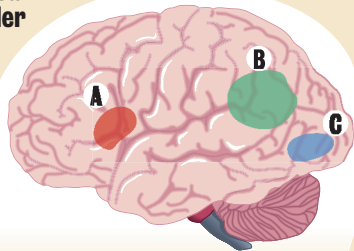


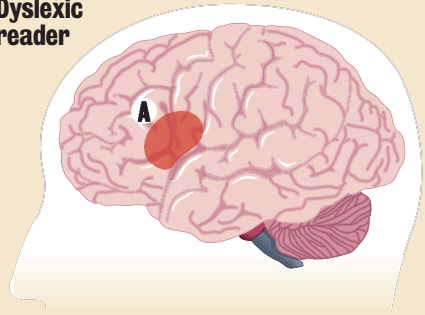
Understanding dyslexia

Studies and brain scans from around the world reveal that dyslexics use different parts of their brain to read than do skilled readers. Yale neuroscientist Sally Shaywitz has found dyslexics have a glitch that prevents them from using their rear brain systems. She compares dyslexic reading to a “manual” brain system versus the “automatic” system of good readers.

Typical reader



Dyslexic reader



A Sound producer - Dyslexic children show an overactivation of this region when reading, a region responsible for slowly analyzing a word and saying the sounds. Use of the Broca's area, located in a region known as the inferior frontal gyrus, often leads to slow reading and moving the mouth while reading silently.

B Word Analyzer - The parieto-temporal region, in the middle of the brain above the ear, more thoroughly analyzes a word, pulls it apart and links letters to sounds. Most novice readers rely on this area as they learn.

C Automatic Recognizer - This express pathway is used heavily by skilled readers. The occipito-temporal area, behind the ear, is the area where images, meanings and sounds collide. All the information about a word is bound together and stored here for instant recognition. As most readers progress, they rely more on this area.

Clues to dyslexia in early childhood

- Trouble learning common nursery rhymes such as “Jack and Jill” and “Humpty Dumpty”
- A lack of appreciation of rhymes
- Mispronounced words; persistent baby talk
- Difficulty in learning and remembering the names of letters
- Failure to know the letters in his or her own name

Clues in kindergarten and first grade

- Failure to understand that words come apart; for example that ‘batboy’ can be pulled into ‘bat’ and ‘boy’
- Inability to learn to associate letters with sounds, such as being unable to connect the letter b with the “b” sound
- Reading errors that show no connection to the sounds of the letters; for example, the word ‘big’ is read as ‘goat’
- Complaints about how hard reading is, or running and hiding when it is time to read
- A history of reading problems in parents or siblings