Diving deeper into developmental dyslexia

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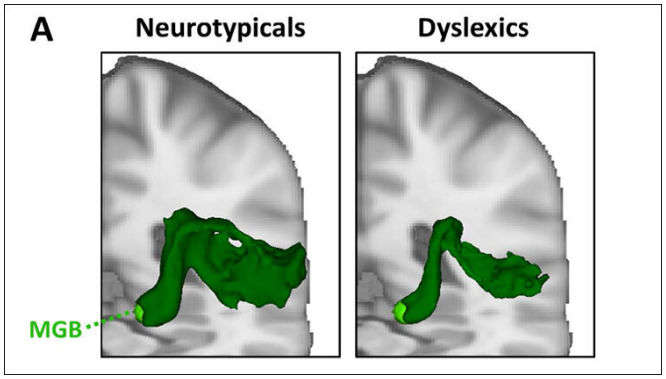

Figure 4A. Averaged probabilistic white matter connectivity for neurotypicals and dyslexics between the left motion-sensitive planum temporale (mPT) and the left medial geniculate body (MGB) (green). Credit: Tschentscher et al., *JNeurosci* (2019)

Men with dyslexia have altered structural connections between the thalamus and auditory cortex on the left side of the brain, new research published in *JNeurosci* reveals. The study extends similar observations of the dyslexic visual system and highlights the importance of early sensory processing for reading proficiency.

Neural fibers connect a subcortical structure in the auditory pathway—the left medial geniculate body (MGB)—to part of the cerebral cortex called the motion-sensitive planum temporale (mPT). Nadja Tschentscher and colleagues present evidence that the strength of this pathway is reduced in adults with dyslexia compared to typical readers.

The researchers found left MGB-mPT connectivity was associated with reading fluency only in typical readers, while previous studies reported associations between an analogous visual pathway and reading ability in both dyslexics and typical readers.

Taken together, the results broaden our understanding of dyslexia—one of the most common learning disabilities—to include alterations in lower as well as higher brain structures.

More information: Reduced structural connectivity between left auditory thalamus and the motion-sensitive planum temporale in developmental dyslexia, *JNeurosci* (2019). DOI: www.jneurosci.org/lookup/doi/1 … EUROSCI.1435-18.2018

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