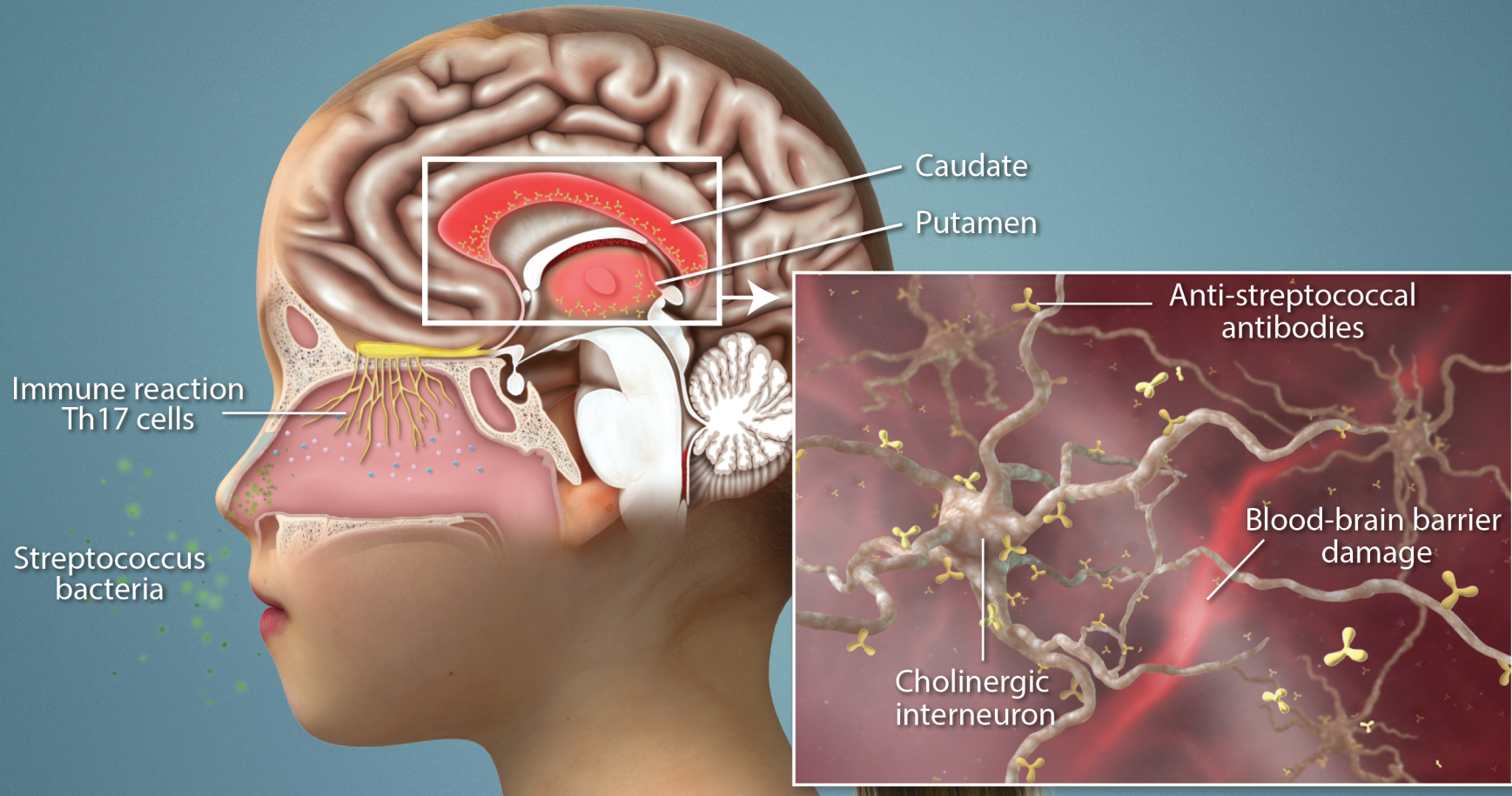


Groundbreaking Research from Yale & Columbia Show Harmful Autoantibodies Enter the Brains of PANDAS Child Through a Damaged Blood-Brain Barrier



Two new studies in 2020: Yale study of 27 children with PANDAS identified autoantibodies that attack interneurons in the brain and interfere with its function. In a subset of these children IVIg treatment removed the harmful autoantibodies. Columbia research on the animal model for PANDAS shows that strep bacteria creates an autoimmune reaction (Th17 cells) that drives PANDAS in children.

"Early research focused on the potential role of the cholinergic interneurons [in the brain] in PANDAS indicates that they may become dysregulated when exposed to anti-streptococcal antibodies" ¹

"Animal model of PANDAS [autoimmune encephalitis]... emphasizes the critical role that Th17 lymphocytes play in disease pathogenesis to impair CNS function..." ²

1. Xu, J., Liu, R., Fahey, S., Frick, L., Leckman, J., Vaccarino, F., Duman, R., Williams, K., Swedo, S., & Pittenger, C. (2020, Jan. 16). Antibodies From Children With PANDAS Bind Specifically to Striatal Cholinergic Interneurons and Alter Their Activity. *The American Journal of Psychiatry*. <https://doi.org/10.1176/appi.ajp.2020.19070698>

2. Platt, M., Bolding, K., Wayne, C., Chaudhry, S., Cutforth, T., Franks, K., & Agalliu, D. (2020). Th17 lymphocytes drive vascular and neuronal deficits in a mouse model of postinfectious autoimmune encephalitis. *PNAS*, 117 (12), 6708-6716. <https://doi.org/10.1073/pnas.1911097117>