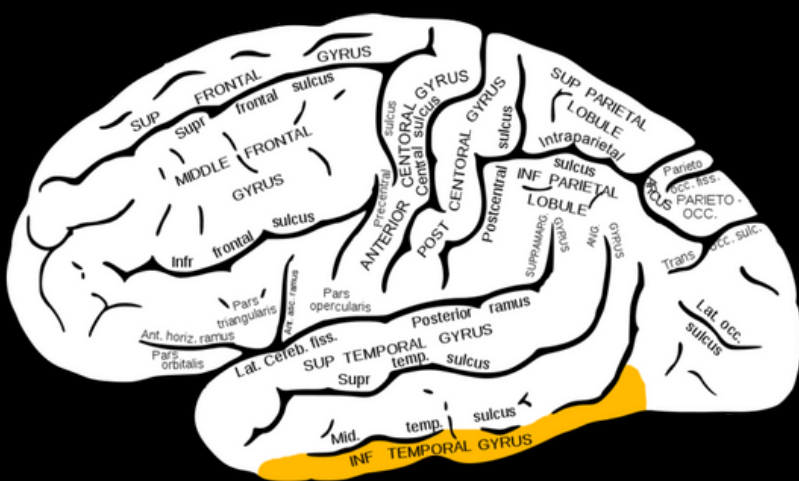


Temporal Lobe

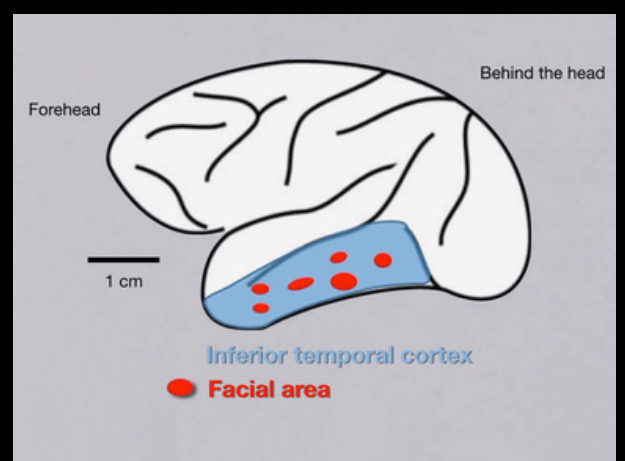
Inferior Temporal Cortex

THE TEMPORAL LOBE IS ASSOCIATED WITH PROCESSING AUDITORY INFORMATION AND ENCODING MEMORY. THE INFERIOR TEMPORAL CORTEX IS CRUCIAL FOR VISUAL OBJECT RECOGNITION (DAS).

A likely site for mechanisms of shape recognition in both man and monkey is the inferior temporal cortex. Removal of this area impairs the visual recognition of shapes and patterns while leaving basic sensory capabilities, such as acuity, intact (Schwartz).



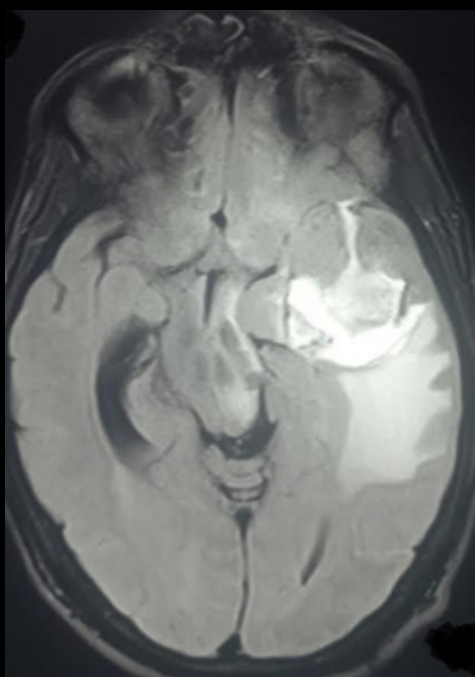
(Inferior)



(Facial)

In a study done by Eric Schwartz, it was found that some IT (Inferior Temporal) cells maintain their selectivity for FD (Fourier Descriptor) stimuli of a particular frequency over changes in size, position, and contrast because they must be sensitive to the shape of the stimulus (Schwartz).

In another study by Kluver and Bucy (1938), it was found that bilateral removal of the temporal lobes in monkeys produced a constellation of strange symptoms including docility, mouthing uneatable objects, indiscriminate sexuality and the inability to recognize objects visually that became known as the Kluver-Bucy syndrome (Gross).



FLAIR MRI sequence of a patient with partial KBS (Das).

Citations

Das, J. M., & Siddiqui, W. (2022, July). *Kluver-Bucy Syndrome*. National Library of Medicine. Retrieved November 9, 2022, from <https://www.ncbi.nlm.nih.gov/books/NBK544221/>

Facial recognition: Cracking the brain's code. CNRS News. (n.d.). Retrieved November 9, 2022, from <https://news.cnrs.fr/opinions/facial-recognition-cracking-the-brains-code>

Gross, C. G. (n.d.). *Inferior temporal cortex*. *Scholarpedia*. Retrieved November 9, 2022, from [http://www.scholarpedia.org/article/Inferior_temporal_cortex#:~:text=Inferior%20Tempor al%20\(IT\)%20Cortex%20is,the%20ventral%20cortical%20visual%20system.](http://www.scholarpedia.org/article/Inferior_temporal_cortex#:~:text=Inferior%20Tempor al%20(IT)%20Cortex%20is,the%20ventral%20cortical%20visual%20system.)

Inferior temporal cortex - definition. @neurochallenged. (n.d.). Retrieved November 9, 2022, from <https://neuroscientificallychallenged.com/glossary/inferior-temporal-cortex>

Schwartz, E. L., Desimone, R., Albright, T. D., & Gross, C. G. (1983). Shape Recognition and Inferior Temporal Neurons. *Proceedings of the National Academy of Sciences of the United States of America*, 80(18), 5776-5778. <http://www.jstor.org/stable/14423>