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Physiology of Temporal Lobe and Limbic System

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Abstract : There are four areas of the temporal lobe. Primary auditory area (areas 41 and 42); it is for the perception of auditory impulse, auditory association area (area 22, 21, and 20): Areas 21 and 20 are for understanding and interpretation of auditory sensation, recognition of language, and long-term memories. Area 22, also called Wernicke's area, and a sensory speech centre. It is for interpretation of auditory and visual information, formation of thoughts in the mind, and choice of words to be used. Ideas and thoughts originate in it. The limbic system is a part of cortical and subcortical structure forming a ring around the brainstem. Cortical structures are the orbitofrontal area, subcallosal gyrus, cingulate gyrus, parahippocampal gyrus, and uncus. Subcortical structures are the hypothalamus, hippocampus, amygdala, septum, paraolfactory area, anterior nucleus of the thalamus portions of the basal ganglia. There are several physiological functions of the limbic system, including regulation of behavior, motivation, and emotion.

Keywords : limbic system, motivation, emotions, temporal lobe
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