

# Frontal lobe personality

Ventromedial Orbitofrontal Cortex commonly known to cause “[frontal lobe personality](#)”, lesions in the orbitofrontal areas classically cause dramatic changes in behavior leading to impulsivity and a lack of judgment. Lesions are usually found in [Brodmann areas](#) 10, 11, 12, and 47 is associated with a loss of [inhibition](#), [emotional lability](#), and inability to function appropriately in social interactions. The most popular case involving a lesion in this area is the case of Phineas Gage who had major behavioral changes after his trauma.

However, in a study by Tranel and Damasio et al., a variety of other etiologies such as stroke and neoplasms may cause frontal lobe personality.

[Anterior Cingulate](#) and Dorsolateral Syndromes Lesions in the areas around Brodmann areas 9 and 46 may cause deficits within [working memory](#), rule-learning, planning, attention, and motivation.

Recent studies have reinforced that DLPFC is critical for working memory function and in particular for monitoring and manipulating the content of working memory. DLPFC may also affect attention as several cases have documented patients complaining of attentional deficits after brain trauma.

There are also psychiatric implications due to injury to DPFMC. Previous studies have researched how lesions in the DLPFC may cause “pseudo-depressive” syndrome associated with DLPFC associated with a loss of initiative, decreased motivation, reduced verbal output, and behavioral slowness (abulia). Other processing issues include rule learning, task switching, planning/ problem solving, and novelty detection and exogenous attention.

The anterior cingulate cortex is important for the motivation behind attention, but may also be involved in a variety of psychiatric disorders such as depression, post-traumatic stress disorder (PTSD), and obsessive-compulsive disorder (OCD).

A new area of research within the dorsolateral frontal cortices revolves around “intuition.” The frontal lobes can communicate with the [limbic system](#) and association cortex. In turn, this emotional influence associated with abstract decision to create more efficient or “intuitive” decision in a short span of time <sup>1)</sup>.

<sup>1)</sup>

Pirau L, Lui F. Frontal Lobe Syndrome. 2018 Oct 30. StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2018 Jan-. Available from <http://www.ncbi.nlm.nih.gov/books/NBK532981/> PubMed PMID: 30422576.

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