

Class 4: Handout # 4

Functions of the Frontal Cortex and Temporal Lobes

Frontal Cortex: The highest and most complex integration center in the human brain; the essential functional area for "volition," i. e., planning and carrying out meaningful, goal-directed activities. Lesions in the left frontal cortex create deficits in attention, abstract thinking, foresight, mature judgment, integration of thought and perception, reality-testing, initiative, perseverance and induce a state of depression characterized by apathy, lack of motivation, withdrawal, loss of sexual interest. Lesions in the right frontal cortex have a disinhibiting effect, revealed in wide mood swings, immature behavior, irresponsibility, inappropriate sexual behavior and/or hyper sexuality.

	Symptoms of Temporal Epilepsy
Emotionality	Deepening of all emotions; sustained intense bipolar disorder
Elation, euphoria	Grandiosity, exhilarated mood; diagnosis of bipolar disorder
Sadness	Discouragement, fearfulness; diagnosis of depression, suicide attempts
Anger	Increased temper, irritability
Aggression	Overt hostility, rape attacks, violent crimes, murder
Altered sexual interest	Loss of libido, hyposexuality; fetishism, exhibitionism, hypersexual episodes
Guilt	Tendency to self-scrutiny and self-recrimination
Hyper-moralism	Attention to rules with inability to distinguish significant from minor infraction; desire to punish offenders
Obsessionalism	Ritualism, orderliness, compulsive attention to detail
Viscosity	Stickiness; tendency to repetition
Sense of personal destiny	Events given highly charged, personalized significance; divine guidance ascribed to many features of patient's life
Hypergraphia	Keeping extensive diaries, detailed notes; writing autobiography or novel
Religiosity	Holding deep religious beliefs; idiosyncratic multiple-conversions, mystical states
Philosophical interest	Nascent metaphysical or moral speculations, cosmological theories
Passivity	Cosmic helplessness, "at hands of fate"; protestations of helplessness
Humorlessness	Over-generalized ponderous concern; humor lacking or idiosyncratic
Paranoia	Suspiciousness, over-interprets motives and events; diagnosis of paranoid schizophrenia

Source: Kolb & Whishaw, Fundamentals of Human Neuropsychology

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