

Some Important Neurotransmitters

Please keep in mind that it is difficult to summarize the various functions of these chemical messengers, and our understanding of their operation will undoubtedly deepen in the near future. But you may need to know about some specific neurotransmitters and their activity on the AP Exam, so we do the best we can to help you with this table.

Neurotransmitter	Major Functions	Related Disorders
Acetylcholine (ACh)	Voluntary muscle movements; memory	Alzheimer's Disease is linked to a loss of ACh producing neurons
Dopamine	Pleasure; muscular control; learning; attention	Excess activity is associated with schizophrenia; low levels of activity are associated with Parkinson's disease
Endorphins	Alleviating pain	Some chronic pain and fibromyalgia sufferers have dramatically reduced endorphin activity
Norepinephrine; Epinephrine	Involved in alertness and arousal	Low levels are often correlated with depression
G.A.B.A. (gamma-aminobutyric acid)	The primary inhibitory neurotransmitter in the brain	Low levels may be involved in anxiety, and seizure disorders
Glutamate	The primary excitatory neurotransmitter in the brain	Too much glutamate activity can be associated with seizure disorders; glutamate may also play a role in many degenerative disorders of the central nervous system, and with bipolar disorder
Serotonin	Appetite, sleep, mood	Low levels are associated with depression; serotonin levels may also be a factor in anxiety disorders and many other problems
Substance P	Sends pain messages	May be linked to fibromyalgia, a disease marked by enduring pain and tenderness in joints, muscles and tendons; may also be linked to other pain disorders