# Review of cognition and brain structure in schizophrenia: profiles, longitudinal course, and effects of treatment

Laura A. Flashman, PhD[a,b,*], Michael F. Green, PhD[c,d]

[a]Department of Psychiatry, Dartmouth Medical School, Dartmouth-Hitchcock
Medical Center, 1 Medical Center Drive, Lebanon, NH 03756-0001, USA
[b]New Hampshire Hospital, 31 Clinton Street, Concord, NH 03301, USA
[c]University of California-Los Angeles Neuropsychiatric Institute, 760 Westwood Plaza,
C9-420, Los Angeles, CA 90024-1759, USA
[d]Veterans Administration Greater Los Angeles Healthcare System, Los Angeles, CA, USA

Schizophrenia is one of the most severe and disabling of all mental illnesses. The diagnosis of schizophrenia involves a constellation of signs and symptoms and impairment in occupational and social functioning. Psychotic symptoms include delusions, prominent hallucinations, disorganized speech, or disorganized and catatonic behavior. Negative symptoms include alogia, affective blunting, avolition/asociality, and anhedonia. Finally, a separate domain of the illness that appears closely related to functional outcome involves the cognitive deficits of schizophrenia [1–3]. The range of cognitive deficits is broad and includes problems in perception, attention, memory, and problem solving [4].

This paper briefly reviews the literature on the neurocognitive and neuroanatomic features of schizophrenia, presents information on the longitudinal course of these deficits, and addresses the issue of the effects of antipsychotic medications on the neurocognitive deficits seen in patients with schizophrenia.

## Neurocognitive deficits of schizophrenia

There has been considerable work to document the types of neurocognitive deficits in patients with schizophrenia. The presence of diffuse cognitive impairment has been documented, and patients with schizophrenia have been found to function one standard deviation or more below the

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* Corresponding author.
*E-mail address:* flashman@dartmouth.edu (L.A. Flashman).