TABLE 109-5 COMMON SOMATIC SYMPTOMS OF ANXIETY

CARDIORESPIRATORY	GENITOURINARY
Palpitations	Urinary frequency or urgency
Chest pain	**NEUROLOGIC OR AUTONOMIC**
Dyspnea or sensation of being smothered	Diaphoresis
GASTROINTESTINAL	Warm flushes
Sensation of choking	Dizziness or presyncope
Dyspepsia	Paresthesia
Nausea	Tremor
Diarrhea	Headache
Abdominal bloating or pain	

may provoke a panic attack or in which having an attack is perceived to be embarrassing or dangerous).

Other disorders may not cause discrete panic attacks. Obsessive-compulsive disorder is characterized by recurrent obsessions (i.e., thoughts, impulses, or mental images that are anxiety-producing, perceived as intrusive and inappropriate, and resistant to attempts to suppress or neutralize them) and compulsions (i.e., repetitive behaviors or mental acts performed in response to obsessions or other rigid rules). Recognizing its distinct pathogenesis involving striatofrontal function and central serotonergic systems, it has been classified separately from the anxiety disorders.

Individuals exposed to severely stressful events (typically involving the actual or threatened loss of life or limb) may experience any of a wide variety of psychiatric sequelae. If the sequelae include symptoms of intrusion (e.g., intrusive memories, dreams, flashbacks, intense distressing responses to reminders of the trauma), avoidance of distressing memories or external reminders, negative cognitions and mood (e.g., amnesia for aspects of the event, negativistic thoughts about oneself in general or self-blame for the event, diminished interests or activities, feelings of detachment), and alterations in arousal and reactivity, the disorder is called *acute stress disorder* (duration up to 1 month) or *posttraumatic stress disorder* (duration is more than 1 month). Enduring anxiety symptoms that are not captured by these diagnoses or by diagnoses of cognitive, mood, or psychotic disorders may be diagnosed as *generalized anxiety disorder*.

These disorders are common, with point prevalence of 1% to 2% each for panic disorder and obsessive-compulsive disorder and up to 10% for phobias. Although there are fewer data on long-term outcome than for mood disorders, many of these disorders tend to have a chronic waxing and waning course. Most of these disorders have a first onset in the teens, 20s, and 30s, although new-onset anxiety is common in later life. The cause is rarely a primary anxiety disorder (see Table 109-2).

The pathogeneses of most anxiety disorders may be understood as inappropriate activation of the stress response system involving a variety of neuroendocrine and autonomic outputs and coordinated by the central nucleus of the amygdala and other brain structures. The amygdala receives excitatory glutamatergic inputs from cortical sensory areas and the thalamus and has outputs to the major monoaminergic centers (e.g., noradrenergic neurons of the locus coeruleus, dopaminergic neurons of the ventral tegmental area, and serotonergic neurons of the raphe nuclei), which project to the many brain regions subserving the symptoms of anxiety.

The identification and correction of dysfunctional patterns of thinking (i.e., cognitive therapy) and the extinction of pathologic behaviors and positive reinforcement of more functional behaviors (i.e., behavior therapy) are evidence-based psychotherapies useful in most anxiety disorders (level A evidence). They are the sole therapies for specific phobias and may be the sole or primary therapy for most other anxiety disorders or combined with pharmacotherapy.

Antidepressant, anxiolytic, and other drug therapies are used in treatment. Increasingly, antidepressant medications have replaced anxiolytics as the mainstay of pharmacotherapy for panic disorder, posttraumatic stress disorder, generalized social phobia, and generalized anxiety disorder. For obsessive-compulsive disorder, only antidepressant agents with pronounced activity on the serotonergic system (i.e., clomipramine and selective serotonin reuptake inhibitors [SSRIs]; see Table 109-4) are efficacious.

PSYCHOTIC DISORDERS

Psychosis is a loss of reality testing, manifested as hallucinations (i.e., false sensory perceptions), delusions (i.e., fixed false beliefs), and thought process derailments. Schizophrenia is the prototypic psychotic disorder; it includes acute episodes of psychosis (i.e., positive symptoms) and often declining overall functioning over time related to the negative symptoms such as affective flattening, abulia, apathy, and social withdrawal.

The lifetime prevalence of schizophrenia is slightly less than 1%, and its chronic, debilitating course takes a considerable toll on patients, families, and society. Peak onset is in late adolescence to young adulthood, with slightly younger ages for males than females. The annual incidence is approximately 15 cases per 100,000 people, but with marked variability across study samples and populations. The condition is slightly more common in males than females.

The pathogenesis of schizophrenia remains unknown, but it is clearly multifactorial. Genetic factors account for up to 50% of the risk, with multiple loci implicated. Studies of postmortem brains indicate a nongliotic neuropathologic process with subtle disruptions of cortical cytoarchitecture. It is likely that psychosocial factors and neurodevelopment interact with a nonlocalizable brain lesion present at birth or acquired early in life. Dopaminergic mesocortical and mesolimbic pathways are important in the production of psychotic symptoms.

Antipsychotic medications, often with adjunctive benzodiazepines, are used to treat acute psychotic episodes. Although maintenance antipsychotic medications help reduce the severity and frequency of acute psychotic episodes (level A evidence), comprehensive psychosocial rehabilitation programs are required to help patients manage interpersonal and other stressors and to improve overall clinical outcomes. Adjunctive cognitive-behavioral therapy also may improve outcomes for some patients (level A). Second-generation (atypical) antipsychotic medications have replaced first-generation antipsychotics in common U.S. practice because of their lower rates of extrapyramidal side effects, including tardive dyskinesia. However, second-generation drugs contribute to an increase in obesity and metabolic syndrome.