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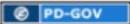
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Anxiety Disorders

I. Definition of Anxiety: An unpleasant state of anticipation, apprehension, fear, or dread, often accompanied by a physiologic state of autonomic arousal, alertness, and motor tension.

A. Psychological Symptoms

1. Fear, apprehension, dread, sense of impending doom
2. Worry, rumination, obsession
3. Nervousness, uneasiness, distress
4. Derealization (the world seems distorted or unreal), depersonalization (one's body feels unreal or disconnected)

B. Physiological Symptoms

- | | |
|----------------------------------|-----------------------------------|
| 1. Diaphoresis (sweating) | 10. Pupil dilatation |
| 2. Diarrhea | 11. Restlessness |
| 3. Dizziness | 12. Shortness of breath |
| 4. Flushing or chills | 13. Syncope (fainting) |
| 5. Hyperreflexia | 14. Tachycardia |
| 6. Hyperventilation | 15. Tingling |
| 7. Lightheadedness | 16. Tremor |
| 8. Numbness | 17. Upset stomach ("butterflies") |
| 9. Palpitations (pounding heart) | 18. Urinary frequency |

C. Normal vs. Abnormal Anxiety

1. Normal Anxiety: Adaptive psychological and physiological response to a stressful or threatening situation
2. Abnormal Anxiety: Maladaptive response to real or imagined stress or threat
 - a. Response is disproportionate to stress or threat
 - b. Stress or threat is nonexistent, imaginary, or misinterpreted
 - c. Symptoms interfere with adaptation or response to stress or threat
 - d. Symptoms interfere with other life functions

II. Neurobiology of Anxiety

A. Central Nervous System

1. Frontal Cortex
 - a. Interpretation of complex stimuli
 - b. Declarative memory
 - c. Learning
 - d. Extinction of condition fear and emotional memory
2. Limbic System (striatum, thalamus, amygdala, hippocampus, hypothalamus)
 - a. Emotional memory (especially the central nucleus of the amygdala)
 - b. Fear conditioning
 - c. Anticipatory anxiety
3. Brainstem (raphe nuclei, locus ceruleus)
 - a. Arousal, attention, startle
 - b. Control of autonomic nervous system
 - c. Respiratory control

B. Peripheral Systems

1. Autonomic arousal (tachycardia, tachypnea, diarrhea)
2. Hypothalamic-pituitary-adrenal (HPA) axis activation
3. Visceral sensory activation

C. Neurotransmitters

1. Norepinephrine – locus ceruleus projections to frontal cortex, limbic system, brainstem, and spinal cord
2. Serotonin – Raphe nuclei projections to cortex, limbic system, and hypothalamus
3. GABA – cortex, limbic system, hypothalamus, locus ceruleus

III. Panic and Agoraphobia; Social and Specific Phobias

A. Panic Attack: A discrete period of intense fear or distress, accompanied by specific physical and psychological symptoms

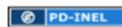
1. Onset is rapid (seconds)
2. Peak symptoms are reached within 10 minutes
3. Symptoms may be spontaneous or in response to a specific stimulus (e.g. crowds, driving, elevators)
4. May occur in the context of panic disorder, social phobia, specific phobia, other anxiety disorders, or as an isolated incident
5. Differential diagnosis includes many physical disorders, which must be ruled out by history, physical examination, and laboratory studies

Diagnostic Criteria for a Panic Attack	
<p>A discrete period of intense fear or discomfort, in which four (or more) of the following symptoms developed abruptly and reached a peak within 10 minutes:</p> <ol style="list-style-type: none"> (1) palpitations, pounding heart, or accelerated heart rate (2) sweating (3) trembling or shaking (4) sensations of shortness of breath or smothering (5) feeling of choking 	<ol style="list-style-type: none"> (6) chest pain or discomfort (7) nausea or abdominal distress (8) feeling dizzy, unsteady, lightheaded, or faint (9) derealization (feelings of unreality) or depersonalization (being detached from oneself) (10) fear of losing control or going crazy (11) fear of dying (12) paresthesias (numbness or tingling sensations) (13) chills or hot flushes

 Source Undetermined

Differential Diagnosis of Panic Attack

Cardiovascular	Pulmonary	Neurological	Endocrine	Substance Abuse	Other
Anemia Angina Arrythmia Congestive heart failure Hypertension Mitral valve prolapse Infarction Tachycardia	Asthma Hyperventilation Pulmonary embolism	CVA/TIA Encephalitis Huntington's Infection Meniere's Migraine Multiple sclerosis Seizure Tumor	Addison's Cushing's Diabetes Hyperthyroidism Hypothyroidism Hypoglycemia Hypoparathyroidism Pheochromocytoma Premenstrual syndrome	Intoxication: Amphetamine Caffeine Cocaine Hallucinogens Inhalants Marijuana Nicotine Phencyclidine Withdrawal: Alcohol Opiate Sedatives	Anaphylaxis B12 deficiency Electrolyte disturbance Heavy metals Systemic infection Systemic lupus erythematosus Uremia

 Source Undetermined

- B. Agoraphobia: Anxiety about being in situations from which escape might be difficult, or help would not be available if a panic attack occurred. Situations such as being outside the home alone, being in a crowd, traveling in a car or airplane, being on a bridge, or being in a public place are avoided or endured with great distress.
1. Usually secondary to panic disorder
 2. Often extremely debilitating

Diagnostic Criteria for Agoraphobia
<p>A. Anxiety about being in places or situations from which escape might be difficult (or embarrassing) or in which help may not be available in the event of having an unexpected or situationally predisposed panic attack or panic-like symptoms. Agoraphobic fears typically involve characteristic clusters of situations that include being outside the home alone; being in a crowd or standing in a line; being on a bridge; and traveling in a bus, train, or automobile.</p> <p>Note: Consider the diagnosis of specific phobia if the avoidance is limited to one or only a few specific situations, or social phobia if the avoidance is limited to social situations.</p> <p>B. The situations are avoided (e.g., travel is restricted) or else are endured with marked distress or with anxiety about having a panic attack or panic-like symptoms, or require the presence of a companion.</p> <p>C. The anxiety or phobic avoidance is not better accounted for by another mental disorder, such as social phobia (e.g., avoidance limited to social situations because of fear of embarrassment), specific phobia (e.g., avoidance limited to a single situation like elevators), obsessive-compulsive disorder (e.g., avoidance of dirt in someone with an obsession about contamination), posttraumatic stress disorder (e.g., avoidance of stimuli associated with a severe stressor), or separation anxiety disorder (e.g., avoidance of leaving home or relatives).</p>

 Source Undetermined

- C. Panic Disorder: Recurrent panic attacks, accompanied by at least one month of persistent concern about having another attack, or a change in behavior due to the attacks

1. Panic disorder with agoraphobia
 - a. Lifetime risk is approximately 1%
 - b. Onset is in young adulthood
 - c. Course of panic attacks is variable; agoraphobia tends to worsen if panic attacks are persistent
 - d. Etiology - Strong biological component (15-20% concordance with 1st-degree relatives). A behavioral component has been suggested.
 - e. Comorbidity includes major depressive disorder, suicide, alcohol abuse.
 - f. Treatment: SSRIs, tricyclic antidepressants, MAOIs, and benzodiazepines are effective for panic. Behavioral therapies and MAOIs are most effective for agoraphobia. Buspirone is not effective.

2. Panic disorder without agoraphobia
 - a. Lifetime risk is 4%
 - b. Onset is in young adulthood
 - c. Course of panic attacks is variable

Diagnostic Criteria for Panic Disorder with Agoraphobia	Diagnostic Criteria for Panic Disorder without Agoraphobia
<p>A. Both (1) and (2):</p> <ol style="list-style-type: none"> (1) recurrent unexpected panic attacks (2) at least one of the attacks has been followed by at least 1 month (or more) of the following: <ol style="list-style-type: none"> (a) persistent concern about having additional attacks (b) worry about the implications of the attack or its consequences (e.g., losing control, having a heart attack, "going crazy") (c) a significant change in behavior related to the attacks <p>B. Presence of agoraphobia.</p> <p>C. The panic attacks are not due to the direct physiological effects of a substance (e.g., a drug of abuse, a medication) or a general medical condition (e.g., hyperthyroidism).</p> <p>D. The panic attacks are not better accounted for by another mental disorder, such as social phobia (e.g., occurring on exposure to feared social situations), specific phobia (e.g., on exposure to a specific phobic situation), obsessive compulsive disorder (e.g., on exposure to dirt in someone with an obsession about contamination), posttraumatic stress disorder (e.g., in response to stimuli associated with a severe stressor), or separation anxiety disorder (e.g., in response to being away from home or close relatives).</p>	<p>A. Both (1) and (2):</p> <ol style="list-style-type: none"> (1) recurrent unexpected panic attacks (2) at least one of the attacks has been followed by at least 1 month (or more) of the following: <ol style="list-style-type: none"> (a) persistent concern about having additional attacks (b) worry about the implications of the attack or its consequences (e.g., losing control, having a heart attack, "going crazy") (c) a significant change in behavior related to the attacks <p>B. Absence of agoraphobia.</p> <p>C. The panic attacks are not due to the direct physiological effects of a substance (e.g., a drug of abuse, a medication) or a general medical condition (e.g., hyperthyroidism).</p> <p>D. The panic attacks are not better accounted for by another mental disorder, such as social phobia (e.g., occurring on exposure to feared social situations), specific phobia (e.g., on exposure to a specific phobic situation), obsessive compulsive disorder (e.g., on exposure to dirt in someone with an obsession about contamination), posttraumatic stress disorder (e.g., in response to stimuli associated with a severe stressor), or separation anxiety disorder (e.g., in response to being away from home or close relatives).</p>

 Source Undetermined

- d. Etiology - Strong biological component (15-20% concordance with 1st-degree relatives). A behavioral component has been suggested.

- e. Comorbidity includes major depressive disorder, suicide, alcohol abuse
- f. Treatment: SSRIs, tricyclic antidepressants, MAOIs, and benzodiazepines are effective for panic. Buspirone is not effective.

3. Agoraphobia without a history of panic disorder:

- a. Available information on prevalence, course, and etiology is quite varied. Often chronic and incapacitating.
- b. Treatment: Behavioral therapy is recommended

 Source Undetermined

Diagnostic Criteria for Agoraphobia without a History of Panic Disorder
<ul style="list-style-type: none"> A. The presence of agoraphobia related to fear of developing panic-like symptoms (e.g., dizziness or diarrhea). B. Criteria have never been met for panic disorder. C. The disturbance is not due to the direct physiological effects of a substance (e.g., a drug of abuse, a medication) or a general medical condition. D. If an associated general medical condition is present, the fear described in criterion A is clearly in excess of that usually associated with the condition.

- D. Social Phobia: Marked and persistent fear of embarrassment in social or performance situations, which is recognized as being excessive, and which interferes with the person's function.
- 1. Prevalence: 2-5%; 50% higher in women than men
 - 2. Onset is in adolescence, often in a shy child
 - 3. The course is typically lifelong and continuous
 - 4. Etiology: The disorder is more common among 1st degree relatives, and is associated with high autonomic arousal
 - 5. Treatment: β -Blockers for performance anxiety; behavioral therapy; SSRIs; benzodiazepines; MAOIs

Diagnostic Criteria for Social Phobia
<ul style="list-style-type: none"> A. A marked and persistent fear of one or more social or performance situations in which the person is exposed to unfamiliar people or to possible scrutiny by others. The individual fears that he or she will act in a way (or show anxiety symptoms) that will be humiliating or embarrassing. B. Exposure to the feared social situation almost invariably provokes anxiety, which may take the form of a situationally bound or situationally predisposed panic attack. C. The person recognizes that the fear is excessive or unreasonable. D. The feared social or performance situations are avoided, or else endured with intense anxiety or distress. E. The avoidance, anxious anticipation, or distress in the feared social or performance situation(s) interferes significantly with the person's normal routine, occupational (academic) functioning, or social activities or relationships with others, or there is marked distress about having the phobia.

E. Specific Phobia (formerly “Simple Phobia”): Marked and persistent fear of a specific object or situation (animals, flying, heights, blood, etc.). Exposure to the “phobic stimulus” almost always provokes an immediate anxiety response, recognized as being excessive, which leads to avoidance of the stimulus, and interferes with the person’s function.

Diagnostic Criteria for Specific Phobia
A. Marked and persistent fear that is excessive or unreasonable, cued by the presence or anticipation of a specific object or situation (e.g., flying, heights, animals, receiving an injection, seeing blood).
B. Exposure to the phobic stimulus almost invariably provokes an immediate anxiety response, which may take the form of a situationally bound or situationally predisposed panic attack.
C. The person recognizes that the fear is excessive or unreasonable.
D. The phobic situation(s) is avoided, or else endured with intense anxiety or distress.
E. The avoidance, anxious anticipation, or distress in the feared situation(s) interferes significantly with the person's normal routine, occupational (or academic) functioning, or social activities or relationships with others, or there is marked distress about having the phobia.

 Source Undetermined

1. Prevalence: 10%; 3X higher in women than men
2. Onset is usually in childhood, with a 2nd peak of onset in the 20’s
3. The course is usually lifelong and continuous
4. Etiology: The disorder is more common among 1st degree relatives
5. Comorbidity: Vasovagal fainting; alcohol abuse
6. Treatment: Behavioral (exposure) therapy is most effective; benzodiazepine for scheduled exposures (e.g. airline flight)

IV. Obsessive Compulsive Disorder (OCD): - Recurrent and persistent thoughts or behaviors that are recognized as being excessive and unreasonable, and either cause marked distress, are time-consuming, or interfere with the person’s function.

- A. Obsessions: Recurrent and persistent thoughts, impulses, or images that are intrusive and disturbing
- B. Compulsions: Repetitive behaviors (e.g. hand washing, checking, counting) that the person is driven to perform in response to obsessions or according to rigid rules, in order to reduce distress or prevent a feared situation

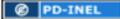
C. Clinical characteristics

1. Prevalence: 2-3%

Diagnostic Criteria for Obsessive Compulsive Disorder

2. Onset is usually in the early teens for males, and mid-twenties for females
3. The course is usually lifelong, with waxing and waning of symptoms. Severe symptoms cause extreme disability.
4. Etiology: The concordance rate among 1st degree relatives is 30%; between monozygotic twins it is 75%
5. Comorbidity: Major depressive disorder (30%), eating disorders, panic disorder (15-20%), generalized anxiety, Tourette's (5%), schizotypal traits

- A. Either obsessions or compulsions:
Obsessions as defined by (1), (2), (3), and (4):
- (1) recurrent and persistent thoughts, impulses, or images that are experienced, at some time during the disturbance, as intrusive and inappropriate, and cause marked anxiety or distress
 - (2) the thoughts, impulses, or images are not simply excessive worries about real-life problems
 - (3) the person attempts to ignore or suppress such thoughts, impulses, or images to neutralize them with some other thought or action
 - (4) the person recognizes that the obsessional thoughts, impulses, or images are a product of his or her own mind (not imposed from without as in thought insertion)
- Compulsions as defined by (1) and (2):*
- (1) repetitive behaviors (e.g., hand washing, ordering, checking) or mental acts (e.g., praying, counting, repeating words silently) that the person feels driven to perform in response to an obsession, or according to rules that must be applied rigidly
 - (2) the behaviors or mental acts are aimed at preventing or reducing distress or preventing some dreaded event or situation; however, these behaviors or mental acts either are not connected in a realistic way with what they are designed to neutralize or prevent, or are clearly excessive
- B. At some point during the course of the disorder, the person has recognized that the obsessions or compulsions are excessive or unreasonable. Note: this does not apply to children.
- C. The obsessions or compulsions cause marked distress; are time-consuming (take more than an hour a day); or significantly interfere with the person's normal routine, occupational (or academic) functioning, or usual social activities or relationships.

 Source Undetermined

6. Treatment: SSRIs, clomipramine; behavioral therapy; in severe cases psychosurgery (cingulotomy, subcaudate tractectomy, limbic leukotomy, or anterior capsulotomy)

V. Traumatic Stress Disorders

- A. Posttraumatic Stress Disorder (PTSD): Following a severe traumatic event, the person reexperiences the trauma through flashbacks, nightmares, or disturbing memories; consciously or unconsciously avoids stimuli associated with the trauma; and experiences increased arousal. The symptoms last more than 1 month, and significantly interfere with the person's function.

Diagnostic Criteria for Posttraumatic Stress Disorder

- A. The person has been exposed to a traumatic event in which both of the following were present:
- (1) the person experienced, witnessed, or was confronted with an event or events that involved actual or threatened death or serious injury, or a threat to the physical integrity of self or others
 - (2) the person's response involved intense fear, helplessness, or horror
 - (3) inability to recall an important aspect of the trauma
 - (4) markedly diminished interest or participation in significant activities
 - (5) feeling of detachment or estrangement from others
 - (6) restricted range of affect (e.g., unable to have loving feelings)
 - (7) sense of a foreshortened future (e.g., does not expect to have a career, marriage, children, or a normal life span)
- B. The traumatic event is persistently reexperienced in one (or more) of the following ways:
- (1) recurrent and intrusive distressing recollections of the event, including images, thoughts, or perceptions.
 - (2) recurrent distressing dreams of the event.
 - (3) acting or feeling as if the traumatic event were recurring (includes a sense of reliving the experience, illusions, hallucinations, and dissociative flashback episodes, including those that occur upon awakening or when intoxicated)
 - (4) intense psychological distress at exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event
 - (5) physiologic reactivity on exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event
- C. Persistent avoidance of stimuli associated with the trauma and numbing of general responsiveness (not present before the trauma), as indicated by three (or more) of the following:
- (1) efforts to avoid thoughts, feelings, or conversations associated with the trauma
 - (2) efforts to avoid activities, places, or people that arouse
- D. Persistent symptoms of increased arousal (not present before the trauma), as indicated by two (or more) of the following:
- (1) difficulty falling or staying asleep
 - (2) irritability or outbursts of anger
 - (3) difficulty concentrating
 - (4) hypervigilance
 - (5) exaggerated startle response
- E. Duration of the disturbance (symptoms in criteria B, C, and D) is more than one month.
- F. The disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning.
- Specify if:*
Acute: if duration of symptoms is less than 3 months
Chronic: if duration of symptoms is 3 months or more
- Specify if:*
with delayed onset: onset of symptoms at least six months after the stressor

 Source Undetermined

1. Prevalence: 2-9%. The highest prevalence is following war experiences and sexual assault. Lower prevalence is observed following motor vehicle accidents, fires, and natural disasters. Prevalence is higher in females than in males.
2. Onset of the symptoms may be immediate (within 6 months of the trauma), or delayed (>6 months after the trauma)
3. Course is variable
4. Etiology: Predisposing factors include anxiety, depression, and antisocial traits in the individual or family
5. Comorbidity: Suicide, major depressive disorder, substance abuse
6. Treatment: Behavioral therapy, SSRIs, tricyclic antidepressants, MAOIs

B. Acute Stress Disorder: Similar to PTSD, but onset is within 1 month of the traumatic event, and the symptoms subside within 1 month of onset

VI. Other Anxiety Disorders

- A. Generalized Anxiety Disorder: Excessive anxiety and worry about several events or issues, accompanied by at least 3 somatic or psychological symptoms, lasting at least 6 months, and interfering with the person's ability to function

1. Prevalence: 5%. Slightly more common in females than in males
2. Onset is usually early in life, but may occur at any age
3. Course is chronic, with waxing and waning, often in response to stressful situations
4. Etiology: There is a weak association with anxiety disorders of all types among 1st degree relatives

Diagnostic Criteria for Generalized Anxiety Disorder	
A.	Excessive anxiety and worry (apprehensive expectation), occurring more days than not for at least 6 months, about a number of events or activities (such as work or school performance).
B.	The person finds it difficult to control the worry.
C.	The anxiety and worry are associated with three (or more) of the following six symptoms (with at least some symptoms present for more days than not for the past six months).
(1)	restlessness or feeling keyed up or on edge
(2)	being easily fatigued
(3)	difficulty concentrating or mind going blank
(4)	irritability
(5)	muscle tension
(6)	sleep disturbance (difficulty failing or staying asleep, or restless unsatisfying sleep)

 Source Undetermined

5. Comorbidity: Other anxiety disorders are very common (80%); major depressive disorder (7%)
 6. Treatment: Benzodiazepines, buspirone, SSRIs, tricyclic antidepressants, behavioral (relaxation) therapy
- B. Adjustment Disorder with Anxiety: Significant anxiety, worry, or nervousness arising in response to an identifiable psychosocial stressor
1. Onset must be within 3 months of the stressor
 2. Symptoms must resolve within 6 months of onset
- C. Anxiety Disorder Due to a General Medical Condition:
1. Anxiety, panic attacks, or obsessive compulsive symptoms arise as a direct physiological effect of the medical condition
 2. Anxiety arising as an emotional response to the stress of an illness should be diagnosed as an adjustment disorder

Conditions that commonly cause anxiety symptoms

Cardiovascular	Pulmonary	Neurological	Endocrine	Other
Anemia Angina Arrhythmia Congestive heart failure Hypertension Mitral valve prolapse Infarction Tachycardia	Asthma Hyperventilation Pulmonary embolism	CVA/TIA Encephalitis Huntington's Infection Meniere's Migraine Multiple sclerosis Seizure Tumor	Addison's Cushing's Diabetes Hyperthyroidism Hypothyroidism Hypoglycemia Hypoparathyroidism Pheochromocytoma Premenstrual syndrome	Anaphylaxis B12 deficiency Electrolyte disturbance Heavy metals Systemic infection Systemic lupus erythematosus Uremia

 Source Undetermined

D. Substance Induced Anxiety Disorder: Anxiety, panic attacks, or obsessive compulsive symptoms arising from substance intoxication or withdrawal

1. Substances commonly associated with anxiety symptoms:

Intoxication	Withdrawal
Amphetamine Caffeine Cocaine Hallucinogens Inhalants Marijuana Nicotine Phencyclidine	Alcohol Opiate Sedative

 Source Undetermined