Anxiety disorder in Primary care setting
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Worry never robs tomorrow of its sorrow, it only saps today of its joy.
Fear is the emotional response to real or perceived imminent threat, whereas anxiety is anticipation of future threat.

Anxiety associated with muscle tension, vigilance in preparation for future danger and cautious or avoidant behaviors.

**Survival instincts:** fright, flight, fight
Anxiety

- Ego dystonic
- Every day
- Exaggerated
- Excessive
- Emotional reactivity
- Exhausting
Pathways

Cerebral cortex - involves our perceptions and thoughts about situations. Linking of these thoughts to experiences is the result of something called cognitive fusion.

Amygdala - attach emotional significance to situations or objects and to form emotional memories. Those emotions and emotional memories can be positive or negative. These circuits influence love, bonding, sexual behavior, anger, aggression, and fear. It triggers the ancient fight-or-flight response, which has been passed down virtually unchanged from the earliest vertebrates on earth.

Hippocampus - Short term memory, connects emotion of fear to its context. The basolateral amygdala (BLA) with the ventral hippocampus (vHPC) control social interactions and anxiety.

The major mediators of the symptoms of anxiety disorders:
- Norepinephrine,
- Serotonin,
- Dopamine,
- Gamma-aminobutyric acid (GABA),
- Corticotrophin-releasing factor.
Risk factors

- **Trauma.** Children who endured abuse or trauma or witnessed traumatic events are at higher risk of developing an anxiety disorder at some point in life. Adults who experience a traumatic event also can develop anxiety disorders.

- **Stress due to an illness.** Having a health condition or serious illness can cause significant worry about issues such as your treatment and your future.

- **Stress buildup.** A big event or a buildup of smaller stressful life situations may trigger excessive anxiety — for example, a death in the family, work stress or ongoing worry about finances.

- **Personality.** People with certain personality types are more prone to anxiety disorders than others are.

- **Other mental health disorders.** People with other mental health disorders, such as depression, often also have an anxiety disorder.

- **Genetic Vulnerability.** Anxiety disorders can run in families.

- **Drugs or alcohol.** Drug or alcohol use or abuse or withdrawal can cause or worsen anxiety.

Symptoms

Increased heart rate
Numbness or tingling in hands or feet
Perspiration
Shortness of breath
Tunnel vision
Nausea or diarrhea
Dry mouth
Dizziness
Restlessness
Muscle tension

**Anxiety Disorders**

- separation anxiety disorder,
- selective mutism,
- specific phobia,
- social phobia,
- panic disorder,
- agoraphobia,
- generalized anxiety disorder
Separation Anxiety disorder

- Developmentally inappropriate and excessive anxiety concerning separation from home or from those to whom the individual is attached, as evidenced by three (or more) of the following:
  - (1) recurrent excessive distress when separation from home or major attachment figures occurs or is anticipated
  - (2) persistent and excessive worry about losing, or about possible harm befalling, major attachment figures
  - (3) persistent and excessive worry that an untoward event will lead to separation from a major attachment figure (e.g., getting lost or being kidnapped)
  - (4) persistent reluctance or refusal to go to school or elsewhere because of fear of separation
  - (5) persistently and excessively fearful or reluctant to be alone or without major attachment figures at home or without significant adults in other settings
  - (6) persistent reluctance or refusal to go to sleep without being near a major attachment figure or to sleep away from home
  - (7) repeated nightmares involving the theme of separation
  - (8) repeated complaints of physical symptoms (such as headaches, stomachaches, nausea, or vomiting) when separation from major attachment figures occurs or is anticipated

- B. The duration of the disturbance is at least 4 weeks.
- C. The onset is before age 18 years.
- D. The disturbance causes clinically significant distress or impairment in social, academic (occupational), or other important areas of functioning.
- E. The disturbance does not occur exclusively during the course of a Pervasive Developmental Disorder, Schizophrenia or other Psychotic Disorder and, in adolescents and adults, is not better accounted for by Panic Disorder With Agoraphobia
Selective Mutism

- A consistent failure to speak in certain social situations where there is a natural expectation of speaking (American Psychiatric Association, 2013). For instance, a child may be verbal at home but unable to speak in a classroom environment. Researchers believe the behavior is a form of social phobia; often not recognized before the age of 5 when a child enters school.

- Cognitive-behavioral (CBT) strategies involve the identification of anxious thoughts that may contribute to the mute behavior and teaches the child to identify negative thoughts and coach the children to replace these with positive thoughts instead. A host of other therapies may also be introduced and include (but are not limited to) emotional reinforcement, self-esteem strengthening.

Specific phobias

- The individual suffers from a persistent fear that is either unreasonable or excessive, caused by the presence or anticipation of a specific object or situation.

- Exposure to the stimulus usually results in an anxiety response, often taking the form of a panic attack in adults, or a tantrum, clinging, crying or freezing in children.

- The sufferer recognizes that their fear is disproportionate to the perceived threat or danger (not always present in children).

- Individuals take steps to avoid the object or situation they fear, or endure such experiences with intense distress or anxiety.

- The phobic reaction, anticipation or avoidance interferes with the individual’s normal routine and relationships, or causes significant distress.

- The phobia has persisted for a period of time, usually six months or longer.

- The symptoms cannot be attributed to another mental condition, such as obsessive-compulsive disorder or post-traumatic stress disorder.
Social Phobia

- A. A 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 embarrassing and humiliating.
- B. Exposure to the feared situation almost invariably provokes anxiety, which may take the form of a situationally bound or situationally pre-disposed Panic Attack.
- C. The person recognizes that this fear is unreasonable or excessive.
- D. The feared situations are avoided or else are endured with intense anxiety and 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, or there is marked distress about having the phobia.
- F. The fear, anxiety, or avoidance is persistent, typically lasting 6 or more months.
- G. The fear or avoidance is not due to direct physiological effects of a substance (e.g., drugs, medications) or a general medical condition not better accounted for by another mental disorder...
Panic Disorders

• Panic Disorder (includes previous diagnoses of Panic Disorder with Agoraphobia and Panic Disorder without Agoraphobia)

• A. Recurrent unexpected panic attacks
• B. At least one of the attacks has been followed by 1 month (or more) of one or both of the following:

• 1. Persistent concern or worry about additional panic attacks or their consequences (e.g., losing control, having a heart attack, going crazy).
• 2. Significant maladaptive change in behavior related to the attacks (e.g., behaviors designed to avoid having panic attacks, such as avoidance of exercise or unfamiliar situations).
• C. The Panic Attacks are not restricted to the direct physiological effects of a substance (e.g., a drug of abuse, a medication) or a general medical condition (e.g., hyperthyroidism, cardiopulmonary disorders).

• D. The Panic Attacks are not restricted to the symptoms of another mental disorder, such as Social Phobia (e.g., in response to feared social situations), Specific Phobia (e.g., in response to a circumscribed phobic object or situation), Obsessive-Compulsive Disorder (e.g., in response to dirt in someone with an obsession about contamination), Posttraumatic Stress Disorder (e.g., in response to stimuli associated with a traumatic event), or Separation Anxiety Disorder (e.g., in response to being away from home or close relatives).

Agoraphobia

An anxiety disorder, affects around 1.8 million adults in the USA. It can manifest in symptoms of distress and panic, disrupting sufferers’ everyday lives.

• Marked and disproportionate fear when confronted with at least two different situations, such as open spaces, public transport or crowded areas

• An immediate anxiety response such as a panic attack when exposed to the phobic stimulus

• Recognition of the fear as disproportionate

• Avoidance behaviors, distress or anticipatory anxiety that significantly disrupts normal routine, relationships, occupational or social activities

• Symptoms recorded for at least six months across all age groups

• No other underlying condition that may explain the symptoms
Generalized Anxiety disorder

- The presence of excessive anxiety and worry about a variety of topics, events, or activities for a minimum of 6 months
- The worry is experienced as very challenging to control
- The anxiety and worry are associated with at least three of the following physical or cognitive symptoms
  - Edginess or restlessness
  - Tiring easily; more fatigued than usual
  - Impaired concentration or feeling as though the mind goes blank
  - Irritability (which may or may not be observable to others)
  - Increased muscle aches or soreness
  - Difficulty sleeping (due to trouble falling asleep or staying asleep, restlessness at night, or unsatisfying sleep)

- The anxiety, worry, or associated symptoms make it hard to carry out day-to-day activities and responsibilities. They may cause problems in relationship, at work, or in other important areas.
- These symptoms are unrelated to any other medical conditions and cannot be explained by the effect of substances including a prescription medication, alcohol, or recreational drugs.
- These symptoms are not better explained by a different mental disorder
Anxiety disorder due to a medical condition

Symptoms of intense anxiety or panic that are directly caused by a physical health problem
- Heart disease
- Diabetes
- Thyroid problems, such as hyperthyroidism
- Respiratory disorders, such as chronic obstructive pulmonary disease (COPD) and asthma
- Chronic pain
- Irritable bowel syndrome
- Rare tumors that produce certain "fight-or-flight" hormones

Substance-induced anxiety disorder

- Symptoms of intense anxiety or panic that are a direct result of abusing drugs, taking medications, being exposed to a toxic substance or withdrawal from drugs
  - Alcohol,
  - Withdrawal from anti-anxiety medications (benzodiazepines)
  - Cocaine abuse and withdrawal
Other specified anxiety disorder and unspecified anxiety disorder

- Anxiety or phobias that don't meet the exact criteria for any other anxiety disorders but are significant enough to be distressing and disruptive.

Treatment
Medication

• SSRIs relieve symptoms by blocking the reabsorption, or reuptake, of serotonin by certain nerve cells in the brain. Citalopram, escitalopram, fluoxetine, paroxetine, and sertraline, common side effects include insomnia or sleepiness, sexual dysfunction, and weight gain.

• Serotonin-Norepinephrine Reuptake Inhibitors (SNRI- venlafaxine and duloxetine) is notable for a dual mechanism of action: increasing the levels of the neurotransmitters serotonin and norepinephrine by inhibiting their reabsorption into cells in the brain. Side effects may occur, including stomach upset, insomnia, headache, sexual dysfunction, and minor increase in blood pressure.

• Benzodiazepines (alprazolam, clonazepam, diazepam, and lorazepam) are highly effective in short-term management of anxiety. It promotes relaxation and reducing muscular tension and other physical symptoms of anxiety. Long-term use may require increased doses to achieve the same effect, which may lead to problems related to tolerance and dependence.

• Tricyclic Antidepressants
Concerns about long-term use of the benzodiazepines led many doctors to favor tricyclic antidepressants (amitriptyline, imipramine, and nortriptyline). Although effective in the treatment of anxiety, they can cause significant side effects, including orthostatic hypotension (drop in blood pressure on standing), constipation, urinary retention, dry mouth, and blurry vision.

• Ketamine
Clinical trials have shown that ketamine can lift depression in hours, or even minutes, much faster than the most commonly used antidepressant medications available today; they often take weeks to take effect. Also, the antidepressant effects of a single dose of ketamine can last for a week or longer. But it also has properties that make it a potential drug of abuse, which limits its usefulness as a depression medication.
Off label use

- Remeron – Mirtazapine works by blocking receptors called alpha-2 receptors, increases noradrenaline and serotonin levels
- Buspar – Buspirone is serotonergic agonist
- Vistaril – hydroxyzine is antihistamine
- Neurontin – Gabapentin is antiepileptic
- Seroquel – Quetiapine is atypical antipsychotic

Therapy

- Cognitive-Behavioral Therapy (CBT)
- Acceptance and Commitment Therapy (ACT)
- Interpersonal Therapy (IPT)
- Dialectical Behavioral Therapy (DBT)
- Eye Movement Desensitization and Reprocessing (EMDR)
- Mindfulness
- Yoga
- Osteopathic manipulative treatment shows significant decrease in self perceived fatigue and distress in first year medical students.
References