Anxiety Disorders
Bob Boland MD

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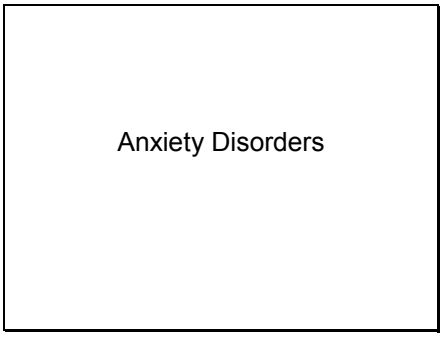

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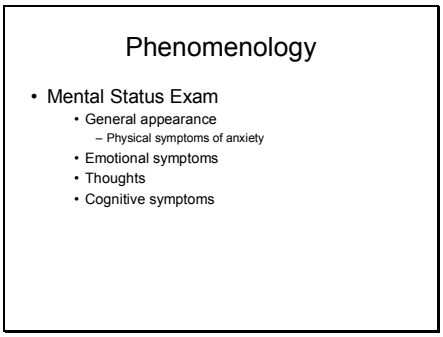

General: Various physical manifestations: restless-appearing, psychomotor agitation, shortness of breath, hyperventilation, stomach upset, chest pain, diaphoresis. May be ill kempt, or meticulously groomed (OCD). May display odd, ritualistic behaviors.

Emotional

Mood: Anxious, fearful

Affect Frightened-appearing, can be very intense

Thought

Process Can involve obsessive, perseverative thoughts

Content: Delusions, hallucinations are rare, but can occur in extreme conditions (ex. PTSD).

Cognitive symptoms: A moderate amount of anxiety can actually be good for attention and concentration, however too much tends to make on too distracted to optimally perform cognitive tasks.

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Phenomenology

- Anxiety as Warning Signal
  - What really sets it off?

One way to think of anxiety is as a warning signal, telling us of potential danger or harmful situations.

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Focus: Panic Disorder

With all the major disorders, we are going to choose one archetypal disorder and concentrate on that. We can then discuss the other disorders as they compare to this disorder.

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Epidemiology

- Overall Anxiety: Most prevalent of psychiatric disorders.
- Panic: 1.5 to 3.5%
- Onset: mid 20's
- Gender

Anxiety disorders are the most prevalent of psychiatric disorders. Community samples have shown surprisingly high lifetime prevalence. The ECA study demonstrated the following lifetime prevalence:

Anxiety Disorders Overall: 15%
Generalized anxiety disorder: 8.5%
Phobias: 12.5%
Panic disorder: 1.6%
OCD: 2.5%

Similar rates were found by the National Comorbidity Survey, which demonstrated the following lifetime prevalence:
Any anxiety disorder: 25%
Generalized anxiety disorder: 5%
Agoraphobia without panic: 5%
Social phobia: 13%
Panic disorder: 3.5%

Additionally, one-month prevalence rates were determined by the ECA study as follows:
All anxiety disorders: 7.3%, distributed fairly equally across age groups though somewhat lower in 65+
Phobias: 6%, distributed fairly equally across age groups, but women tended to have higher in young adulthood
Panic: 0.5% overall, distributed fairly equally across age groups, but women tended to have higher in young adulthood

OCD: 1.3% overall, tended to have higher in late adolescence and young adulthood

Clinical samples have shown anxiety disorders to be a very common reason for presentation to primary care doctors, ER, etc. In terms of gender effects, anxiety disorders seem more common in women. They may decrease with age, and can present differently at different ages. In children, an anxiety disorder can manifest as separation anxiety ("school phobia"). Elderly patients may tend towards somatic presentations ("stomach problems," headaches, sleep problems).

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Pathology/Physiology

- Focuses of research
  - Precipitators of panic
  - lactic acid, infusion, carbon dioxide inhalation
- Neurotransmitters
  - Catecholamines
  - GABA

The key neurotransmitters seem to be **catecholamine** ("fight or flight reaction") and **serotonin** modulation. In addition, the **GABA receptor**, the primary inhibitory transmitter in the brain, plays an important role in the modulation of arousal and anxiety. Specific structures important in the etiology of anxiety disorders include the **Reticular Activation System (RAS)** and the so-called **"suffocation response."** The **locus coeruleus** (site of noradrenergic neurons), **raphe nucleus** (site of serotonergic neurons), caudate nucleus (particularly in OCD), temporal cortex, and frontal cortex are brain areas likely to be involved in anxiety disorders.
Cortical modulation plays an important role; key to this is the role of learning (classical and operant conditioning), as well as the role of stress, conflict and neuroses (psychoanalytic theory).

Diagnostic tests have been used to explore the pathogenesis of anxiety disorders. For example, **lactic acid infusion** and **carbon dioxide inhalation** bring out panic disorder. This, along with some tentative data, gives some credence to the suggestion that panic disorder is a "suffocation response" gone awry.

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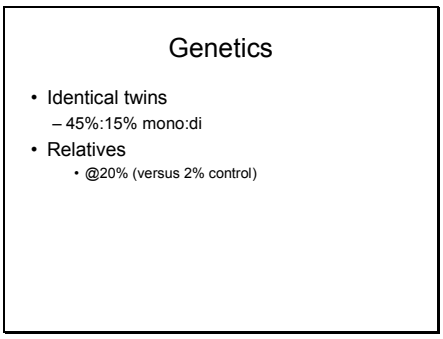

Genetic influences are a factor. There is a high incidence of anxiety disorders passed to subsequent generations, as evidenced by family studies. In these studies, generally all the disorders are more common in first-degree relatives of affected individuals than the general public. Panic disorder has a 4-7X greater incidence in first-degree relatives. Specific phobias may aggregate by type within families. In addition, twin studies show strong genetic contribution to Panic Disorder. For example, in OCD concordance is higher for monozygotic than dizygotic twins.

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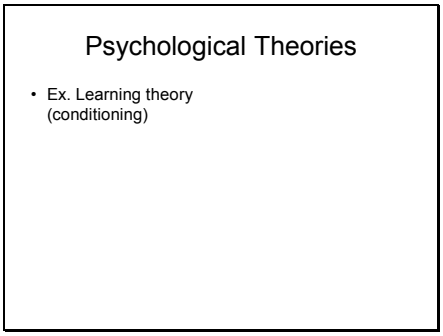

Classical psychoanalytic theories focused on anxiety as warning of some inner conflict or struggle. For example, Freud, in his discussions of such cases as Little Hans, interpreted Hans external fears (ex. of a horse) as actually being a “stand-in” of sorts for more central conflicts (with father).

In reality, a certain amount of anxiety—ex. separation anxiety, fear of strangers, certain phobias, represent normal developmental stages or parts of childhood development, and should always be interpreted as pathological.

More modern theories tend to look at anxiety from a behavioral standpoint, seeing anxiety as a learned, or “conditioned” phenomenon.

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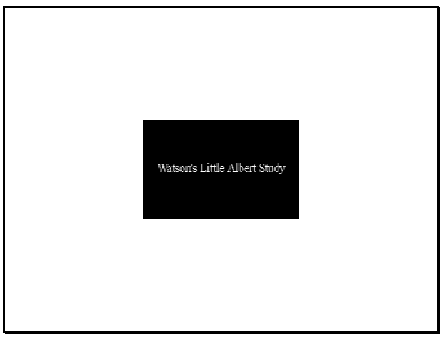

For example, John B. Watson in his experiment with Little Albert, an 11 month old baby, studied how emotions are learned. He presented **(A)** a white rat (CS) and **(B)** a loud noise (US) to Little Albert. After several pairings, Albert showed fear (CR) of the white rat. Later, Albert generalized the fear to stimuli that were similar to CS, such as **(C)** a beard.

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DSM-IV Diagnosis

- Syndrome versus Diagnosis
  - Panic Attacks, Agoraphobia
  - Panic Disorder

DSM stands for the Diagnostic and Statistical Manual of Mental Disorders. Essentially it is the list of all the accepted diagnoses in psychiatry. Some think of it as a Bible, others more as a cookbook.

Currently it is in 1st fourth edition, published 1994, and it underwent a text revision in 2000 which clarified some of the wordings and such, but did not make any substantial revisions. DSM-V is currently being written (begun around 2006) and it planned for release in 2010.

In DSM-IV, there is some attempt to distinguish syndromes from disorders. Panic attacks are a syndrome, that is they are a collection of symptoms, which are not themselves a disease, but part of one. They could have multiple causes, some pathological, some not.

Panic disorder represents a disease that is characterized by panic attacks.

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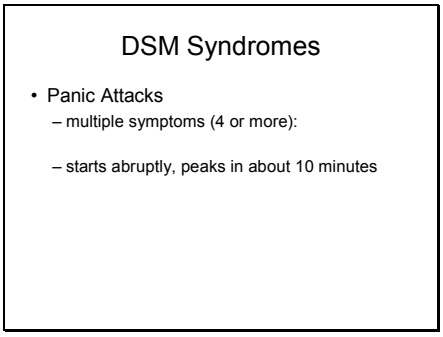

Panic attacks are defined by the presence of multiple symptoms, that start abruptly. In general panic attacks are short lived, rarely lasting for more than 20 minutes. People who report longer periods of panic attacks (ex. some patients have told me they get them for days on end) are most likely using the work in a generic sense to describe anxiety, but not true panic.

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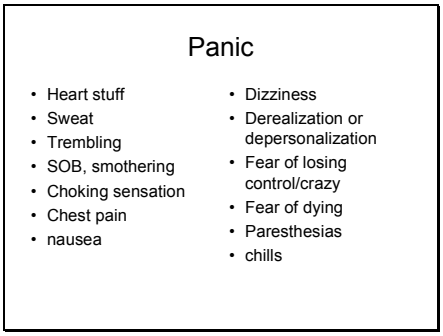

These are the symptoms of a panic attack. Again, you have to have 4 or more to qualify.

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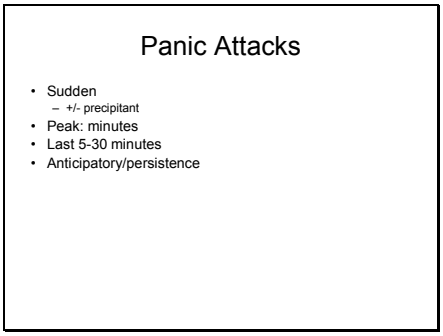

This slide stresses the time course of a panic attack.

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DSM Syndromes

- Agoraphobia
  - fear/avoidance of places/situations.
    - fear panic attack.

AGORAPHOBIA: Anxiety about being a place or situation from which either escape is difficult or embarrassing, or if a panic attack occurred, help might not be available. The situation is avoided (restricting travel), or Is endured, but with marked distress or anxiety about having a panic attack, or requires a companion.

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DSM Diagnosis

- Panic Disorder, with and without Agoraphobia
  - recurrent Panic Attacks
  - anticipatory anxiety
  - "Global Criteria".
  - Can be with or without Agoraphobia.

This is the criteria for Panic Disorder. Again, this one is a disease, not a syndrome (as is Panic Attacks).

Panic disorder is defined as recurrent unexpected panic attacks. At least two unexpected panic attacks are required for the disorder, but individual generally have many more.

At least 1 attack has been followed by 1 month+ of anticipatory anxiety: concern about having additional attacks, worry about the implications or consequences of the attack.

There also has to be a significant change in behavior relating to the attack. This criteria is essential to most psychiatric disorder, that there has to be a deleterious change in functioning, either social or occupational, as a result of the disorder

Panic Disorder may or may not include Agoraphobia.

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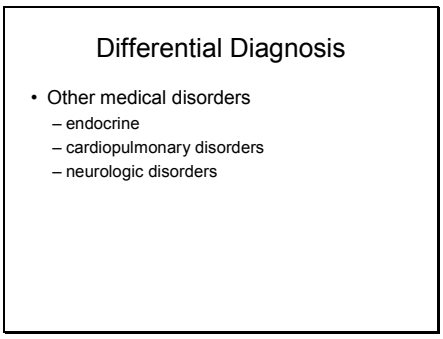

Important medical disorders that should be considered in the differential for anxiety disorders include **endocrine disorders**, **cardiopulmonary disorders**, and **neurological disorders**. Some specific organic causes of symptoms of anxiety include excessive caffeine intake, hyperthyroidism, vitamin B12 deficiency, hypo- or hyperglycemia, cardiac arrhythmias, anemia, pulmonary disease, and pheochromocytoma (an adrenal medullary tumor).

Adjustment disorder often must be distinguished from post-traumatic stress disorder. Adjustment disorder is characterized by emotional symptoms (e.g. anxiety, depression, conduct problems) that cause social, school, or work impairment occurring within 3 months and lasting less than 6 months after a serious (but usually not life-threatening) life event (e.g. divorce, bankruptcy, changing residence). Generally, adjustments disorders are understandable, even seemingly "normal" reactions to unusual circumstances. PTSD is an abnormal reaction to an abnormal trauma, and though the reaction may be understandable, it is grossly maladaptive.

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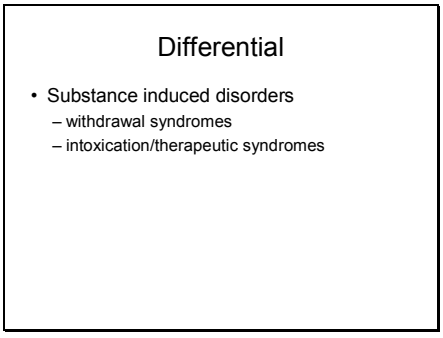

Substance-induced disorders mistaken for anxiety disorders include *withdrawal syndromes* (alcohol or tranquilizers), and *intoxication/therapeutic syndromes* (stimulants or others).

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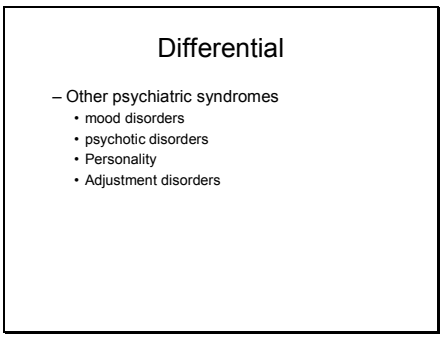

Other psychiatric syndromes in the differential include mood disorders (anxiety can be misdiagnosed as, or comorbid with depression), psychotic disorders, sleep disorders, somatoform disorders, and eating disorders.

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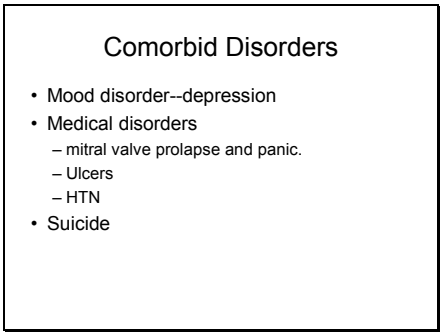

Commonly, mood disorders like depression can present comorbidly with anxiety, bringing to question genetic linkage or different forms of the same disorder. Some medical disorders are commonly comorbid with anxiety disorders: for example, mitral valve prolapse and Panic Disorder.

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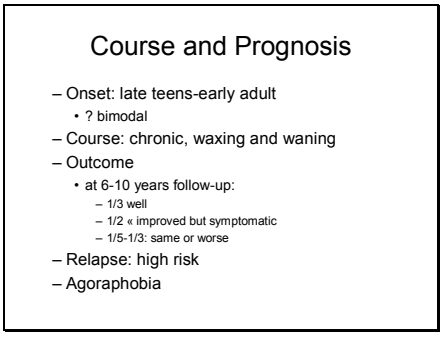

Most anxiety disorders tend to be chronic disorders. **Panic disorder** tends to present in late adolescence to early adulthood. It has perhaps a bimodal distribution (late adolescence and mid-30's). It can be chronic, but waxing and waning. At 6-10 years follow-up, 1/3 patients appear to be well, about 1/2 have improved but are still symptomatic, and 1/5 – 1/3 feel the same or worse. There is a high risk of relapse after (somatic) treatment. **Agoraphobia** may or may not improve if panic improves; it can become a "learned behavior."

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This is a brief tour of other psychiatric anxiety diagnoses and how they differ from Panic Disorder.

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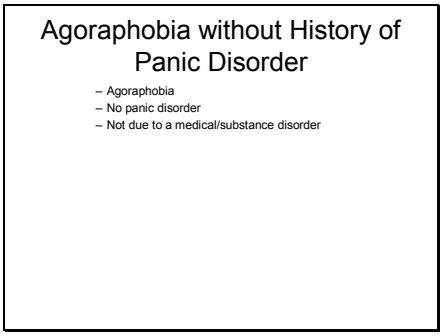

Agoraphobia can occur without panic.

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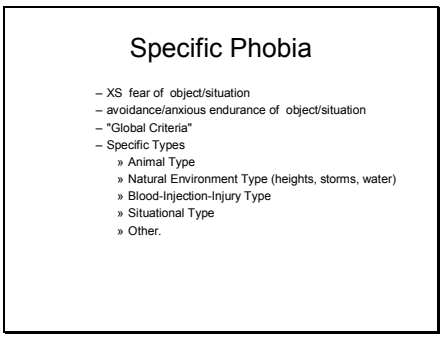

Specific phobia refers to a syndrome of fear/anxiety of an object or situation.

DSM defines it as: “Marked persistent fear that is excessive or unreasonable, cued by the presence or anticipation of a specific object or situation. The phobic stimulus almost invariably provokes an immediate anxiety response. The fear is recognized as excessive or unreasonable (not needed in children). The phobic stimulus is avoided or endured with intense anxiety or distress.

Persons under age 18 must have the symptoms for 6 months+.

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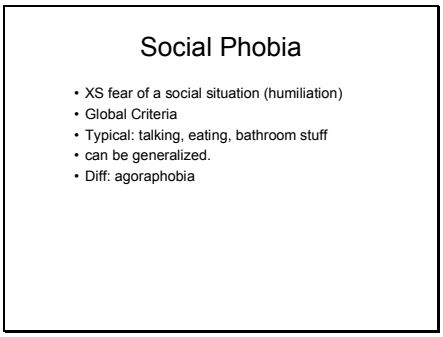

Social phobia is defines as “marked and persistent fear of one or more social or performance situations. The fear is of possible humiliation or embarrassment. The phobic stimulus almost always causes anxiety. The fear is recognized as excessive or unreasonable. The feared situation is avoided or endured with intense distress or anxiety.

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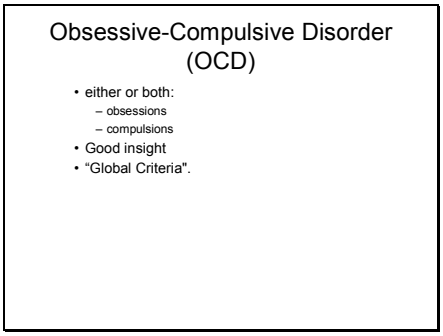

OCD was already covered in a separate lecture. It is defined as:

Either obsessions or compulsions:
Obsessions: Recurrent, persistent thoughts or impulses, experiences (sometimes) as intrusive and inappropriate, and cause distress. The thoughts aren’t realistic worries about real problems. Person tries to ignore or suppress the obsessions. The obsessive thoughts are recognized as such.
Compulsions: Repetitive behaviors or mental acts that are done in response to an obsession. The behaviors are meant to reduce distress, or prevent a feared event, but are not realistic.

At some point, the person had good insight into the unrealistic nature of these.

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Posttraumatic Stress Disorder (PTSD)

- After trauma: 3 types of symptoms
  - re-experiencing trauma
  - Avoidance/numbing
  - Arousal
- Global Criteria.
- Timing
  - Acute (< 3 months) versus chronic.
  - requires more than 1 month of symptoms

Post Traumatic Stress disorder is an anxiety disorder caused by a specific stress or trauma.

DSM Defines is thus:

The person experienced/witnessed/was confronted by an unusually traumatic event, which:
-Involved actual or threatened death/serious injury to the person or other, and
-Caused intense fear, horror or helplessness

The event is reexperienced through (1 or more of following):
-Intrusive, recurrent recollections
-Recurrent nightmares
-Flashbacks
-Intense distress in reaction to internal or external cues symbolizing/resembling the event
-Physiological reactivity in response to these cues

Avoidance of the stimuli and numbing of general responsiveness shown by (3+):
-Efforts to avoid thoughts, feelings or conversations about the trauma
-Efforts to avoid activities, people or places associated with the event
-Inability to recall important aspects of the event
-Loss of interest/participation in significant activities
-Feeling of detachment or estrangement from others
-Restricted range of affect
-Sense of foreshortened future

Persistent symptoms of hyperarousal:
-Insomnia
-Irritability
-Difficulty concentrating
-Hypervigilance
-Exaggerated startle response

The above symptoms have lasted longer than one month.

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Acute Stress Disorder

- Like PTSD, but less than 1 month.

Acute Stress Disorder is like PTSD, but less than 1 month.

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Generalized Anxiety Disorder (GAD)

- "Always anxious."
- Excessive worry ≥ 6 months.
- Associated with (≥ 3)
  - restlessness
  - fatigueability
  - difficulty concentrating
  - irritability
  - muscle tension
  - insomnia

Generalized anxiety disorder describes a disorder of chronic and persistent anxiety. These people often describe themselves as always nervous or anxious.

DSM defines is as “excessive anxiety and worry occurring more days than not for at least 6 months, in regard to work, school or other activities. It is difficult to control these worries.

The anxiety and worry are associated with 3+ of the following:
-Restlessness, or feeling keyed up
-Easy fatigue
-Difficulty concentrating
-Irritability
-Muscle tension
-Insomnia or restless, unrefreshing sleep

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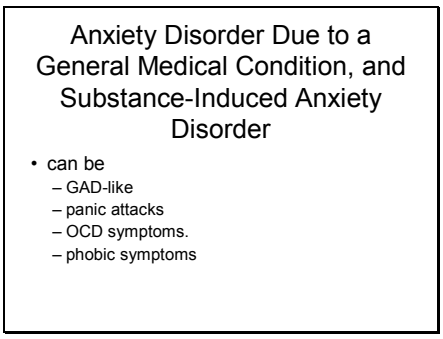

Anxiety Disorder Due to a General Medical Condition and **Substance-Induced Anxiety Disorder** can demonstrate as generalized anxiety, panic attacks, OCD symptoms, or phobic symptoms in the case of substances.

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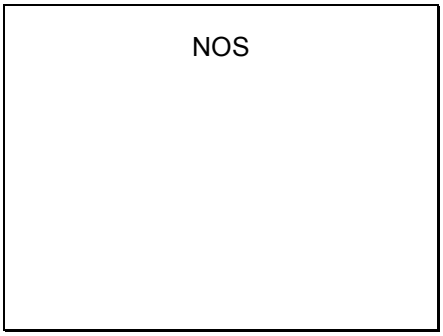

In addition as with many psych disorders, there is **Anxiety Disorder Not Otherwise Specified (NOS)** which is a "wastebasket diagnosis" for anxiety symptoms not meeting the criteria for any specific disorder. It is generally reserved as a provisional diagnosis, or in cases where a disorder seems to cause harm at the level of a psych disorder, but truly not describable by existing nosology. Generally its best to avoid this except as a provisional diagnosis.