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Anxiety Disorders: General

- Quotes (imperfect and with caveats, but useful to think about)
  - "Fear of trying causes paralysis. Trying causes only trembling and sweating"; Mason Cooley
    - Avoidance is self-perpetuating
  - "While I was fearing it, it came, but came with less of fear…'Tis harder knowing it is due, than knowing it is here"; Emily Dickinson
  - "He who fears he shall suffer already suffers what he fears"; Michel de Montaigne
- History of anxiety (from Joseph LeDoux's "Anxiety")
  - The word "anxiety" comes from the Latin "anxietas", with roots in the ancient Greek "angh"
  - "Angh" referred at times to burdened or troubled, though it was primarily used to describe physical symptoms of distress such as tightness, constriction, or discomfort
  - Freud distinguishes "angst" (anxiety) from "furcht" (fear)
    - To him, anxiety relates to the state itself, disconnected from the object that elicits it
      - A state of expecting or preparing for or dreading danger, even though the actual source of harm may be unknown
      - Aka, basically, "signal anxiety", which is objectless and involves a more diffuse or uncertain feeling that harm may come in the future
    - Fear is connected to the object that triggers the anxiety
      - Requires a definite object (or subject) of which to be afraid
      - Aka, basically, "primary anxiety"
  - Kierkegaard
    - Anxiety (dread) caused by "nothingness", the despair that comes from the realization that we are not grounded in the world and are defined only by the practices in which we engage
    - Experiencing anxiety is essential for a successful life: "whoever is educated by anxiety is educated by possibility"
    - There is indeed an optimal relation between cognition and anxiety in performing life's tasks; with too little one is less motivated, but with too much comes impairment; Barlow emphasizes that.
  - LeDoux
    - Anxiety results when a threat is possible but its occurrence is uncertain
    - Fear states occur when a threat is present or imminent
    - It is likely impossible to feel fear without also being anxious

Table 1.1: Similarities Between Fear and Anxiety

Presence or anticipation of danger or discomfort
Tense apprehensiveness and uneasiness
Elevated arousal
Negative affect
Accompanied by bodily sensations

Based on Table 1.1 in Rachman (2004)

Table 1.2: Differences Between Fear and Anxiety

	FEAR	ANXIETY
Threat is present and identifiable	yes	no
Evoked by specific cues	yes	no
Connection to threat is reasonable	yes	no
Usually episodic (specific onset and offset)	yes	no
Overall quality of an emergency	yes	no
Overall quality of sustained vigilance	no	yes

Based on Table 1.2 in Rachman (2004) and Table 1.2 in Zeidner and Matthews (2011)

Table 1.3: Everyday vs. Pathological Fear and Anxiety

EVERYDAY ANXIETY	ANXIETY DISORDER
Worry about paying bills, landing a job, or other important life events	Constant and unsubstantiated worry that causes significant distress and interferes with daily life
Embarrassment or self-consciousness in an uncomfortable or awkward social situation	Avoiding social situations for fear of being judged, embarrassed, or humiliated
A case of nerves or sweating before a big test, business presentation, stage performance, or other significant event	Seemingly out-of-the-blue panic attacks and the preoccupation with the fear of having another one
Worry about an actual dangerous object, place, or situation	Irrational worry about and avoidance of an object, place, or situation that poses little or no threat of harm
Making sure that you are healthy and living in a safe, hazard-free environment	Performing uncontrollable repetitive actions such as excessive cleaning or checking, or touching and arranging
Anxiety, sadness, or difficulty sleeping immediately after a traumatic event	Recurring nightmares, flashbacks, or emotional numbing related to a traumatic event that occurred several months or years before

Based on http://www.adaa.org/understanding-anxiety

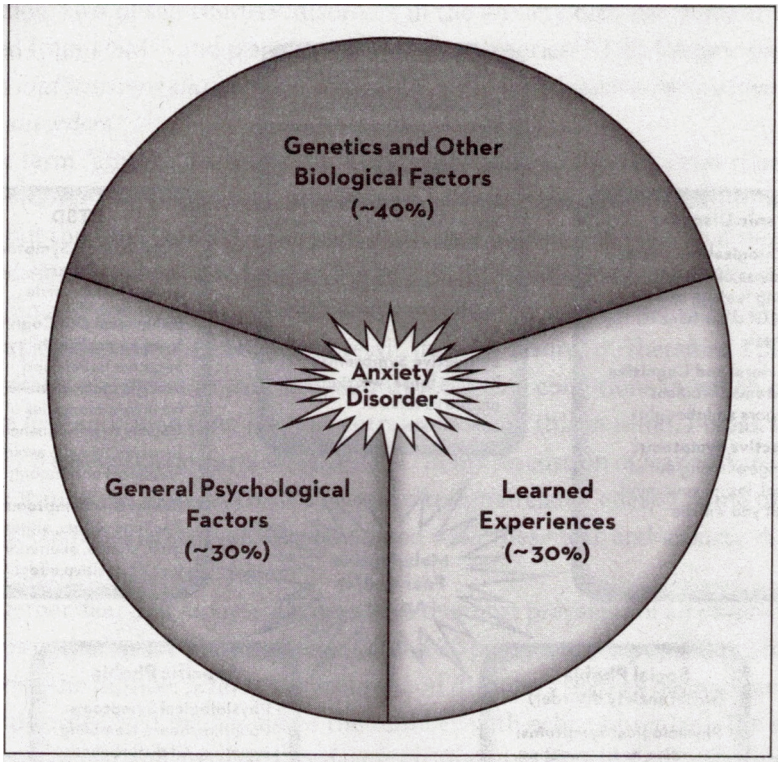

Figure 1.6: Vulnerability to Pathological Anxiety.

(Based on Barlow [2003].)

- Anxiety is contagious
    - Parental attention to the anxious child
    - Parental support for avoidance
        - "Too big to fail"; facilitation of avoidance by accommodation
        - Anxious anticipation of upcoming events
        - Increased attentional focus on threat cues
        - Overprotection leads to lack of corrective experience, decreased ability to self-regulate and learn from mistakes
        - Interaction of overprotection and avoidance results in stalled developmental tasks
    - Catastrophic reactions shape relationships

- Core aspects of anxiety
  - Hypervigilance
  - Reactive to novel stimuli (triggered)
  - Threat bias

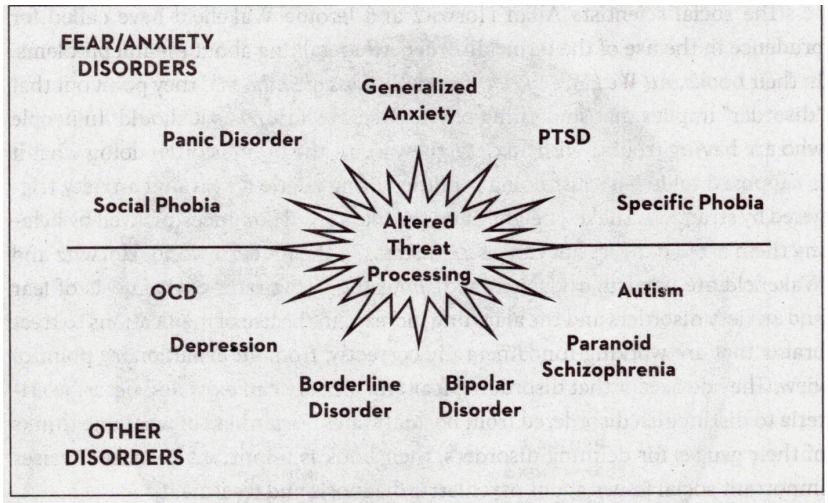

Figure 1.7: Alterations of Threat Processing Occur in Many Psychiatric Disorders.

  - Avoidance coping
  - Catastrophic reactions
  - Parental accommodation, overprotection
  - Mid-line physical symptoms

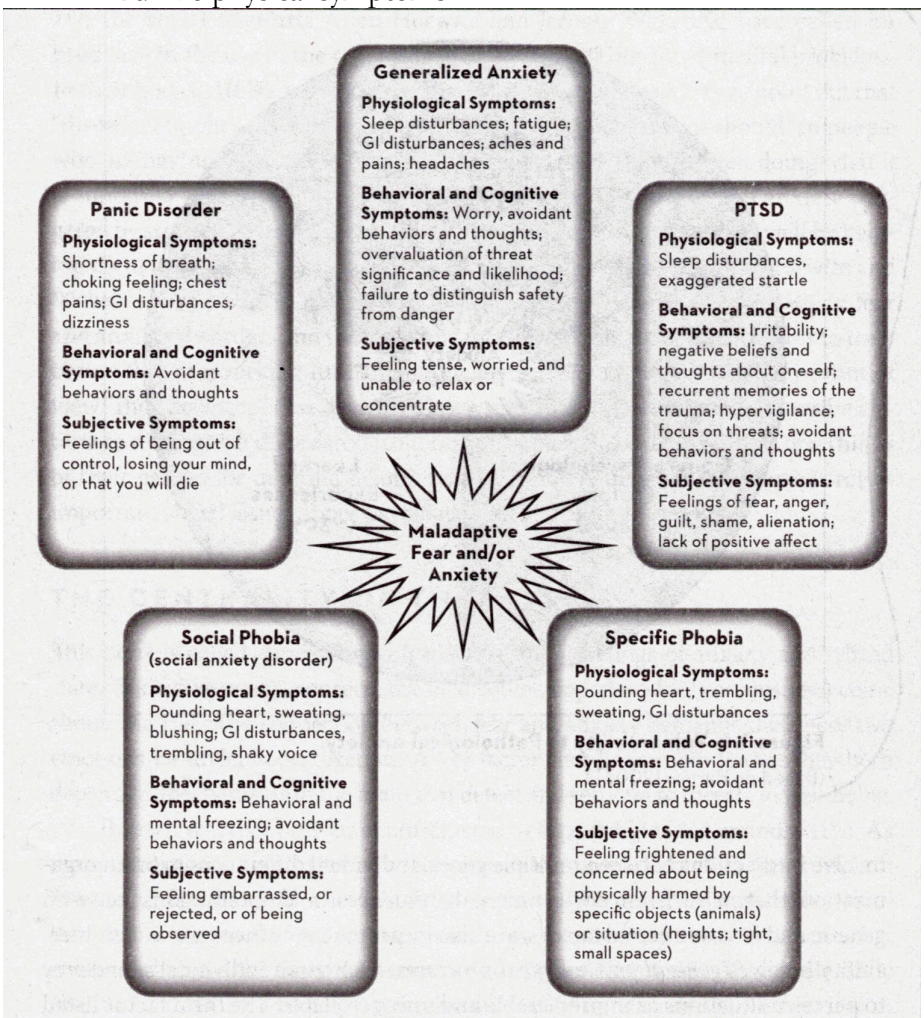

Figure 1.5: Major Symptoms of Fear / Anxiety Disorders.

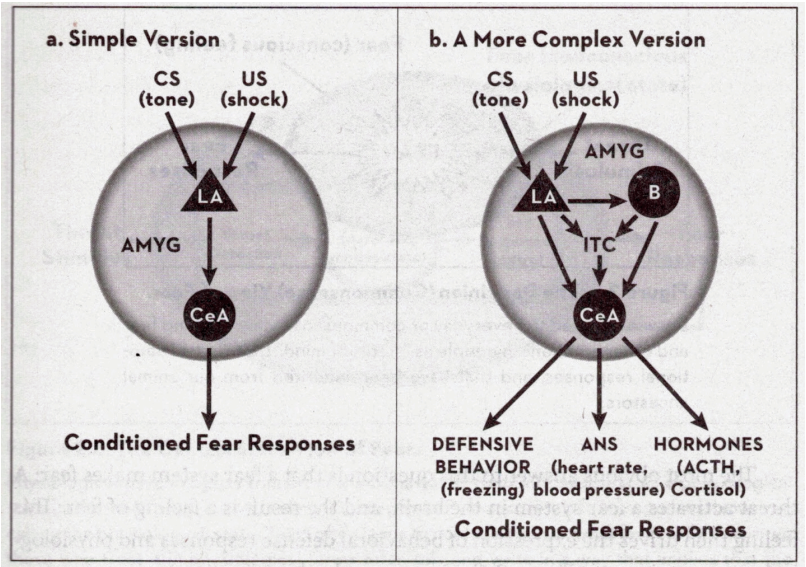

Figure 2.3: Fear Conditioning: The Circuit.

a. The Simple Version. The basic circuitry underlying the acquisition and expression of fear (threat) conditioning involves conditioned stimulus (CS) and unconditioned stimulus (US) sensory transmission to the lateral nucleus of the amygdala (LA), where a CS-US association is learned and stored. LA communicates with the central nucleus of the amygdala (CeA), which then connects with areas that control conditioned fear responses. **b. A Slightly More Complex Version.** The LA connects with the CeA directly and by way of other amygdala areas, such as the basal nucleus (BA) and intercalated cells (ITC). CeA then connects with downstream targets that separately control freezing, autonomic nervous system (ANS), and hormonal conditioned responses. Additional details are described in Chapters 4 and 11.

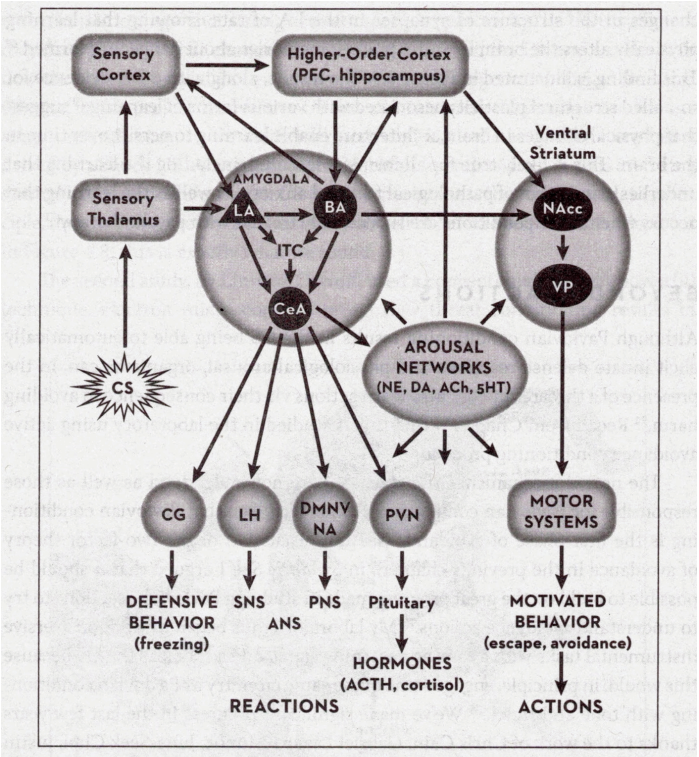

Figure 4.10: Defensive Action Circuitry Builds upon Pavlovian Reaction Circuitry.

The action circuitry is an extension of the reaction circuitry shown in Figure 4.5. The main difference is the connection from the basal amygdala (BA) to the NAcc of the ventral striatum, which allows the emission of actions under motivational influences signaled by information from the BA. For other abbreviations, see Figure 4.5.

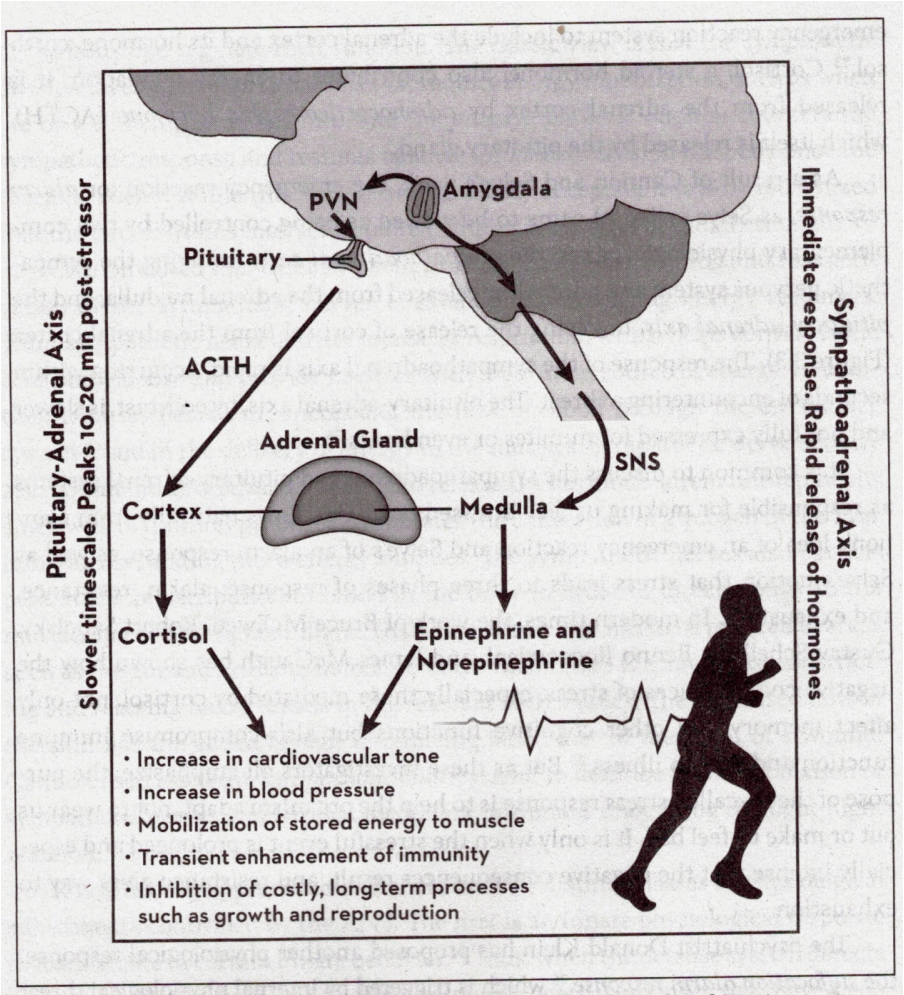

Figure 3.3: Endocrine Support of Defense: Sympathoadrenal and Pituitary-Adrenal Systems.

The sympathoadrenal system (also known as the fight-flight system) and the pituitary-adrenal system are both responsive to threat processing by the amygdala. The sympathoadrenal system involves nerves from the sympathetic nervous system (SNS) that terminate on various target organs and tissues, including the adrenal medulla. SNS activation of the adrenal medulla releases epinephrine and norepinephrine into the bloodstream, allowing these hormones to influence many of the same organs and tissues affected by the nerves of the SNS (see Figure 3.2). Hormones of the adrenal medulla do not cross the blood-brain barrier and have to affect the brain indirectly. The pituitary-adrenal system involves the paraventricular hypothalamus (PVN), connections to the pituitary gland, and the release of adrenocorticotropin hormone (ACTH) into the bloodstream. ACTH then binds to receptors in the adrenal cortex to release cortisol, which, in turn, is distributed to many sites within the body and within the brain as well.

(BASED ON RODRIGUES ET AL [2009].)

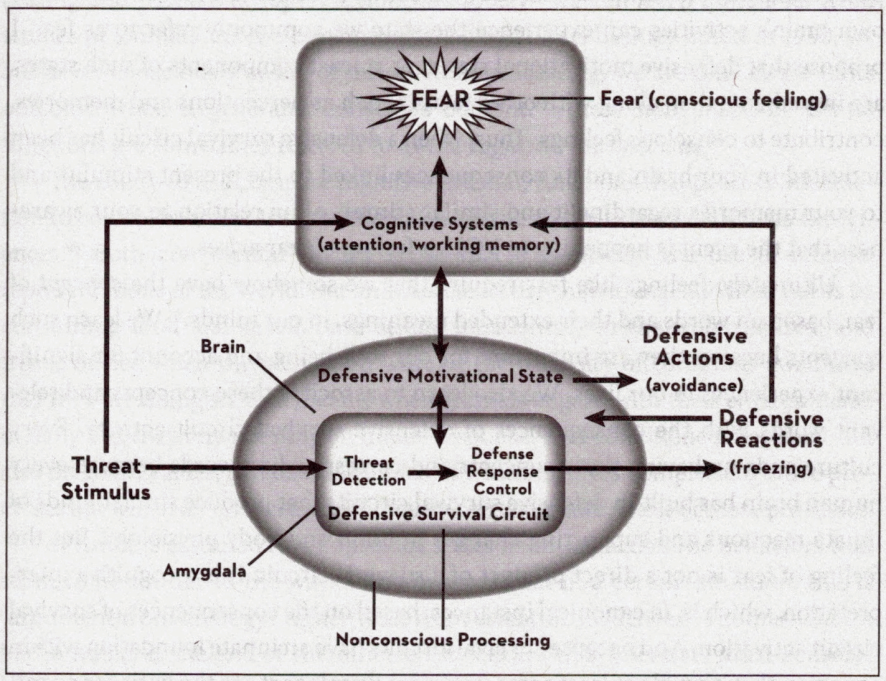

Figure 2.7: The Survival Circuit View of Fear and Defensive Motivation.

Because my traditional view of the fear system (Figure 2.6) was often misconstrued as implying that the amygdala is the seat of fear in the brain, I have revised my terminology. In the current model the term *fear* is no longer used to describe functions of the amygdala. I now describe the amygdala circuit that detects and responds to threats as a *defensive survival circuit*. One consequence of survival circuit activation is the establishment of a *defensive motivational state* throughout the brain. This state is not the neural instantiation of a feeling of fear. The state (or neural components of it) provides neural ingredients that when cognitively interpreted give rise to a feeling of fear. This view differs from the commonsense approach in that fear does not cause defense responses. It differs from the central state view in that both defense responses and the central state are consequences of activation of the survival circuit. While the defensive motivational state does not cause innate defensive reactions and changes in body physiology that accompany them, it does contribute to motivation of instrumental behaviors that allow the organism to act, rather than simply react, in the face of danger.

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- Prevalence
  - Adults
    - Lifetime prevalence of any anxiety disorder 14.5% (per updated analysis done in 2005); previous data suggested ~25%
      - 19% of women (per updated analysis done in 2005); previous data suggested 30.5%
      - 10% of men (per updated analysis done in 2005); previous data suggested 19.2%
    - The 12 month prevalence is 8.4% (per updated analysis done in 2005); previous data suggested prevalence 18.2%
      - 5.9% of women (per updated analysis done in 2005)
      - 3.1% of men (per updated analysis done in 2005)
    - 27.4 million Americans experience some amount of anxiety; the yearly economic cost of anxiety is $46.6 billion (calculated in 1990).
  - Children
    - Prevalence of anxiety disorders (all inclusive) in children is ~8-10%.
    - Underdiagnosed
    - Undertreated
- Co-morbidity
  - 60% of people with one anxiety disorder have at least one other anxiety disorder
  - 50% have depression
  - 57.5% of individuals with depression also have a lifetime history of anxiety disorder; in those with co-morbid anxiety and depression, anxiety precedes the depression 80% of the time. Indeed, antecedent

anxiety disorders in youth are risk factors for the subsequent onset and/or recurrence of depressive disorders.

- 51% of those with bipolar I and 45% of those with bipolar II have a lifetime history of anxiety disorder
- Personality disorders
    - Anxiety→
        - Distorted thinking patterns
        - Problematic emotional responses
        - Over- and under-regulated impulse control
        - Interpersonal difficulties

- Children and anxiety
    - Child inhibition and maternal anxiousness at age 4 predicts the development of social anxiety disorder at age 15 (Rapee, 2014)
        - 37% of inhibited pre-school children develop social anxiety disorder at age 15
        - 15% of uninhibited pre-school children develop social anxiety disorder at age 15
        - maternal anxiety and lack of inhibition at age 4 predicts other anxiety disorders (other than social anxiety disorder)
    - Many anxiety disorders in children are transient; they may go away with time or with psychotherapy.
    - When anxiety disorders are more intransigent, they can be severely impairing and distressing.
    - 58% of children with anxiety (or mood) disorders will not go on to have an anxiety disorder in adulthood (though 42% will).
    - Course
        - Onset in childhood – "prepubertal affective illness"
        - Adolescence – symptoms plus accumulated disability
            - Intense symptoms sometimes burn out
            - Generalized anxiety
            - Poor adaption and coping
            - Easily flooded and overwhelmed by typical life and developmental expectations
            - Some morph to recurrent depression
            - School drop out
        - Young adulthood – symptoms plus failure in major roles
            - Work inhibition
            - Fail to leave home or stay in college
            - Evolution into panic disorder
            - Substance abuse
    - Children of adults with anxiety disorders show an increased startle eye-blink reflex and cortisol response to stress.
    - Mean age at onset of anxiety disorders and depression

	Female	Male	Total
Any anxiety disorder	8	6	7
Generalized anxiety disorder	7	4.6	6
Specific phobias	3.6	9	6
Social phobia	7	7	7
Separation anxiety disorder	9	8	9
Agoraphobia	10.5	8	9.5
Obsessive-compulsive do	9	11	10
Overanxious disorder	10	12	11
Panic disorder	14	12	13
Unipolar depression	14	14.5	14

- General
  - Anxiety disorders respond well to appropriate psychopharmacologic interventions.
  - Under many circumstances, it is appropriate to begin a trial of cognitive behavior therapy (with an expert in that form of therapy) prior to initiating pharmacologic treatment or other forms of psychotherapy.
  - Rates of remission continue to increase through at least 6 months into treatment; remission is more delayed when initial symptoms are severe.
  - 60-80% of clients relapse within 1st year after stopping treatment; full relapse in ~25% of clients 1 month after stopping treatment.
  - The development of major depressive disorder is 3-4 times more likely in those with anxiety disorder.
  - In patients with persistent stomach upset (dyspepsia) in the absence of medical etiology, gastric sensitivity and compliance are associated with state anxiety symptom scores in visceral hypersensitivity.
  - Cognitive distortions seen in depression and anxiety
    - All-or-nothing, black-or-white thinking—if your performance falls short of perfect, you see yourself as a total failure
    - Overgeneralization—you see a negative event as a never-ending pattern
    - Labeling and mislabeling—this is an extreme form of overgeneralization. Instead of describing your error, you attach a negative label to yourself: "I'm a loser." When someone else's behavior rubs you the wrong way, you attach a negative label to him/her: "s/he's a louse." Mislabeling involves describing an event with language that is highly colored and emotionally loaded.
    - Mental filter—you pick a single negative detail and dwell on it exclusively, so that your vision of all reality becomes darkened, like the drop of ink that discolors the entire beaker of water
    - Jumping to conclusions—you make a negative interpretation even though there are no definite facts that convincingly support your conclusion
    - Mind reading—you arbitrarily conclude that someone is reacting negatively to you, and you don't bother to check this out
    - The fortune-teller error—you anticipate that things will turn out badly, and you feel convinced that your prediction is an already established fact
    - The binocular trick
      - Magnification—you exaggerate the importance of things (such as your goof-up or someone else's achievement)
      - Minimization/disqualifying the positive—you inappropriately shrink things until they appear tiny (your own desirable qualities or the other person's imperfections); you reject positive experience by insisting they "don't count" for some reason or another
    - Catastrophizing—you attribute extreme and horrible consequences to the outcomes of events. A turndown for a date means a life of utter isolation. Making a mistake at work means being fired for incompetence and never getting another job
    - Emotional reasoning—you assume that your negative emotions necessarily reflect the way things really are: "I feel it, therefore it must be true"
    - "Should" statements—you try to motivate yourself with "shoulds" and "shouldn'ts" as if you need to be whipped and punished before you could be expected to do anything. "Musts" and "oughts" are also offenders. The emotional consequence is guilt. When you direct "should" statements towards others, you feel anger, frustration and resentment.
    - Personalization—you see negative events as indicative of some negative characteristic of yourself or you take responsibility for events that were not your doing.
  - CAMS and Child/Adolescent Anxiety Multimodal Extended Long-Term Treatment Study (CAMELS): year 1 results
    - CAMS
      - CBT vs. Zoloft vs. CBT+Zoloft vs. placebo (see info packet on SSRI's)
    - ½ of sample (46%) in remission (52% of initial responders in remission)
    - Relapse rates high
    - Acute treatment type unrelated to long-term outcomes

        - Predictors of remission
            - Male
            - Higher SES
            - Lower baselines anxiety
            - Not having an externalizing disorder at baseline like ADHD or ODD
            - Better family functioning
            - Fewer negative life events
    - Costello and Maughin, 2015
        - Youth (Costello and Maughin, 2015)
        - Recovery in half of all youth cases
        - 50% with poor adult functioning
        - Family systems issues increase recurrence risk
        - Comorbidities increase recurrence risk
        - Protective factors
            - Positive emotional style
            - Family bonding
            - Good parent/child relationships
- Anxiety and pregnancy
    - Generalized anxiety disorder
        - Co-morbid with depression 46-75% of time
    - OCD
        - 0.2-1.2% prevalence in pregnancy
        - 2.7-9% postpartum prevalence
        - Onset and course
            - 40% of childbearing folks with OCD have onset in pregnancy
            - 30% in postpartum period
        - Symptoms
            - Obsessional fears of intentionally or accidentally harming fetus/child
            - Contamination obsessions/rituals
            - Safety obsessions
            - Fear of sexually or physically abusing child
    - Panic disorder
        - Prevalence in pregnancy 0.2-5.7%
        - Perinatal prevalence 1.4-3.2%
        - Postpartum risk is highest
        - New onset most likely in 1st trimester
        - History of panic disorder predicts high risk relapse in pregnancy
        - Increased postpartum depression risk
        - Nocturnal episodes common
        - In postpartum period, it may be associated with weaning
        - Increased risk of alcohol use in pregnancy
        - Increased risk of preterm birth
        - Increased risk of small for gestational age
        - Rule out
            - Thyroid dysfunction
            - Anemia
            - Pre-eclampsia
            - Pheochromocytoma
            - Substance use/withdrawal
    - PTSD
        - Perinatal prevalence 0.6-6.9%

- **Separation Anxiety Disorder (SeAD)**
  - Prevalence of separation fears

	SeAD	Other anxiety disorder	ADHD
• Being along	75%	31%	50%
• Sleeping	83%	50%	56%
• Being abandoned	83%	63%	50

  - Excessive worry and distress when separated from parents/caregivers or when separation is imminent, lasting more than 4 weeks, in youth younger than 18 yo
    - Lasts for weeks or longer
    - Difficulty in going to school
    - Hard to be left alone in any room, even if a parent is in the next room
    - You may avoid overnight activities like slumber parties, camp, or just sleeping over at a friend's home
    - You grab onto mom or dad when it's time to say goodbye and you find it hard to let go.
    - You feel really scared that something bad will happen to you or to your parents if you're away from each other.
    - You still worry, even if you know your dad or mom will always come back
    - You're afraid to go to school or to after-school activities; the fear is so strong that you avoid going by saying you're sick or throwing tantrums.
  - Prevalence
    - In community samples
      - 3-13% in children
      - 1.8-2.4% in adolescents
    - In child and adolescent psychiatry clinics
      - As high as 47%
  - Most common in ages 7-12
  - Affects individuals throughout the lifespan
  - Girls>boys
  - Conditions associated with SeAD
    - School refusal behavior: 75%; most often the behavior is acute, limited to mild forms (e.g., pleas to stay home, visits to the nurse), and may not necessitate treatment
    - Generalized anxiety disorder: ~33%
    - Depressive disorder: ~33%
    - Panic attacks
      - 73% of youths with panic attacks in one study had antecedent or associated separation anxiety
    - ADHD: 16.7%
    - Oppositional defiant disorder (ODD): 16.7%
    - Specific phobias: 12.5%
    - Social anxiety disorder: (SoAD): 8.3%
    - Bed wetting (enuresis): 8.3%
    - Obsessive compulsive disorder (OCD): 4-7%
      - In youth with OCD, 24-34% have SeAD
      - In youth with OCD and SeAD, there is a higher risk of earlier onset of panic disorder
    - Learning disorders; will further diminish a child's sense of control
  - Symptom dimensions
    - Fear of being alone (FBA)
      - Fear of being left alone in certain areas of the house
      - Distraction doesn't always work

        - Night>day
        - Less disruptive outside the home
    - Fear of abandonment (FAb)
        -
    - Fear of physical illness (FPI)
    - Worry about calamitous events (WCE)
- **Generalized anxiety disorder (GAD)**
    - Worry
        - Suppresses sympathetic nervous system arousal
        - Supresses more disturbing affect
        - Fosters the erroneous believes that
            - The uncontrollable can be controlled
            - One can magically prevent disaster with worry
            - One can motivate oneself with worry
            - One can solve problems better with worry
            - One can truly prepare oneself for the worst with worry
    - Symptoms
        - Persistent and excessive "free-floating" anxiety and worry more days than not for at least six months that impairs function and is difficult to control
        - Worries often include subjects related to your health, your performance in school or work, being physically hurt, disasters (tornadoes, terrorist attacks)
        - Psychic symptoms include worry, insomnia, fatigue, irritability, feeling "on edge", poor concentration.
        - Somatic symptoms include muscle tension, nausea or diarrhea, sweating, urinary frequency, heart palpitations, cold and clammy hands, dry mouth
        - Difficulty in controlling the worry
        - Significant distress or impairment
    - Epidemiology
        - 4.5-5% lifetime prevalence; ~3% 12-month prevalence
        - Second most frequently seen psychiatric disorder in primary care, behind depression
        - Women outnumber men 2:1
        - Modal age of onset is early 20s
        - Chronic: average duration >20 years
        - Low rate of spontaneous remission: 25% at 2 years
        - Prevalence
            - Life-time prevalence rate—2.8% (per updated analysis done in 2005); 5.1% in other data
            - 12-month prevalence rate—0.9% (per updated analysis done in 2005)
            - Current prevalence rate—1.6%
            - In adult primary care—8%
            - In pediatric primary care--3.2%
    - Very often co-morbid
        - Overall, 90% have another psychiatric disorder in lifetime; 66% in past 30 days;
        - Prevalence of GAD if diagnosed with:
            - Any (other) anxiety disorder: 83%
            - Depression: 37-50%
            - Social anxiety disorder: 32%
            - Bipolar I: 18%
            - Dysthymia: 17%
            - Bipolar II: 15%

- If have a lifetime history of GAD, 8-fold increased lifetime risk of major depression:
    - 54-67% prevalence of unipolar depression or dysthymia
    - 17% prevalence of any bipolar disorder
    - 16% with no mood disorder
- Co-morbid rates:
    - 62.4% with depression; 6.7-20% per Zimmerman, 2005
        - 58% of those with lifetime history of major depression have anxiety disorder
    - 40% with dysthymia
    - 37.6% with alcohol abuse and dependence
    - 34.4% with social anxiety disorder
    - 23.5% with panic disorder
    - 22% with post-traumatic stress disorder
- Consequences
    - 37% receive public assistance
    - 27% never marry
    - 13% with suicide attempts
- Course
    - Insidious onset
    - Characterological presentation
    - Typically begins in late teens, early twenties
    - Earlier onset associated with greater severity of anxiety and depression
    - Highly chronic
    - Marked fluctuations in response to life stressors
    - Spontaneous remission
        - 15% by 2 months
        - 15% (still) by 6 months
        - 15% (still) by 1 year
        - 25% by 2 years
        - 38% by 5 years
    - Relapse rates after full remission
        - Full relapse in ~25% of patients 1 month after stopping medication treatment
        - Full relapse in 60-80% of patients within 1st year of stopping medication treatment
        - 10% by 1 year
        - 20% by 2 years
        - 25% by 3 years
- Treatment response rates:
    - FDA-approved treatments: Paxil, Lexapro, Effexor XR
    - Celexa, Zoloft, Cymbalta have shown efficacy
    - 74% with Effexor XR vs. 40% with placebo
        - Benefits clear at 2-4 week mark
        - Increasing benefits through 12 week mark (accrual slows from 4th week on)
        - Enduring benefits through at least 28th week
    - 70% with Paxil vs. 40% with placebo
    - Risk of relapse over 24 weeks is 2.8 times less likely with Lexapro than placebo
        - Response: ~50% vs. ~30% with placebo
        - Remission: 26% vs. 14% with placebo
    - Other treatments
        - Tricyclic antidepressants
        - Buspar 30-60 mg/day

        - Lyrica 600 mg/d
        - Gabatril 4-16 mg/day (mild benefit)
        - Hydroxyzine 37.5-50 mg/day
        - Risperdal or Zyprexa with SSRI
    - Biology (see separate handout as well)
        - Greater activation to fearful faces than to happy faces in a distributed network including the amygdala, ventral prefrontal cortex, and anterior cingulate cortex while attending to their own subjective fear
        - 30% heritability; may be phenotypic variation of same genetic vulnerability as depression
- ***Obsessive Compulsive Disorder (OCD) (see separate handout)***
- ***Trichotillomania***
    - Repetitive pulling of one's own hair to the point of noticeable hair loss
    - Occurs in 0.6-3.4% of adults
    - May serve as an affect regulator
    - Responsive to CBT
    - Distressing and impairing
- ***Social Anxiety Disorder***
    - Symptoms
        - You find it really hard to talk at school or in a social group
        - You have very few friends because it isn't easy for you to be with other people
        - You're really scared of talking to your teacher or speaking up in class
        - You avoid most social situations, even the ones that sound fun.
        - You're terrified of introducing yourself to people
        - You get very anxious when you're in a crowd
        - You avoid public restrooms because you're scared someone might come in while you're there.
    - Feared situations
        - Parties, weddings
        - Conversing in groups
        - Speaking on telephone
        - Interaction with authority figure (e.g., teacher or boss)
        - Making eye contact
        - Ordering food in a restaurant
        - Performance
            - Public speaking
            - Eating in public
            - Writing a check
            - Using public toilet
            - Taking a test
            - Trying on clothes in a store
            - Speaking up at a meeting
    - Precipitating situations
        - Being introduced
        - Meeting people in authority
        - Using the telephone
        - Receiving visitors
        - Being watched doing something
        - Writing in front of others
        - Speaking in public
    - Cognitive patterns

    - Core beliefs
        - Social situations are potentially dangerous
        - One must perform perfectly in order to stay safe
        - One lacks the personal qualities necessary to perform in the social situation
        - I'm not as smart as…
        - My problems are worse than everyone else's
        - I don't know what to say to others
        - If they see me shaking, they will think I'm incompetent
        - This won't work out for me so what's the point of trying?
        - I'm not attractive to anyone
        - Who would want to waste their time on (a loser like) me?
        - They think I'm an imposter and so I shouldn't be here
        - I know they think I am a failure
        - What if I freeze up and can't speak?
    - Core predictions of consequences of social and evaluative situations
        - Embarrassment
        - Humiliation
        - Rejection
        - Loss of social status
    - Overestimation of scrutiny by others
    - Overestimating possible rejection, embarrassment or humiliation
    - Misinterpretation of response of others
    - Exaggerated response to rejection
    - Discounting personal achievements
    - Overemphasizing failures
- Previously known as social phobia
- Prevalence
    - 12-month prevalence rates:
        - 10% in Chili
        - 8% in Norway
        - 7% in Sweden
        - 5% in Israel
        - 4% in the US (though 1.6% per an analysis in 2005)
        - 2% in Australia
    - Lifetime prevalence
        - 2.8% (per updated analysis done in 2005)-13.3% lifetime prevalence in adults
        - ~5% (range 1-13.1%) lifetime prevalence in youth
        - 6.8% in pediatric primary care
    - Second most prevalent anxiety (first is specific phobia)
    - Third most common psychiatric condition in the U.S., behind major depression and alcohol abuse.
    - Of those with
        - body dysmorphic disorder: 34% lifetime history of social anxiety disorder
        - bipolar I: 22% lifetime history of social anxiety disorder (13% current)
        - eating disorder: 20% lifetime history of social anxiety disorder (OCD was the only anxiety disorder more common at 41%)
        - bipolar II: ~18% lifetime history of social anxiety disorder
        - depression: 2.1-32.7% (7-15% current) also have social anxiety disorder
- Age of onset::
    - 18% under 5 yo

- 14% 6-10
- 23% 11-15
- 16% 16-21
- 8% 21-25
- 21% >25

- Course
  - Average duration 20 years
  - 27% recover
  - 2.4 million sufferers in the U.S. go untreated
  - Untreated social anxiety disorder→
    - Academic underachievement
    - Inability to work, or under-performance at work
    - Financial dependence
    - Difficulty making and maintaining friendships or relationships
    - Extensive and often unnecessary medical examinations
    - Development of alcoholism, depression, agoraphobia, or suicidal ideation
- Co-morbid conditions
  - In adolescents and young adults with co-morbid social anxiety disorder and depression, subsequent episodes of depression are 9 times more likely than among peers without the co-morbid disorders; the depressive episodes are more likely to be chronic and severe and suicide attempts are 6 times more likely
  - 80% of patients with one or more other psychiatric disorders; in 53-69%, the social anxiety disorder occurs before the co-morbid condition; these co-morbidities are as follows:
    - 38% with simple phobia
    - 24-43% with agoraphobia
    - 24% with alcohol dependence; the rate rises to 40% in those seeking treatment
    - 20% with panic attacks
    - 18-37% with major depression; 4-fold increased risk
      - Beesdo et al, 2007, 3,021 individuals ages 14-24 y.o. followed over 10 years:
        - Cumulative incidence of social anxiety disorder is 11%
        - Social anxiety disorder was consistently associated with subsequent depression, independent of age at onset for social anxiety disorder, with an 1.49-fold to 1.85-fold increased risk for depression
        - Behavioral inhibition temperament in early childhood was associated with a 1.3-fold increased risk and panic for a smaller increased risk for depression following social anxiety disorder
    - 18% with alcohol abuse
    - 15% with drug dependence
    - 13% with drug abuse
    - 12% with dysthymia
    - 12% with OCD
    - 4% with panic disorder
- Linkages on chromosome 16 and 14 associated with social anxiety disorder and simple phobia.
- *Treatment Response Rates*
  - *Cognitive behavioral therapy (CBT): exposure/systematic desensitization, relaxation training*
    - *Walk up to people engaged in conversation, introduce self, ask 3 questions during the conversation, respond in full sentences*
    - *Go over the top; provide test of 'worst, catastrophic fear': use empty metrocards in a busy station; spill soup; "flip flop" shop; "lost in New York"*

- *MISSION IS POSSIBLE TASK: "your mission, should you decide to accept it (and if you don't, you'll be avoiding) is to enter the Whole Foods Café. Once inside, you are to purchase a drink and soup, and sit at a table with unfamiliar people. You CANNOT read or otherwise distract yourself. You must eat and spill your soup and/or drink! Make sure others see this! At a minimum, you must stay at the table for 25 minutes. DO TALK to anyone who talks to you. Good luck. This letter will now self-destruct."*
- *78% with Klonopin vs. ~18% with placebo*
- *64% with Phenelzine (MAOI) vs. 32% with placebo*
  - *Relapse rates:*
    - *22% with Phenelzine by 6 months, 50% in follow-up*
    - *15% with CBT group by 6 months, 16% in follow-up*
- *48-80% with Brofaromine (RIMA) vs. 10-35% with placebo*
- *40-65% SSRI vs. 5-30% with placebo*
  - *47-56% with Zoloft vs. 25-29% with placebo*
  - *Relapse rates:*
    - *4% with Zoloft for 24 weeks*
    - *36% with placebo*
- *38% with Xanax vs. 18% with placebo*
- *18-48% with Moclobemide (RIMA) vs. 10-35% with placebo*
- *Other*
  - *Effexor XR*
  - *Neurontin*
  - *Lyrica*
- *Youth studies (RCT's); increasing effects from weeks 8 through 12-16*
  - *Prozac*
  - *Luvox*
  - *Paxil*

- ***Panic Disorder***
  - Symptoms of a panic attack
    - You feel your heart pounding hard
    - Your chest hurts
    - You may get sweaty all over
    - You begin to tremble and shake
    - You have trouble catching your breath
    - You feel like you are choking on something
    - Your stomach hurts
    - You get dizzy or lightheaded; you feel like you are about to faint
    - You feel as if **everything** around you is unreal, or like you're watching yourself
    - You're scared that you're losing control or going crazy
    - You feel tingly or numb in your fingers or toes
    - You start feeling too cold (the chills) or too hot (hot flashes)
    - You feel as if you're about to die
  - Diagnosis requires the presence of recurrent unexpected panic attacks followed by at least one month of persistent anxiety or concern about recurrent attacks or consequences of attacks, or by significant behavioral changes related to the attacks
  - Often evolves to growing fear of fear and distress, a pattern of learned fear of body sensations
  - Prevalence
    - 1.6% (per updated analysis done in 2005) - 3.5% with panic disorder, though it is underreported and undertreated
      - Another 4.2% with recurrent panic attacks (3.3% in children)
      - Another 7.3% with at least one panic attack

    - 0.7% (per updated analysis done in 2005) 12-month prevalence
    - ~9% in adolescents
    - 8-16% (10-15% current) of those with depression
    - 44-71% of clients with panic disorder report having panic attacks at night (occurring in sleep) at least once; 18-45% report experiencing them regularly and frequently
- Less than 1/3 of persons with panic disorder receive treatment
- Typically begins in late adolescence or early adulthood; can present in childhood; onset is rare after 45
- 15-20% rate of panic disorder in relatives of persons with panic disorder.
- The suicide rate is comparable to that of persons with depression; 20-40% of persons with panic disorder report having made suicide attempts, and about half admit to having had suicidal ideation.
- Persons with panic disorder report
    - a subjective feeling of poor physical and emotional health
    - impaired social and marital functioning
    - increased financial dependency
    - 70% lose or quit their jobs
    - Average length of work disability of more than 2.5 years
    - 50% are unable to drive more than 3 miles from their home
- Caffeine is panicogenic
- Co-morbidities
    - 83% have lifetime history of one or more disorders; 100% if agoraphobia too
    - 66% have lifetime history of one or more anxiety disorders; 94% if agoraphobia too
    - 35% have lifetime history of depression; 39% if agoraphobia too; lifetime risk of suicide attempt is doubled when panic disorder and depression are co-morbid
    - 25% have lifetime history of alcohol abuse OR dependence; 37% if agoraphobia too
    - 20% with OCD
    - 17% with generalized anxiety disorder
    - 14% have lifetime history of bipolar disorder; 33% if agoraphobia too
    - 10% have lifetime history of dysthymia; 15% if agoraphobia too
    - 8% with phobia
    - 7% with PTSD
    - 4% with current alcohol disorders
    - If have bipolar I: 17% have lifetime history of panic disorder
    - If have bipolar II: ~14% have lifetime history of panic disorder
- Biologic etiologies
    - Serotonin and norepinephrine dysfunction
    - Carbon dioxide/lactate hypersensitivity
    - False suffocation alarm theory
    - Abnormalities in the limbic system (including the hippocampus) and the locus ceruleus
    - Genetics
        - 17.3% (10-25%) lifetime risk of panic disorder in first degree relatives of patients with panic disorder; 5-fold increased risk
        - 7-18% additional risk of recurrent panic attacks
    - Genes possibly associated are on chromosomes:
        - 1
        - 3 (for agoraphobia)
        - 7
        - 9q31
        - 11 (CCKRB locus)
        - 12 (panic/agoraphobia)

        - 13q
        - 14
    - Treatment
        - CBT/psychotherapy
        - SSRIs
        - Effexor XR
        - ?Cymbalta, Remeron, Serzone
        - Tricyclic antidepressants
        - MAOIs
        - High potency BDZs
        - Prazosin for nightmares and intrusive sx
        - Clonidine
        - Guanfacine
        - Propranolol
        - NOT effective: Wellbutrin, Buspar, low potency BDZs, maprotiline, ECT
- ***Post-Traumatic Stress Disorder***
    - Symptoms
        - Traumatic event
        - You relive the event
            - You keep thinking about what happened. You get upset when you think about it or are reminded of it. You picture scary things in your head, and it's hard to stop these images.
            - You have bad dreams about the event. The dreams happen over and over again and don't stop.
            - You have flashbacks where you start acting or feeling as if the trauma is happening all over again. Sometimes this happens just after you wake up.
            - Your heart starts racing and you breathe faster, because your body feels afraid all over again. This can happen any time you're reminded of the trauma.
        - You feel numb or avoid anything that reminds you of the event
            - You try to avoid thinking or talking about the trauma because it upsets you too much. You ignore any feeling about it or even try to pretend it never happened
            - You avoid doing things, going places, or being around people that remind you of the trauma
            - You may forget part of what happened; this is your brains way of trying to protect you. By not remembering, you don't have to think about it
            - You don't want to do fun things as much as you did before. Maybe you don't enjoy them, or it seems easier to lie around and do nothing.
            - You feel that you don't fit in with others anymore and you feel alone when others are around. You might feel different from everyone else because of what happened to you.
            - You don't feel much of anything—not happy, sad, or worried. Being numb is your body's way of protecting you by shutting off most of your feelings.
            - You think you won't live long and that you may die earlier than everyone else.
        - Your body can't relax—you're always wound up
            - You have trouble falling or staying asleep. Maybe you can't turn off your thoughts at night. Or, you may be afraid to fall asleep because you think you won't be able to protect yourself if something bad happens.
            - You're irritable and you get angry easily. Little things upset you.
            - You have trouble concentrating. Your mind is always thinking about other things, which makes it so hard to pay attention in school or do homework.
            - You're always looking around and expecting something bad to happen. You're on alert all the time, which can wear you out

        - You're very jumpy if anyone sneaks up on you, even accidentally. This makes it hard to relax or go to sleep.
- Prevalence
    - Affects an estimated 5.2 million adults (between the ages of 18-54)
    - 2.5% (per updated analysis done in 2005) - 8% in U.S. general adult population
        - 7-11% (1-13% current) of those with depression
        - women twice as likely as men to develop the disorder
    - 1.1% (per updated analysis done in 2005) 12-month prevalence
- Co-morbidities
    - If bipolar I: 17% have PTSD
    - If bipolar II: ~12% have PTSD
- Dysregulated noradrenergic system
- Treatment
    - Goals
        - Reduce core symptoms of PTSD
            - Re-experiencing
            - Avoidance/numbing
            - Hyperarousal
        - Treat associated co-morbid conditions
        - Medications may facilitate psychotherapy
        - Minimize side effects
        - Improve quality of life
        - Improve resilience to stress
        - Reintegration into occupation and social activities
        - Improved functioning
    - Interventions within the first 30 days
        - Brief cognitive behavioral therapy (4-5 sessions
            - Education
            - Breathing training/relaxation
            - Imaginal and in vivo exposure
            - Cognitive restructuring
        - Social, spiritual support
        - Prazosin for sleep, nightmares
        - Benzodiazepines (short course on the order of days)
            - Open trials positive (Dunner et al, 1985; Lowenstein et al, 1988)
            - RCT DB cross-over study of alprazolam positive (Braun et al, 1990; small study, 5 wks long)
            - Temazepam beneficial during early phase if an acute stress response (Mellman et al, 1998; 4 patients)
            - Do not prevent sequelae of PTSD
    - EMDR (Eye Movement Desensitization and Reprocessing)
        - Rigorous evidence supports its efficacy
        -
    - Pharmacologic treatment
        - *SSRI's
            - *Prozac (Connor et al, 1999; Martenyi et al, 2002, van der Kolk et al 1994l Martenyi et al, 2002; off label)
            - *Paxil (Marshall et al, in press; Schneier et al, 2011; Tucker et al, 2004)

        - *Zoloft (Davidson et al, 2003; Davidson et al, 2001; Brady et al, 2000; Friedman et al, 2007 (not efficacious))
        - Youth
            - 24 youth with PTSD vs. 14 adults with PTSD
                - Equivalent improvement
            - Some studies in youth with PTSD negative (two involved Zoloft)
    - *Venlafaxine
    - TCA
    - Mirtazepine
    - Nefazodone
    - MAOI's (phenelzine; off label)
    - Alpha-adrenergic blockers (off label)
    - Atypical antipsychotic medications (off label) as adjunctive
        - 7 of 9 RCT's (Risperdal, Zyprexa) showed benefit (though small studies, other meds allowed)
        - Meta-analysis of 7 RCT, DB studies of Risperdal or Zyprexa either alone or as adjuvants positive (though only 192 patients involved in the studies)
        - Bartzokis et al 2005; Krystal et al 2011;
        - BUT, benefits from Risperdal were modest at best such that the risk-benefit ratio weighs towards recommendations against the use of Risperdal and atypical antipsychotic medications as monotherapy OR adjunctive treatment.
    - Anticonvulsants (off label)
    - Benzodiazepines (off label)
    - D-cycloserine (off label)
    - No evidence/risk of harm
        - Neurontin
        - Tenex
        - Lamictal
        - Topamax
        - Depakote
        - Gabatril
        - Typical antipsychotic
- More information
    - "Straight Talk about Your Child's Mental Health," Stephen Faraone, PhD
    - "Your Child," AACAP
    - "Your Adolescent," AACAP
    - www.dr_mark_wilson.medem.com
    - Mindfulness Based Stress Reduction: www.rosenthal.hs.columbia.edu