Anxiety Disorders

Several subtypes of anxiety disorders have been described and defined.
- in general, anxiety is characterized by _______________________
- it is also accompanied by any number of a variety of ________
  including muscle aches and shakes, sweating, pounding
  and racing of the heart, cold and clammy hands, dry mouth,
  dizziness, light headedness, tingling of hands and feet, hot and cold
  spells, upset stomach, urge to urinate, diarrhea, lump in the throat,
  butterflies in stomach, belching, gasping, and difficulty breathing.
- different anxiety disorders therefore require specific treatments.

1) Social phobia

- usually successfully treated with psychotherapy.

2) Simple (specific) phobia

- also successfully treated with psychotherapy.

3) Post-traumatic stress disorder (PTSD): occurs following an intense
  experience of stress (outside the normal range of situations), and
  often involves the reexperience of the traumatic event.
- no good cure for PTSD yet.

While the first two are usually not associated with a complete
disruption of one’s life and activities, PTSD can often be very
debilitating. However, little is known about PTSD yet.

Panic Disorder

Panic disorder provides a distinct anxiety disorder.

- its lifetime prevalence is approximately ______________________
  (approximately 3 million Americans).
- it afflicts twice as many ________________________________
- age of onset is normally during the ______________________; half of
  the panic disorder patients had their first attack before age ___.
- it can last for years, during one’s entire lifetime, although the panic
  “attack” themselves normally last ________________________
- some genetic factors are involved since it tends to run in families.
- best treatment includes ________________________________

Criteria for Panic Disorder (DSM-III-R):

Criterion A (exclusion criterion)
At some time during the disturbance, panic attacks (discrete periods
of intense fear or discomfort) occurred:
1. Unexpectedly (without exposure to an anxiety provoking stimulus
or situation - i.e., ____________________________________).
2. Were not triggered by situations in which the person was the focus
of other’s attention (i.e., ________________________________).

Criterion B
Either 4 attacks, as defined in A, have occurred ________________________,
or one or more attacks have been followed by a period of at
least a month of persistent fear of having another attack.
Panic Disorder (continued)

Criterion C (defining criterion)
At least ___ of the following symptoms developed during at least ___
________________:
1. _____________________________ or smothering (suffocating)
sensations;
2. Dizziness, unsteady feelings, or faintness;
3. _____________________________ or accelerated heart rate
(tachycardia);
4. _____________;
5. _____________;
6. _____________;
7. Nausea or abdominal distress;
8. Depersonalization or derealization;
9. Numbness or tingling sensations (paresthesias);
10. _____________;
11. _____________ or discomfort;
12. Fear of dying;
13. Fear of going crazy.

Criterion D (defining criterion)
During some attacks, at least 4 of the criterion C symptoms develop
suddenly and increase in intensity within 10 min of the beginning of
the first symptom.

Criterion E (exclusion criterion)
It cannot be established that an organic factor initiated and
maintained the disturbance (amphetamine, cocaine, or caffeine
intoxication, hormonal abnormalities such as hyperthyroidism).

Agoraphobia

Agoraphobia (Gk > fear of the marketplace):

__________________________
__________________________

DSM-III-R criterion for agoraphobia
Fear of being in places or situations from which _______________
______________________ or in which ________________ in
the event of suddenly developing a symptom(s) that could be

As a result of this fear, the person either restricts travel or needs a
companion when away from home, or else endures agoraphobic
situations despite intense anxiety.

Although agoraphobia has been suggested to develop as a result of
____________________, it is not always the case; the two can exist

- yearly incidence of agoraphobia is approximately __________
_____________; those occur without symptoms of panic attacks;
- about _____ suffer from combined disorder (agoraphobia and panic
attacks).
In general, obsessive-compulsive disorder (OCD) is a disturbance that plagues individuals with ______, and compulsive behaviors that involve the purposeful behavioral routine or ritual that they feel compelled to perform repetitively, ____________.

- OCD can reach a level at which _______________________ (spends several hours a day washing, watching, hoarding, etc.).
- It affects approximately 3.3 million Americans yearly (__________).
- Usually begins ____________.
- It shows approximately ______ incidence in women and men.
- The role of genetic and environmental factors are not clear.
- Best treated through __________________________.

DSM-III-R criteria for OCD

Criterion A
Either obsessions (4) or compulsions (3):

Obsessions:
1. ______________________________________ that are experienced as intrusive and senseless;
2. The person attempts _____________ such thoughts or impulses or ________ them with some other thought or action;
3. The person recognizes that the obsessions are the product of his or her own mind, not imposed from without (________________);
4. If another disorder is present, the content of the obsession is unrelated to it (e.g., not about food in an eating disorder or guilt in major depression).

Compulsions:
1. ________________________________________ that are performed in response to an obsession, or to certain rules or stereotyped fashion;
2. The behavior is designed to neutralize or to prevent discomfort or some dreaded event or situation, ___________________________
3. The person recognizes that his or her behavior is excessive or unreasonable.

Criterion B
The obsessions or compulsions cause __________________, are __________________ (take more than an hour a day), or significantly interfere with the person’s, ____________________ or usual social activities or relationships with others.
Generalized Anxiety Disorder (GAD)

An anxiety disorder characterized by _________________________
______________________________, that is not evoked by ________
____________________, and accompanied by symptoms of ________
____________________ (normally present only during heightened levels of attention).

- incidence of GAD believed to be approximately ____ of the US population, with more ____________________ afflicted.
- appears to be the least dependent on genetic factors, since the incidence of concordance in mono- vs. dizygotic twins is ________
______________________.

DSM-III-R criteria for GAD

Criterion A
Person must experience the disorder for 6 months or longer, and be concerned with at least two different life circumstances.

Criterion B (exclusion criterion)
Anxiety should exclude simple phobia, social phobia, agoraphobia, panic disorder, and OCD.

Criterion C (exclusion criterion)
Anxiety is not a direct symptom of a mood disorder or a psychotic disorder.

Criterion D (defining criterion)
Patient must experience 6 of 18 of the following symptoms:

1. __________________________________;
2. ________________________________;
3. Restlessness;
4. Easy fatigability;

5. _________________________ or smothering sensations;
6. ______________________________;
7. ______________________________;
8. Dry mouth;
9. Dizziness or lightheadedness;
10. Nausea, diarrhea, or other abdominal distress;
11. Flashes (hot flashes) or chills;
12. Frequent urination
13. Trouble swallowing or lump in throat;

14. Feeling keyed up or on edge;
15. _________________________ or mind going black because of anxiety;
16. _________________________;
17. __________________________________;
18. Irritability.

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Generalized Anxiety Disorder (continued)

Criterion E (exclusion criterion)
No organic factor initiated and maintained the disturbance
(amphetamine, cocaine, or caffeine intoxication, hormonal
abnormalities such as hyperthyroidism).

A Note About Anxiety Disorders and Major Depression
Anxiety disorders and depression are closely associated: ________
________________________________________________________
- in several individuals, one disorder can be linked to the appearance
  of the other disorder.
- several similar physiological symptoms are observed in panic
disorder, major depression, and OCD, such as ___________
  ________________.
- as we will see, anxiety disorders can sometimes be treated with the
  ______________________________________________________.
- however, unlike depression, anxiolytic effects are usually observed
  ______________________________________________________(with some notable
  exceptions).

Anxiety Disorder Treatments: Anxiolytics
What are anxiolytic drugs? _________________
What are the five major classes of anxiolytic drugs?
1. __________;
2. ______________________________________________;
3. __________________________________________;
4. _________________________________________;
5. __________.
I. The Barbiturates
Used extensively during the first half of the 1900’s as an anxiolytic.
- acts as a ____________________.
- sedative: ________________________.
- hypnotic: ________________________.
- low doses of barbiturates provides anxiolytic actions together with
  sedative-hypnotic effects.
- moderate doses produce marked thought and behavioral
  impairments.
- high doses are used as ____________________.

Some side-effects:
- fine line with lethal dose, ________________.
- addiction results from repeated use (need ____________;
  and suffer from ________________).
- produces liver enzyme changes that can lead to hormonal
  imbalances.
II. Minor Tranquilizers
Claimed to possess fewer side-effects than barbiturates ("full blown sedative tranquilizers").
- however, this class of drugs worked with ____________

III. Benzodiazepines
Developed in the early 1960's as a different class of minor tranquilizers, benzodiazepines were introduced to treat anxiety disorders, the most well known being ____________
- they work via a ____________ than barbiturates;
- they show ____________;
- they produce ____________.

Effectiveness of a benzodiazepine vs. a barbiturate and comparison of reported side-effects

Mechanisms of action of benzodiazepines and barbiturates
- work on one subtype of ____________, the ____________ receptor complex which is composed of ____________ that form an ion (to chloride) channel (inhibitory because it allows ____________).
- benzodiazepines bind to subunits of GABA \( \alpha \) receptor complex ____________
- however, upon GABA release from presynaptic terminals, the presence of benzodiazepines ____________
- alcohol and barbiturates can increase the effectiveness of GABA in this way, but they also produce ____________.
IV. Buspirone

Buspirone (BuSpar) has a very different mechanism of action than benzodiazepines and barbiturates since

- it is about equally effective in treating anxiety disorders as the benzodiazepines.
- it has been shown to act on several neurotransmitter systems, including ________________________.
- buspirone increases activity at dopamine and norepinephrine synapses, while benzodiazepine reduce activity at those synapses - these are believed to be involved in the ________________________.
- like benzodiazepines, buspirone decreases the activity of serotonin cells (apparently via 5HT1A autoreceptor antagonism) - this might be associated with the ________________________.

Side-effects of buspirone: very different from benzodiazepines; they include symptoms that are more similar to the initial condition: dizziness, headache, nervousness, tingling feeling, diarrhea, excitement, and sweating - but fewer cognitive and motor impairments.

One negative characteristic of buspirone is that it takes ________________________ of benzodiazepines.

Brain Mechanisms Associated with Anxiety Disorders

Which brain regions show abnormalities in anxiety disorders? ____________.

The amygdala and locus coeruleus of some anxious patients has been shown to be ________________________.

Here is an example of a significant change in GABA_A receptors, as measured by the binding of benzodiazepines by PET imaging, especially in the orbitofrontal cortex of untreated patients.

Orbitofrontal cortex

Control Anxious

If receptors such as GABA_A are reduced in some forms of anxiety, these patients suffer from ________________________, which can be restored by ________________________.

The power of mind over matter!?!?