What, Me Worry?

Pharmacological Treatment of Anxiety Disorders
Dont look, scary part.

FAIL
Isn’t anxiety “normal”?

- The anxiety, worry, or physical symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.

LENSES

**Bio-Psycho-Social**

Bio - anxiety disorders are disease states of the brain

Psycho - anxiety disorders represent behaviors arising from defenses, drives, etc.

Social - anxiety disorders represent unjust social institutions, the pace of modern life, etc.
Symptoms common to both depression and anxiety may mean similar root causes in the brain, e.g. in serotonin systems.

- sleep/appetite disturbance
- difficulty concentrating
- fatigue
- psychomotor agitation, irritability

Amygdala - center for primitive emotions like fear
Neuroplasticity - “neurons that fire together, wire together”

“Stressed/fearful” amygdala

“Unstressed” amygdala

Epinephrine!
Sympathetic nervous system!
Fight or Flight!
Is this an anxiety disorder?

- You patient, a 34 year old woman, complains of "years" of worry, of "feeling like I have butterflies in my stomach all the time," "shakiness," "on edge all the time," constant muscle tension, being "tense all the time", being easily startled, difficulty concentrating, constant fatigue.
Maybe, but first medical causes must be considered

- hyperthyroidism
- street drugs (e.g. stimulants)
- medications
- mitral valve prolapse, or other cardiac disease

Medications for anxiety disorders

- Benzodiazepines
- SSRIs
Why benzos for anxiety?

- Benzodiazepines act as if they were GABA agonists

What would you expect a “GABA agonist” to do?

GABA is the primary inhibitory neurotransmitter - increasing GABA activity tends to be anxiolytic
Four commonly used benzodiazepines

<table>
<thead>
<tr>
<th>Benzodiazepine</th>
<th>Time to action</th>
<th>Half life</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>alprazolam (Xanax)</td>
<td>1/2 - 2</td>
<td>6 - 12</td>
<td>Faster onset of action</td>
</tr>
<tr>
<td>lorazepam (Ativan)</td>
<td>1 - 2</td>
<td>10 - 20</td>
<td>Shorter half life</td>
</tr>
<tr>
<td>diazepam (Valium)</td>
<td>2 - 3</td>
<td>40 - 100</td>
<td>Slower onset of action</td>
</tr>
<tr>
<td>clonazepam (Klonopin)</td>
<td>3 - 4</td>
<td>20 - 50</td>
<td>Longer half life</td>
</tr>
</tbody>
</table>

(times in hours)
Common side effects from benzos

- Sedation
- Dizziness
- Fatigue
- Unsteadiness (may be a factor in elderly or those taking other medications)

What’s the big problem with benzodiazepines?

- Huge dependence potential
- Taking with alcohol and/or other drugs can be lethal

Xanax
Works on kittehs, too
SSRIs

- fluoxetine - Prozac
- sertraline - Zoloft
- citalopram - Celexa
- escitalopram - Lexapro
- paroxetine - Paxil

Role (oversimplified) of serotonin - decrease of serotonin increases activity of amygdala

**SEROTONIN**

[Diagram showing amygdala and hippocampus]
Common SSRI side effects

- Nausea
- Headache
- Anxiety, “activation”
- Problems sleeping
- Sexual side effects

Anxiety disorders

- Generalized anxiety disorder (GAD)
- Post traumatic stress disorder (PTSD)
- Panic disorder (PD)
- Obsessive compulsive disorder (OCD)
Generalized anxiety disorder

A. Excessive anxiety and worry (apprehensive expectation), occurring more days than not for at least 6 months, about a number of events or activities (such as work or school performance).

B. The person finds it difficult to control the worry.

C. The anxiety and worry are associated with three (or more) of the following six symptoms (with at least some symptoms present for more days than not for the past 6 months). Note: Only one item is required in children.

1. Restlessness or feeling keyed up or on edge
2. Being easily fatigued
3. Difficulty concentrating or mind going blank
4. Irritability
5. Muscle tension
6. Sleep disturbance (difficulty falling or staying asleep, or restless unsatisfying sleep)

E. The anxiety, worry, or physical symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.

F. The disturbance is not due to the direct physiological effects of a substance (e.g., a drug of abuse, a medication) or a general medical condition (e.g., hyperthyroidism) and does not occur exclusively during a Mood Disorder, a Psychotic Disorder, or a Pervasive Developmental Disorder.

Pharmacological treatment anxiety disorders

- Start SSRI
- Sometimes give prescription for benzodiazepines for symptom relief while SSRIs are taking effect
- Start therapy, maximize engagement in therapy
- If used, taper benzodiazepines as effects of
OCD

Table. Categorizing Obsessions and Compulsions

<table>
<thead>
<tr>
<th>Obsessions</th>
<th>Commonly Associated Compulsions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fear of contamination</td>
<td>Washing, cleaning</td>
</tr>
<tr>
<td>Need for symmetry, precise arranging</td>
<td>Ordering, arranging, balancing, straightening until &quot;just right&quot;</td>
</tr>
<tr>
<td>Unwanted sexual or aggressive thoughts or images</td>
<td>Checking, praying, &quot;undoing&quot; actions, asking for reassurance</td>
</tr>
<tr>
<td>Doubts (eg, gas jets off, doors locked)</td>
<td>Repeated checking behaviors</td>
</tr>
<tr>
<td>Concerns about throwing away something valuable</td>
<td>Hoarding</td>
</tr>
</tbody>
</table>

OCD is different from OCPD!

- A pervasive pattern of preoccupation with orderliness, perfectionism, and mental and interpersonal control, at the expense of flexibility, openness, and efficiency, beginning by early adulthood and present in a variety of contexts. It is a requirement of DSM-IV that a diagnosis of any specific personality disorder also satisfies a set of general personality disorder criteria.
Treatment of OCD

- SSRIs, most often at higher than usual doses
- Maximize engagement in therapy
Let’s play…”You be the doc!”

- You’re a psychiatrist.
- A 24 year old man arranges a first appointment with you.
- His chief complaint is, “I keep having panic attacks.”

Your mission: diagnose, cure, then bill the insurance company.

Panic attacks

A discrete period of intense fear or discomfort, in which four (or more) of the following symptoms developed abruptly and reached a peak within 10 minutes:

- Palpitations, or accelerated heart rate
- Sweating
- Trembling or shaking
- Sensations of shortness of breath or smothering
- Feeling of choking
- Chest pain or discomfort
- Nausea or abdominal distress
- Feeling dizzy, unsteady, lightheaded, or faint
- De-realization (feelings of unreality) or depersonalization (being detached from oneself)
- Fear of losing control or going insane
- Sense of impending death
- Paresthesias (numbness or tingling sensations)
- Chills or hot flashes
Pharmacological treatment for panic disorder

• Start SSRI - often a “sedating” SSRI like paroxetine, but all can be effective
• Consider use of “rescue” benzodiazepine
• Start therapy
• **Maximize** engagement in therapy
Treatment of PTSD

• Treat symptoms aggressively with medication - treat anxiety, depression, anger, psychosis, etc.
• Maximize therapy and support - emphasize team approach
• Maximize engagement in therapy
• Educate, work with family and other support