DEPRESSION AND ANXIETY IN THE ELDERLY AND MEDICALLY ILL

Steven Cole, MD
Professor of Clinical Psychiatry
S.U.N.Y. Stony Brook Health Sciences Center
MANAGEMENT OF MENTAL DISORDERS IN PRIMARY CARE

“De Facto” Mental Health Care System

Prevalence of significant mental disorders: 28.1%

Regier, Arch Gen Psych, 1993
### PREVALENCE
(adult data -- very little data on the elderly)

<table>
<thead>
<tr>
<th></th>
<th>12 Months (%)</th>
<th>Lifetime (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major depression</td>
<td>10</td>
<td>17.1</td>
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<tr>
<td>Social anxiety disorder</td>
<td>7.9</td>
<td>13.3</td>
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<tr>
<td>PTSD</td>
<td>5.0</td>
<td>8.0</td>
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<tr>
<td>Agoraphobia without PD</td>
<td>2.8</td>
<td>5.3</td>
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<td>Panic disorder</td>
<td>2.3</td>
<td>3.5</td>
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<td>Generalized anxiety disorder</td>
<td>3.1</td>
<td>5.1</td>
</tr>
<tr>
<td>OCD</td>
<td>1.6</td>
<td>2.5</td>
</tr>
</tbody>
</table>

*Kessler RC et al. Arch Gen Psychiatry. 1994;51:8-19*
INCREASED PREVALENCE OF MD IN MEDICALLY ILL

- 20-50% of patients with DM, CAD, PD, MS, CVA, asthma, cancer... (etc) have MD
- Prevalence varies by illness, pathophysiology, severity, research design
- Depressed patients visit PCPs 3x more often than patients not depressed
CO-MORBIDITY IS THE RULE
ANXIETY IN MAJOR DEPRESSION

- 58% have an anxiety disorder
- >70% have anxiety symptoms

PREVALENCE OF MAJOR DEPRESSION IN PATIENTS WITH ANXIETY

- 27% (OCD + MD)
- 37% (SAD + MD)
- 56% (GAD + MD)
- 56% (Panic + MD)
- 42% (Specific Phobia + MD)
- 62% (GAD + MD)
- 37% (SAD + MD)
- 27% (OCD + MD)

Depression

GAD

Panic

PTSD

SAD

Specific Phobia

OCD
IMPACT OF MENTAL DISORDERS: COSTS OF DEPRESSION

GLOBAL BURDEN OF DISEASE: WORLD HEALTH ORGANIZATION

1990
1. Lower respiratory infection
2. HIV
3. Conditions arising during the perinatal period
   • Diarrheal diseases
   • Unipolar major depression
   • Ischemic heart disease
   • Vaccine-preventable disease

2020
1. Ischemic heart disease
2. Unipolar major depression
3. Road traffic accidents
4. Cerebrovascular disease
5. Chronic obstructive pulmonary disease
6. Lower respiratory infections

COMORBIDITY IS ASSOCIATED WITH INCREASED IMPAIRMENT

- Controls (n=5,217)
- Pure GAD (n=92)
- Pure MDD (n=489)
- Comorbid GAD + MDD (n=99)

IMPACT OF DEPRESSION IN MEDICAL PATIENTS

- ↑ disability
- ↑ morbidity/mortality
- ↑ healthcare utilization and costs
- ↓ adherence
- ↓ productivity at work (absenteeism; presenteeism)
- ↓ recognition; ↓ response to Rx.
DEPRESSION PREDICTS IN-HOSPITAL MORTALITY

UNDER-RECOGNITION/UNDERTREATMENT

- 30%-70% of depression missed
- 50% of *treated* patients in primary care remain depressed after 1 year
In a study examining adherence,
28% of patients discontinued antidepressant treatment within the first month

- According to AHCPR, patients who discontinue medication early have a relapse rate of about 25% within 2 months

Lin, Medical Care, 1995; *Depression in Primary Care*, 2 (AHCPR) 1993.
CUMULATIVE MORTALITY FOR DEPRESSED AND NONDEPRESSED PATIENTS AFTER MI

Cumulative Mortality

Depressed (n=35)

Non depressed (n=187)

Cox Hazard Ratio = 5.74
p=0.0006

Frazure-Smith, JAMA 1993;270:1819-1825
DEPRESSION IN CAD

- Dep is risk factor for future CAD, MI
- 15-23% major depression
- ↑ risk (3-5x) of death after MI (independent of other risks)
- ↑ HPA activation
- ↑ sympatho-medullary activity
- ↑ platelet aggregation; ↓ HR variability

*Musselman et al Archives Gen Psych 1998*
*van Kanel et al Psychosom Med 2001*
DEPRESSION IN DIABETES

11-15% major depression (OR 2:1)

↑ non-adherence

↑ GHb

↑ retinopathy; ↑ neuropathy; ↑ nephropathy

↑ macrovascular complications (CAD, etc)

Katon, Biological Psychiatry, 2003
Groot et al Psychosom Med 2001
Van Tilburg et al Psychosom Med 2001
DEPRESSION IN CANCER

- 6/30 studies show positive association with depression and later cancer
- 25-33% prevalence of major depression in cancer
- 15/24 studies link depression as predictor of poor outcome in cancer
- Depression more commonly precedes pancreatic cancer than other CA (4:1)

Spiegel and Giese-Davis, Biological Psychiatry, 2003
Carney et al, Psychosomatic Medicine, 2003
DEPRESSION AND PAIN

- Depression/pain ‘cause’ each other
- 30-54% of patients with chronic pain have MD
- 43% of MD have CPPC (OD 4:1)*
- MD w/CPPC is more severe and lasts longer*
- 5-HT and NE involved in both pain and MD
- Dual action antidepressants (tricyclics, venlafaxine, duloxetine) effective for pain

*Ohayon J Clin Psychiatry 2004
Campbell, Biological Psychiatry, 2003
TYPES OF DEPRESSION

- Major depression
- Chronic depression (dysthymia)
- Minor depression
- Adjustment disorder
- Depressive disorder nos
TYPES OF ANXIETY
TYPES OF ANXIETY

- Panic disorder
- Generalized anxiety disorder
- Obsessive-compulsive disorder
- Post-traumatic stress disorder
- Phobias (specific/agoraphobia)
- Social anxiety disorder
PANIC DISORDER

- Recurrent unexpected panic attacks
- Panic attacks associated with $\geq 1$ of the following, lasting $\geq 1$ month
  - Persistent concern about attacks
  - Worry about the implications of attacks
  - A significant change in behavior
GENERALIZED ANXIETY DISORDER

- Excessive worry (cannot be controlled)
  - About events/activities
  - 6 months
- At least three of the following
  - Restlessness
  - Fatigue
  - Poor concentration
  - Irritability
  - Muscle tension
  - Insomnia
OBSESSIVE COMPULSIVE DISORDER

- **Obsessions**
  - Recurrent thoughts (ego-dystonic)
  - Often of a violent or sexual nature

- **Compulsions**
  - Repetitive behaviors that cannot be controlled
PTSD

- Exposure to extreme traumatic event
  - Intense fear, helplessness, or horror
- Significant dysfunction/distress
- Symptom clusters
  - Re-experiencing
  - Avoidance/emotional numbing
  - Increased arousal
- Symptoms persist for > 1 month
ETIOLOGICAL MODEL

Genetic factors

Vulnerability and resistance genes

Trauma

HPA axis dysfunction

Vulnerability/phenotypic plasticity

Developmental trajectory

Enriched environment

Social support

Psychiatric intervention

Psychoimmune disease

Anxiety

Depression
MAJOR DEPRESSION

Four Hallmarks:

- Depressed mood
- Anhedonia
- Physical symptoms
- Psychological symptoms
DEPRESSED MOOD

Hallmark 1

- Neither necessary, nor sufficient
- Can be misleading
- Beware of asking the question, “Are you depressed?”
ANHEDONIA

**Hallmark 2**

- Loss of interest or pleasure
- May be most important and useful hallmark
- Ask, “What do you enjoy doing?”
PHYSICAL SYMPTOMS

Hallmark 3

- Sleep disturbance
- Appetite or weight change
- Low energy or fatigue
- Psychomotor changes
PSYCHOLOGICAL SYMPTOMS

Hallmark 4

- Low self-esteem or guilt
- Poor concentration
- Suicidal ideation or persistent thoughts of death
CHRONIC DEPRESSION (DYSTHYMIA)

- Characterized by 2 years of depressed mood, occurring more days than not
- Persists with at least 2 other symptoms of depression
- Increases risk of major depressive episodes
COMPLEXITIES OF ASSESSMENT

Complexity #1 (stigma)

“Fallacy of good reasons”

• “I have good reasons to be depressed…”
• “who wouldn’t be depressed?…I would too”

Complexity #2 (multi-determined symptoms)

“Confound of overlapping etiology”

• 4/9 signs/sx. may be ‘caused’ by either or both depression or co-morbid physical illness
  – low energy/fatigue
  – loss of appetite
  – trouble sleeping
  – slowing of motor movements
DMS IV TR: MODIFIED INCLUSIVE APPROACH

“Count all physical symptoms... unless they are clearly and fully accounted for by the physical illness”
MINOR DEPRESSION

- Depressed mood or anhedonia
- + additional dep. symptoms
- Symptoms present < 2 yrs
- Dx = Adjustment disorder
- Dx = Depressive disorder nos
- Significant disability
PATIENT HEALTH QUESTIONNAIRE: (PHQ)

- 9-item, self-administered questionnaire
- Validated for diagnostic assessment
  - 1st 2 questions useful for screening
- Validated for follow up of outcomes
- Clinically significant depression
  ("CSD"): PHQ = 10 or greater

Spitzer R, et al. JAMA 1999; Kroenke K et al, Medical Care, 2003
Kroenke K et al, J Gen Int Med, 2001
PHQ - 9 Symptom Checklist

1. Over the **last two weeks** have you been bothered by the following problems?

<table>
<thead>
<tr>
<th>Problem</th>
<th>Not at all 0</th>
<th>Several days 1</th>
<th>More than half the days 2</th>
<th>Nearly every day 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Little interest or pleasure in doing things</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>b. Feeling down, depressed, or hopeless</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>c. Trouble falling or staying asleep, or sleeping too much</td>
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<td></td>
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<tr>
<td>d. Feeling tired or having little energy</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>e. Poor appetite or overeating</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>f. Feeling bad about yourself, or that you are a failure . . .</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>g. Trouble concentrating on things, such as reading . . .</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>h. Moving or speaking so slowly . . .</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>i. Thoughts that you would be better off dead . . .</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. **how difficult** have these problems made it for you to do your work, take care of things at home, or get along with other people?

- a. Little interest or pleasure in doing things: More than half the days
- b. Feeling down, depressed, or hopeless: Nearly every day
- c. Trouble falling or staying asleep, or sleeping too much: Nearly every day
- d. Feeling tired or having little energy: Nearly every day
- e. Poor appetite or overeating: Nearly every day
- f. Feeling bad about yourself, or that you are a failure: Nearly every day
- g. Trouble concentrating on things, such as reading: Nearly every day
- h. Moving or speaking so slowly: More than half the days
- i. Thoughts that you would be better off dead: Nearly every day

Subtotals: 3 4 9

TOTAL: 16
SCORING THE PHQ: SEVERITY

Count numerical values of symptoms
- 0-4 not clinically depressed
- 5-9 mild depression
- 10-14 moderate depression
- >14 severe depression

- 88% sensitivity, 88% specificity (MD)
USE OF THE PHQ

◆ Assess high-risk, ‘red flag’ patients
  - Chronic illness
  - Unexplained physical complaints
    - sleep disorder, fatigue
  - Patients who appear sad
  - Recent major stress or loss
3. Questions about anxiety.

   a. In the last 4 weeks, have you had an anxiety attack—suddenly feeling fear or panic?  
   If you checked "NO," go to question 5.

   b. Has this ever happened before?

   c. Do some of these attacks come suddenly out of the blue—that is, in situations where you don’t expect to be nervous or uncomfortable?

   d. Do these attacks bother you a lot or are you worried about having another attack?

4. Think about your last bad anxiety attack.

   a. Were you short of breath?

   b. Did your heart race, pound, or skip?

   c. Did you have chest pain or pressure?

   d. Did you sweat?

   e. Did you feel as if you were choking?

   f. Did you have hot flashes or chills?

   g. Did you have nausea or an upset stomach, or the feeling that you were going to have diarrhea?

   h. Did you feel dizzy, unsteady, or faint?

   i. Did you have tingling or numbness in parts of your body?

   j. Did you tremble or shake?

   k. Were you afraid you were dying?

5. Over the last 4 weeks, how often have you been bothered by the following problems?

   a. Feeling nervous, anxious, on edge, or worrying a lot about different things  
   If you checked "Not at all," go to question 6.

   b. Feeling restless so that it is hard to sit still

   c. Getting tired very easily

   d. Muscle tension, aches, or soreness

   e. Trouble falling asleep or staying asleep

   f. Trouble concentrating on things, such as reading a book or watching television

   g. Becoming easily annoyed or irritated

FOR OFFICE CODING: Pan Syn if all of #3a–d are "YES" and four or more of #4a–k are "YES." Other Anx Syn if #5a and answers to three or more of #5b–g are "More than half the days."
Risk of Suicide Attempts Among Patients with Anxiety Disorders

Kessler RC et al. *Arch Gen Psychiatry*. 1999;56:617-626.
TREATMENT OF DEPRESSION
TREATMENT

- Watchful waiting
- Psychotherapy
- Antidepressant medication
- Combination therapies
WATCHFUL WAITING (WW)

- Some low intensity depressions remit spontaneously
- WW is an acceptable “treatment plan”
- Initial treatment of choice for minor depression

Intensity of WW
- Low: repeat PHQ only (mild depression)
- Moderate: w/care management (mod. depression)
- If no remission in 6 months, treat more aggressively
THREE PHASES OF TREATMENT

Time

Symptom Severity

Normal

Response

> 50%

STOP Rx

Acute Phase (3 months+)

Remission

Relapse

Relapse Recurrence

> 65 to 70%

STOP Rx

Continuation Phase (4-9 months)

Recovery

Recurrence

Oxman, 2001
GOAL: FULL REMISSION

- Remission of symptoms treatment goal
  - Resolution of emotional/physical symptoms
- Restoration of full functioning
  - Return to work, hobbies, relationships
- PHQ score < 5 for three months
Potential Consequences of Failing to Achieve Remission

- Increased risk of relapse and resistance¹-³
- Continued psychosocial limitations⁴
- Decreased ability to work and productivity⁵,⁶
- Increased cost for medical treatment⁶
- Sustained depression may worsen morbidity/mortality of other conditions⁷-⁹

PSYCHOTHERAPY

◆ Effective (CBT/IPT/PST)
  • Mild to moderate major depression
  • Adjunct to antidepressants

◆ Possibly effective
  • Dysthymia (chronic depression)
  • Minor depression
  • For patients in life transitions or with personal conflicts
OFFICE COUNSELING

S schedule regular activities
P plan pleasant events
E exercise
A assertiveness
K kind thoughts about self

Christensen et al: Psychiatry for Primary Care, 2002
NON-SPECIFIC SUPPORT

Reflective listening
  • If I understand you correctly, you…

Empathic communication
  • I can see you feel very sad…(reflection)
  • I can understand…(legitimation)

Specific offer of support
  • I am here to help you…

Partnership
  • Let’s you and I together…

Respect
  • I am very impressed by…
PHARMACOTHERAPY

- **Effective**
  - major depression
  - chronic depression (dysthymia)

- **Equivocal**
  - minor depression
ANTIDEPRESSANTS

- **TRICYCLICS**
- **SSRIs**
  - citalopram (Celexa)
  - escitalopram (Lexapro)
  - fluoxetine (Prozac)
  - paroxetine (Paxil)
  - sertraline (Zoloft)
- **OTHER NEW AGENTS**
  - bupropion (Wellbutrin SR, XL) - DA/NE
  - duloxetine (Cymbalta) - SRI/NRI
  - mirtazapine (Remeron) - NE/5HT
  - venlafaxine (Effexor XR) - SRI/NRI
MEDICATION ALGORITHM

- Start with SSRI or new agent
- Early follow-up (1-2 weeks)
- Increase dose every 2-4 weeks (to evaluate effect of each dose change)
- Repeat PHQ every month
- MCID=5 points on PHQ
- Raise dose or change treatment until PHQ<5 for 3 months (remission)
PARTIAL OR NON-RESPONSE

- If no response, switch class
- If partial response at maximum dose, consider augmentation or consultation
- Continue medication for at least 4-9 months after full remission
- Use full-dose maintenance for recurrent depressions
Recurrence becomes more likely with each episode of depression:

- **First episode**: >50%
- **Second episode**: ≈70%
- **Third+ episode**: 80%-90%

Risk recurrence (%) following recovery during long-term follow-up*

TRICYCLIC ANTIDEPRESSANTS

Side Effects:

- anticholinergic
- antihistaminergic
- antiadrenergic
- quinidine-like effects

* nortriptyline and desipramine least toxic
ADVANTAGES OF SSRI\textsubscript{s} AND OTHER NEW AGENTS

- Fewer side effects
- Safety profile
- Increased patient satisfaction
- Improved adherence to therapy
- Cost savings
CHOOSING AGENTS IN ELDERLY/MEDICALLY ILL

- **Generics**
  - fluoxetine; paroxetine; mirtazapine; bupropion
  - (citalopram will be generic soon)

- **Fluoxetine (Prozac)** - long half-life; P450 inhibition;
  - ↑ anxiety (only in short term), ↑ insomnia

- **Paroxetine (Paxil)** – sedating/multiple indications/weight gain/P450 inhibition/significant withdrawal problems/anti-cholinergic activity
DRUG INTERACTIONS
(INHIBITION OF CYTOCHROME P450)

IID$_6$

- **Moderate inhibition**
  - duloxetine (Cymbalta)
  - fluoxetine* (Prozac)
  - paroxetine* (Paxil)

- **Low inhibition**
  - bupropion* (Wellbutrin)
  - escitalopram (Lexapro)
  - mirtazapine* (Remeron)
  - sertraline (Zoloft)
  - venlafaxine (Effexor)

*generic available
DRUG INTERACTIONS

- Obtain medication history
- Be aware that all drugs can affect the action and serum levels of other drugs
- Monitor the clinical effects and serum levels of all medications
- Use electronic data base
HALF-LIFE

Long (longer than 1 day)
- fluoxetine (Prozac)

Short
- other SSRIs (once a day)
- Cymbalta (once a day)
- Effexor XR (once a day)
- mirtazapine (once/day)
- bupropion SR (1-2x/day)
POTENTIAL ROLE OF DUAL AGENTS
(venlafaxine, amitriptyline, duloxetine)

- all antidepressants may not be equally effective
- dual agents (NE, 5 HT) may be more effective
- if more patients reach remission with dual agents, may be ultimate pharmacoeconomic advantage to dual agents
VENLAFAXINE VS. SSRIs

Remission: HAM-D_{17} \leq 7 (%)

- Placebo (n=446)
- SSRIs* (n=748)
- Venlafaxine (n=851)

*Fluoxetine (6 studies), paroxetine (1 study), fluvoxamine (1 study).
†P \leq 0.05 drug vs placebo. ‡P \leq 0.05 venlafaxine vs SSRI. Thase ME, et al. Br J Psychiatry. 2001
SIDE EFFECTS (SSRIs)

- Agitation/insomnia
- GI distress
- Sexual dysfunction
SIDE EFFECTS (OTHER NEW AGENTS)

- **bupropion** - agitation; (seizure risk) (Wellbutrin)
- **duloxetine** - nausea (Cymbalta)
- **mirtazapine** - sedation; weight gain (Remeron)
- **venlafaxine** - GI distress; (1-3% ↑ BP) (Effexor)
MANAGING SIDE EFFECTS

- Insomnia/agitation
  - Use adjunctive sedating agent
  - Switch to mirtazapine

- Sexual dysfunction
  - Switch to bupropion, mirtazapine
  - Add bupropion, sildenafil, yohimbine
MANAGING SIDE EFFECTS

- Sedation
  - Give medication HS

- GI distress
  - Give medication after meals

- Anticholinergic effects
  - Bulk in diet, lemon drops

- Postural hypotension
  - Hydration, change position slowly, support hose
COMORBID ANXIETY SYMPTOMS/DISORDER

- Educate patient: SSRIs effective but increase anxiety in short-term
- Start with low dose SSRI, titrate slowly
- Consider adjunctive sedative/hypnotic, (trazodone at hs or benzodiazepine)
- Use buspirone for anxiety (not panic)
- Consider venlafaxine/mirtazapine monotherapy
ANTIDEPRESSANTS IN DIABETES

- Tricyclics
  - useful for diabetic neuropathy
  - watch for postural hypotension and gastroparesis
  - may impair glycemic control
- SSRIs shown to improve depression/GHb
- Evidence of efficacy of new dual agents (venlafaxine, duloxetine) for neuropathy
ANTIDEPRESSANTS IN CAD/CVD

- **Tricyclics**
  - prolong conduction
  - cause postural hypotension
  - may decrease HR variability

- **SADHART** *(Glassman et al JAMA 2002)*
  - Sertraline is safe and effective
  - Sertraline inhibits platelet aggregation
SADHART: Sertraline in Post-MI Depression: Week-24 Responder* Rates

Responder Rates (%) 186 183

Sertraline Placebo

P ≤ .014

*Responder: CGI-I ≤ 2.

Glassman, *JAMA*, 2002
<table>
<thead>
<tr>
<th>Adverse events* (%)</th>
<th>Total</th>
<th>Severe</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sertraline†</td>
<td>Placebo‡</td>
</tr>
<tr>
<td>Total cardiovascular§ (%)</td>
<td>52.7</td>
<td>59.0</td>
</tr>
<tr>
<td>Others (%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nausea</td>
<td>19.9</td>
<td>10.9</td>
</tr>
<tr>
<td>Diarrhea</td>
<td>18.8</td>
<td>7.7</td>
</tr>
<tr>
<td>Insomnia</td>
<td>18.8</td>
<td>18.8</td>
</tr>
<tr>
<td>Dyspnea</td>
<td>13.4</td>
<td>19.7</td>
</tr>
<tr>
<td>Fatigue</td>
<td>14.5</td>
<td>13.7</td>
</tr>
<tr>
<td>Pain</td>
<td>10.2</td>
<td>11.5</td>
</tr>
<tr>
<td>Headache</td>
<td>20.4</td>
<td>16.4</td>
</tr>
<tr>
<td>Dizziness</td>
<td>15.6</td>
<td>12.0</td>
</tr>
</tbody>
</table>

*≥ 10% in either group.
†(n = 186).
‡(n = 183).
§Includes angina, chest pain, edema, palpitations, syncope, postural dizziness, CHF, MI, BP, tachycardia, bradycardia.

Glassman, *JAMA*, 2002
PARTIAL OR NO RESPONSE

- Check for adherence
- Re-evaluate diagnosis
- Adjust dosage
- Change antidepressant
- Augment (lithium, T3, other class)
- Consider dual action agent
- Add psychotherapy
- Atypical antipsychotic
- Refer for expert consultation
OTHER TREATMENTS

- Psycho-stimulants
  - methylphenidate (Ritalin)
  - dextroamphetamine
  - modafinil (Provigil)

- Electroconvulsive therapy
TREATMENT OF ANXIETY
# 5-HT Drugs—Other Approved Indications

<table>
<thead>
<tr>
<th>Drug</th>
<th>MD</th>
<th>Panic</th>
<th>OCD</th>
<th>SAD</th>
<th>GAD</th>
<th>PTSD</th>
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<tbody>
<tr>
<td>citalopram</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>escitalopram</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>fluoxetine</td>
<td>Adult and children</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td>BN</td>
</tr>
<tr>
<td>fluvoxamine</td>
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<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>paroxetine</td>
<td>Adult</td>
<td>X</td>
<td>Adult</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>sertraline</td>
<td>X</td>
<td>X</td>
<td>Adult and children</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>venlafaxine</td>
<td>X</td>
<td></td>
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</tbody>
</table>

DEP=major depression; OCD=Obsessive-compulsive disorder; SAD=social anxiety disorder; GAD=generalized anxiety disorder; PTSD=post-traumatic stress disorder; BN=bulemia nervosa; PDD=premenstrual dysphoric disorder
## TREATMENTS FOR ANXIETY DISORDERS

<table>
<thead>
<tr>
<th>Disorder</th>
<th>CBT</th>
<th>SSRI</th>
<th>Bus**</th>
<th>Antidep*</th>
<th>BZ***</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panic Disorder</td>
<td>X</td>
<td>X</td>
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<td>X</td>
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<tr>
<td>Soc anxiety disorder</td>
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<tr>
<td>OCD</td>
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<tr>
<td>Generalized anxiety</td>
<td>X</td>
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<td>X</td>
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<tr>
<td>PTSD</td>
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<tr>
<td>Specific phobia</td>
<td>X</td>
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</tbody>
</table>

*Tricyclic antidepressants and venlafaxine (duloxetine soon)

**Buspirone

**CBT = cognitive behavioral therapy; ***BZ = benzodiazepines.
BENZODIAZEPINES
(all available as generics)

Short acting:  
- Ativan (lorazepam)*
- Serax (oxazepam)*

Intermediate:  
- Xanax (alprazolam)

Long acting:  
- Klonopin (clonazepam)
- Valium (diazepam)
- Librium (chlordiazepoxide)

*excreted in the urine, after simple metabolism
PSYCHOPHARMACOLOGY IN THE ELDERLY: SPECIAL CONSIDERATIONS

- **Pharmaco-kinetics - increased effect**
  - hepatic metabolism decreased
  - decreased protein binding

- **Pharmaco-dynamics - increased effect**
  - increased receptor sensitivity

- **Start low, go slow, but GO!**