

## **Internal Medicine Board Certification Review 2009: Psychiatry**

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\*indicates slide included for reference and  
may be skipped during the presentation

### **IMBCR Psychiatry: Key issues**

- 1) Rule out Medical conditions causing psychiatric symptoms
- 2) Rule out Substance abuse or iatrogenic medications
- 3) Consider Psychiatric Diagnosis

## **IMBCR Psychiatry: The Three S's of the Psychiatric Interview**

- 1) S – Stressors/triggers
- 2) S – Suicidality
- 3) S – Substance Abuse

## **Internal Medicine Board Certification Review: Psychiatry Outline**

### **Mood Disorders**

Anxiety Disorders

Psychotic Disorders

Delirium and Dementia (not covered)

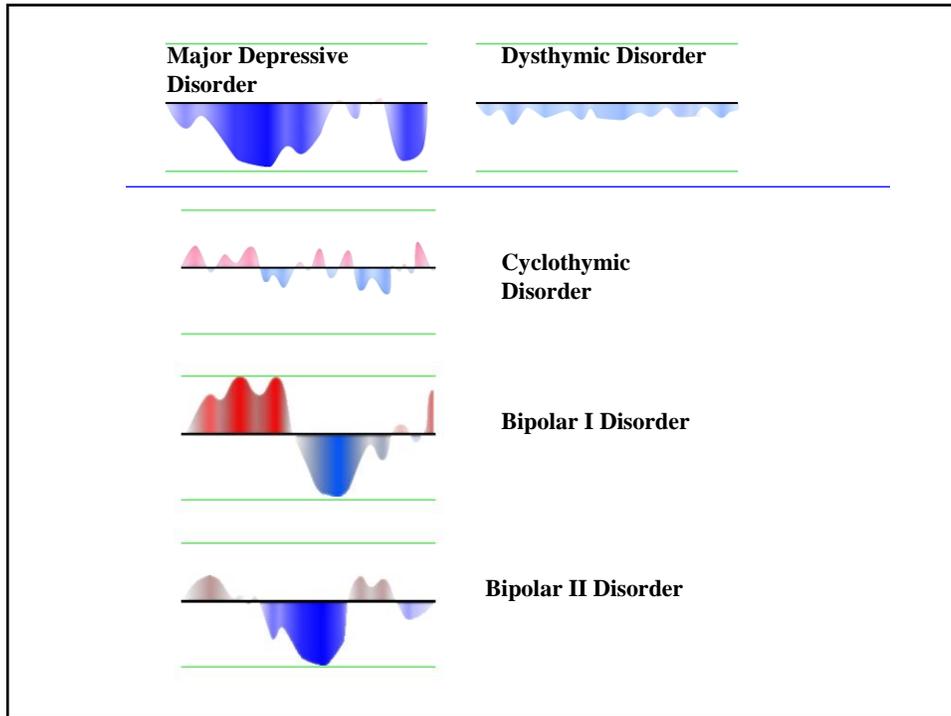
Somatoform Disorders

Substance Abuse Disorders

Eating Disorders (not covered)

Personality Disorders

Suicide (will skip)



## Internal Medicine Board Certification Review: Psychiatry Outline

Mood Disorders

### Major Depressive Disorder

## **Case Vignette#1**

A 41-year-old woman with recent diagnosis of systemic lupus erythematosus presents in your outpatient clinic with depression for 4 weeks. She reports 5 pound weight loss, little energy or interest in life, poor sleep, feelings of worthlessness/hopelessness, and thoughts of death and suicide.

## **Case Vignette#1 (continued)**

She has been taking prednisone 80mg daily for the past four weeks with partial improvement of her lupus symptoms. Her husband reports that her current depressive symptoms are very similar to the ones she experienced three years earlier when she was hospitalized for depression.

## Case Vignette#1 (continued)

Which ONE of the following diagnoses is LEAST likely?

- a. Adjustment Reaction with Depressed Mood
- b. Major depressive disorder, recurrent
- c. Mood Disorder Due to a General Medical Condition with Depressive Features
- d. Substance-induced Mood Disorder with Depressive Features
- e. Substance abuse

## Case Vignette#1 (continued)

### Discussion:

- a. Adj rxn – recent diagnosis of SLE
- b. MDD – this could be a recurrence
- c. Due to a General Medical Condition– SLE involves CNS
- d. Substance-induced Mood Disorder – corticosteroids generally cause euphoria, but can cause depression
- e. Substance abuse – common things are common

## Case Vignette (continued)

Which ONE would be the LEAST appropriate intervention?

- a. Assess for suicidality with no medication changes, f/u in one wk
- b. refer for couple's counseling
- c. Obtain more hx of course of depression, emotional impact of SLE
- d. Start citalopram 40mg daily
- e. Taper off prednisone

## Case Vignette (continued)

Discussion:

- a. Assess for suicidality with no medication changes, f/u in one wk
- b. Refer for couple's counseling
- c. Obtain more hx of course of depression, emotional impact of SLE
- d. Start citalopram 40mg daily
- e. Taper off prednisone

## Major Depressive Episode: SIG E CAPS criteria

Depressed mood (or anhedonia), plus:

- **S** –Sleep symptoms
- **I**—lack of Interest.
- **G**—feelings of Guilt
- **E**—lack of Energy.
- **C**--lack of Concentration.
- **A**--lack of Appetite.
- **P**--Psycomotor changes
- **S**--thoughts of Suicide

## Major Depressive Episode: DSM IV Criteria\*

Five (or more) of the following symptoms have been present during the same 2-week period and represent a change from previous functioning; at least one of the symptoms is either (1) depressed mood or (2) loss of interest or pleasure.

- depressed mood most of the day, nearly every day, as indicated by either subjective report (e.g., feels sad or empty) or observation made by others (e.g., appears tearful). (In children and adolescents, this may be characterized as an irritable mood.)
- markedly diminished interest or pleasure in all, or almost all, activities most of the day, nearly every day
- significant weight loss when not dieting or weight gain (e.g., a change of more than 5% of body weight in a month), or decrease or increase in appetite nearly every day.
- insomnia or hypersomnia nearly every day
- psychomotor agitation or retardation nearly every day
- fatigue or loss of energy nearly every day
- feelings of worthlessness or excessive or inappropriate guilt nearly every day
- diminished ability to think or concentrate, or indecisiveness, nearly every day
- recurrent thoughts of death (not just fear of dying), recurrent suicidal ideation without a specific plan, or a suicide attempt or a specific plan for committing suicide.

## Major Depressive Disorder Treatments

- Psychopharmacological:  
SSRI's, TCA's, MAOI's, psychostimulants
- Psychosocial (may also be used first-line):  
Cognitive-behavioral therapy, interpersonal therapy
- Somatic:  
Electroconvulsive therapy, transcranial magnetic stimulation, vagal nerve stimulation (efficacy remains unclear)

N.B. All treatments for major depression about equally efficacious (ECT may be a bit better)

## Medications

- SSRI's
- Other Antidepressants
- Tricyclics
- MAOI's



## SSRI's (selective serotonin reuptake inhibitors)

- First line
- Fairly safe in OD
- Recommend 9m minimum duration of treatment

Hx: 3-Phenoxy-3-phenylpropylamine, a compound structurally similar to diphenhydramine, was taken as a starting point to make a chemical compound that would inhibit serotonin reuptake

Fluoxetine (Prozac), sertraline (Zoloft), paroxetine (Paxil), fluvoxamine (Luvox), citalopram (Celexa), escitalopram (Lexapro)

## SSRI: Side Effects

"long term": weight gain (moderate), sexual side effects (in around 35%)

"short term": nausea, diarrhea, headache, rash, insomnia, sweating

"serotonin syndrome": usually in combo with two or more serotonergic agents: restlessness, confusion, flushing, tremor progressing to hyperthermia, hypertonicity, rhabdomyolysis, death

"suicide controversy": in 2004, black box on SSRI and other antidepressant medications warning of increased risk of suicidality in patients younger than 24.

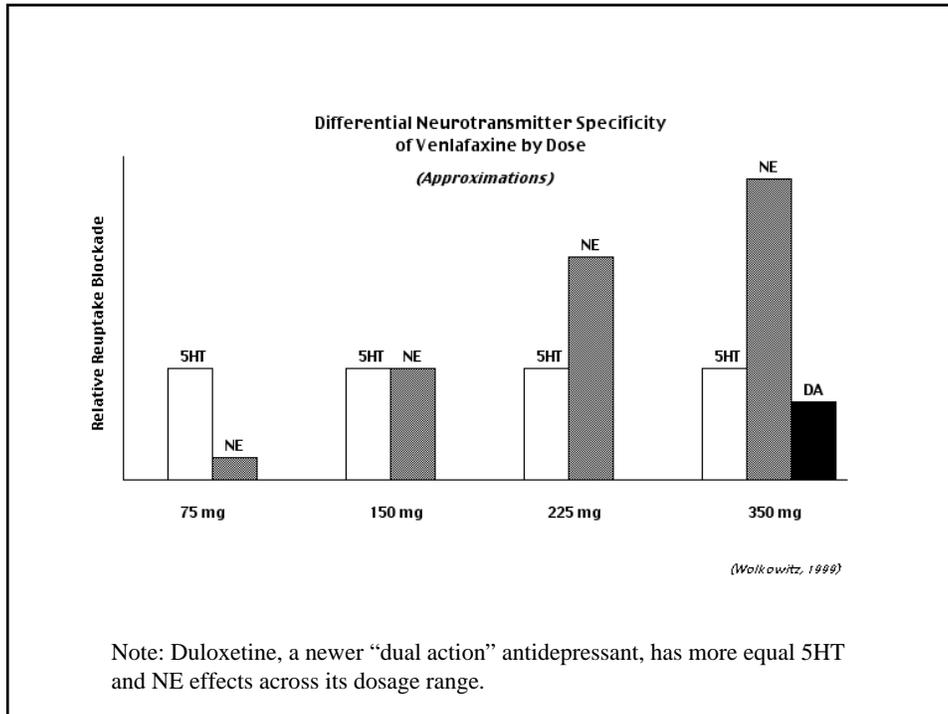
However, decrease in ssri prescriptions may have resulted in increased suicide rates in this population. [*Am J Psychiatry* **164** (9): 1356–63]

## Other Antidepressants

- Bupropion (Wellbutrin):
  - low rate of sexual side effects or wt gain,
  - Assoc. w/ increased rate of seizures, not for pts w/ eating d/o or prior sz d/o
- Duloxetine (Cymbalta):
  - mixed NE and 5HT activity,
  - Alleviate pain of diabetic neuropathy and fibromyalgia?
- Mirtazapine (Remeron):
  - sedation and weight gain

## Other Antidepressants

- Nefazodone (Serzone):
  - 5-HT<sub>2</sub> blocker, ?for anxious depression
  - black box for liver failure (1/250K pt-yrs)
  - low rate of sexual se's
- Trazodone (Desyrel):
  - usually prescribed as a hypnotic
  - Warn about priapism
- Venlafaxine (Effexor):
  - Mixed NE and 5HT activity
  - increases BP
  - similar side effect profile to ssri's
  - significant withdrawal syndrome



## **Tricyclic Antidepressants (TCA's)**

- NE reuptake inhibitors
- anticholinergic side effects, orthostatic hypotension, tremor, weight gain, sexual side effects,
- cardiac conduction delay (quinidine like effect)

Examples [not a complete list]: amitriptyline (Elavil), doxepin (Sinequan), imipramine (Tofranil), desipramine (Norpramin), nortriptyline (Pamelor, Aventyl), maprotiline (Ludiomil)

## Monoamine-oxidase inhibitors (MAOIs)

important: dietary restrictions!  
(b/o hypertensive crisis)

side effects: sedation, sexual side effects, weight gain

Drug-drug interactions: ssri's, tca's, OTC cold meds, pressors

phenelzine (Nardil), trancyclopramine (Parnate), [selegiline (Eldepryl) for Parkinson's]

## MAOI Diet

- Avoid:
  - aged cheese
  - aged or cured meats (e.g., air-dried sausage);
  - any potentially spoiled meat, poultry, or fish;
  - broad (fava) bean pods;
  - Marmite concentrated yeast extract;
  - sauerkraut; soy sauce and soy bean condiments;
  - and tap beer.
- Wine and domestic bottled or canned beer are considered safe when consumed in moderation.
- Other foods not mentioned are considered unrestricted.

J Clin Psychiatry 1996 Mar; 57(3):99-104 . **The making of a user friendly MAOI diet.**

# Internal Medicine Board Certification Review: Psychiatry Outline

Mood Disorders

## Bipolar Disorder

## Case Vignette#2

Three weeks ago, a 59yo Caucasian woman with a history of CHF, depression, and alcohol abuse presents to your office with three months of depressed mood. At that time, you started her on citalopram 20mg at bedtime. Today in your office, she describes improved energy but significantly worsened irritability and insomnia, with new onset hyperactivity, racing thoughts, and impulsivity. She also endorses ruminative suicidal thoughts.

She has been on hydrochlorothiazide and potassium supplements for over one year.

## Case Vignette#2 Question

Which ONE of the following interventions is **LEAST** appropriate?

- a. Initiation of divalproex 500mg qhs
- b. Increase citalopram to 40mg daily
- c. Stop citalopram
- d. Trial of quetiapine 50mg daily
- e. Urine toxicology screen

## Case Vignette#2 Answers Discussed

- a. Divalproex is the preferred treatment for bipolar disorder in patients with potential electrolyte and fluid shifts.
- b. **If this patient is having a mixed episode, antidepressants may be the cause and are therefore contraindicated**
- c. Stop citalopram is probably the most appropriate intervention
- d. Low-dose atypical antipsychotics can target insomnia, racing thoughts, and agitation.
- e. Urine toxicology screen is indicated to rule out substance abuse.

n.b. Trial of antidepressants is contraindicated because patient may be experiencing a mixed episode.

## **Bipolar Disorder**

- Formerly known as manic depression
- Bipolar disorder in the primary care population is more common than previously thought (up to 25% of anxious and depressed patients).
- Don't forget about various presentations of hypomanic or manic or mixed episodes.
- Typical triggers include disruption of regular routines of sleep and/or social activities.
- Patients should be instructed to avoid street drugs.

## **Bipolar Disorder Mixed Episode\***

- Duration of 1 week.
- Rapidly alternating moods (sadness, irritability, euphoria) accompanied by symptoms of a Manic Episode and a Major Depressive Episode.
- Frequently includes agitation, insomnia, appetite dysregulation, psychotic features, and suicidal thinking.
- Symptoms are not due to the direct effects of a substance, or a general medical condition.

## **Bipolar Disorder: DIG FAST**

D – Distractibility

I – Insomnia

G – Grandiosity (or inflated self esteem)

F – Flight of Ideas (or racing/crowded thoughts)

A – Activities (increased goal directed activities)

S- Speech (pressured)

T- Thoughtlessness (impulsivity, ie, increased pleasurable activities with potential for negative consequences: sex, money, traveling, driving)

## **Bipolar Disorder: Psychopharm Treatment**

Mood stabilizers:

- Mainstay of treatment
- usually require lab monitoring

## **Bipolar Disorder: Psychopharm Treatment**

lithium carbonate: polyuria (nephrogenic diabetes insipidus, ?interstitial nephritis), hypothyroidism, acne vulgaris (oily skin)

intoxication sx's (cognitive difficulties/confusion, tremor, ataxia)

Labs: pretreatment: CBC, lytes, lfts, creatinine, tft's and then 5d after changing dosage and q6m: trough **lithium level, creatinine, tsh**

## **Bipolar Disorder: Psychopharm Treatment**

divalproex (valproate, Depakote): elevated lft's, thrombocytopenia, weight gain, sedation, rare pancreatitis, ?polycystic ovary syndrome

Labs: pretreatment- CBC w platelets, LFT's, pregnancy

5d after dosage changes and q6m -cbc with plts, lfts, weight, pancreatic enzymes prn abd pain, n/v, anorexia

## **Bipolar Disorder: Psychopharm Treatment\***

Carbamazepine (Tegretol): aplastic anemia,  
drug-drug interactions, autoinduction

Labs: pretreatment: cbc, platelets,  
reticulocytes, serum iron, ALT, AST, LDH,  
Alk Phos, serum bilirubin, serum  
electrolytes, EKG, eye exam/slit lamp,  
pregnancy test

5 days after dosage adjustment:  
carbamazepine level

every 2 weeks, first 2-3 months: CBC,  
carbamazepine level

Then q3m: electrolytes, ALT, AST, LDH, alk  
PO4, bilirubin, carbamazepine level

## **Bipolar Disorder other meds\***

- Lamotrigine (Lamictal)
- Oxcarbazepine (Trileptal)

## **Bipolar Disorder: Psychopharm Treatment**

### Antidepressants

- Monotherapy with antidepressants in bipolar disorder is a significant risk factor for switches into hypomania or mania or cycle acceleration.
- Therefore, use a mood stabilizer first!
- Tricyclic antidepressants and MAO-I's represent greater risk.
- Antidepressants of roughly equal efficacy.

## **Bipolar Disorder: Psychopharm Treatment**

### Atypical Antipsychotics (see section on Psychotic Disorders)

- Helpful with agitation, psychotic features, insomnia
- Less risk of tardive dyskinesia compared with traditional antipsychotics
- High rate of weight gain, dyslipidemia, hypercholesterolemia, hyperglycemia

### Sedative-hypnotics (see section on Anxiety Disorders)

- Useful adjuncts for maintaining sleep-wake cycles
- N.B. High rates of co-morbid substance abuse in patients with bipolar disorder.

## Bipolar Disorder: psychosocial treatments\*

- Cognitive-behavioral therapy
- Psychoeducation
- Family-Focused Therapy
- Interpersonal psychotherapy and social rhythm therapy

Used in conjunction with pharmacological management

## Internal Medicine Board Certification Review: Psychiatry Outline

Mood Disorders

**Anxiety Disorders**

Psychotic Disorders

Somatoform Disorders

Substance Abuse Disorders

Personality Disorders

Suicide

### **Case Vignette#3**

A 27-year-old woman has dissociative (feelings of unreality) symptoms accompanied by nightmares, hypervigilance, and anger that continue 6 weeks after being a victim of an armed robbery and assault. What diagnosis, if any, should she receive?

1. Acute Stress Disorder
2. Post-Traumatic Stress Disorder
3. Generalized anxiety disorder
4. Obsessive-Compulsive Disorder
5. Anxiety Disorder, not other specified

### **Case Vignette#3 Answer**

2. Post-Traumatic Stress Disorder

Acute Stress Disorder lasts for less than 4 weeks, whereas PTSD lasts more than 4 weeks. PTSD also generally emphasizes avoidance symptoms, but these can overlap with dissociative symptomatology.

## Question

What is the prevalence of panic disorder in patients with coronary artery disease?

- 1) 2%
- 2) 5%
- 3) 10%
- 4) 50%
- 5) 75%

## Question

What is the prevalence of panic disorder in patients with coronary artery disease?

Answer: **10-50%** (choices 3 or 4)

Fleet et al. *Is panic disorder associated with coronary artery disease? A critical review of the literature.* J Psychosom Res 2000 Apr-May; 48(4-5): 347-56.

## Cardiac Presentations of Anxiety\*

- GAD was the primary dx among 20% of patients with atypical chest pain (1).
- 55% of patients with chest pain and normal coronary arteries (2).
- 50% of patients seeking cardiac evaluation (3).

1. Kane, F et al. Angina as a symptom of psychiatric illness. Southern Med J 1988;81:1412-1416.
2. Wulsin LR et al. Axis I disorders in ER patients with atypical chest pain. Int J Psychiatry Med 1991;21:37-46
3. Logue MB et al. Generalized anxiety disorder patients seek evaluation for cardiological symptoms at the same frequency as patients with panic disorder. J Psychiatr Res 1993;27:55-59.

## GI Presentations of Anxiety: Irritable Bowel Syndrome\*

Study	Lifetime prevalence of GAD	Current rate of GAD
1. Walker et al. (n=47)	58%	25%
2. Lydiard et al. (n=35)	28%	13%

1. Walker EA et al. Psychiatric illness and irritable bowel syndrome: a comparison with inflammatory bowel disease. Am J Psychiatry 1990;147:1656-1661.
2. Lydiard RB et al. Prevalence of psychiatric disorders in patients with irritable bowel syndrome. Psychosomatics 1993;34:229-234.

## Anxiety disorders

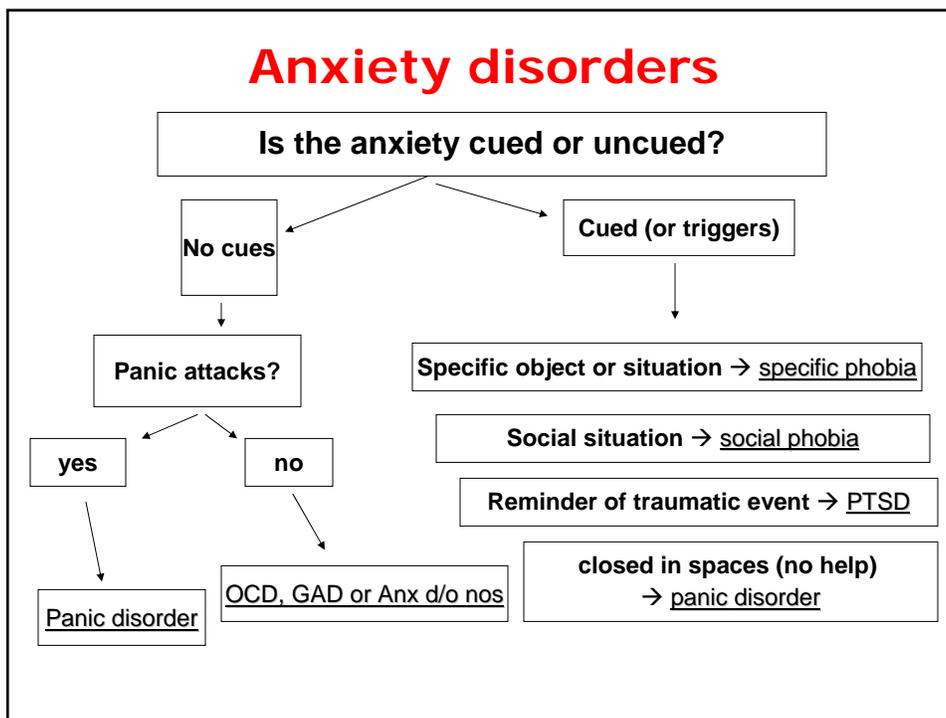
- Panic Disorder +/- Agoraphobia
- Social Phobia (Social Anxiety Syndrome)
- Specific Phobia
- Generalized anxiety disorder
- Obsessive-Compulsive Disorder
- Post-Traumatic Stress Disorder

– Acute Stress Disorder

Adjustment disorder, with anxious features

Anxiety Disorder, not other specified

## Anxiety disorders



## **Anxiety disorders**

### Key Diagnostic Points

- Panic attacks can occur in a number of Anxiety Disorders in addition to Panic Disorder
- The diagnosis of Panic Disorder requires the presence of recurrent unexpected (uncued) panic attacks.
- The uncued panic attacks of Panic Disorder can progress, over time to the cued attacks of Specific Phobia or Social Phobia (and vice versa).

## **Panic Attack**

- Episodes have a sudden onset and peak rapidly (usually in 10 minutes or less)
- Often accompanied by a sense of imminent danger or doom and an urge to escape
- Frequently presents to ER with fear of catastrophic medical event (e.g., MI or stroke)

## Panic Attack

Discrete period of intense fear or discomfort accompanied by four or more of following:

- Palpitations
- Sweating
- Trembling
- Choking
- Chest pain
- Dizzy, faint
- Derealization
- Numbness
- Chills or hot flashes
- Fear of losing control, going crazy
- Fear of dying, passing out



## Panic Attacks: A Syndrome

- Not specific to Panic Disorder
- Occurs in social phobia, specific phobia, PTSD and OCD
- May herald depression
- May be secondary to:
  - underlying medical condition
  - medication side effect
  - illicit drug use

## **Panic Disorder**

- Recurrent unexpected panic attacks
- Followed by one or more of the following:
  - Anticipation of additional attacks
  - Worry about implications of attacks
  - Change in behavior
- With or without Agoraphobia

## **Agoraphobia**

- Anxiety about being in situations from which escape might be difficult
- Usually secondary to panic attacks
- Avoided situations include: driving, bridges, tunnels, elevators, airplanes, malls, long lines, sitting in middle of row, etc.

## Post-Traumatic Stress Disorder

Requires history of trauma

Three clusters of symptoms

- Re-experiencing (flashbacks, nm's)
  - Avoidance and numbing
  - Arousal (insomnia, hypervigilance)
- 
- Duration of more than one month

## Obsessive-compulsive disorder

Patient usually has obsessions and compulsions:

**Obsessions** are recurrent and persistent thoughts, impulses, or images that are experienced, at some time during the disturbance, as intrusive and inappropriate and that cause marked anxiety or distress. The person recognizes that the obsessional thoughts, impulses, or images are a product of his or her own mind.

**Compulsions** are repetitive behaviors or mental acts that the person feels driven to perform in response to an obsession, or according to rules that must be applied rigidly. Generally, they are not connected in a realistic way with what they are designed to neutralize or prevent, or are clearly excessive.

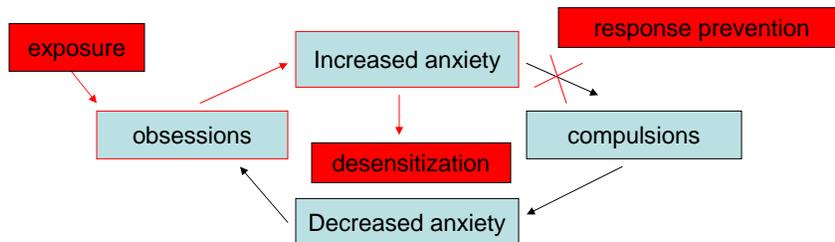
## Obsessive-compulsive disorder

Typical obsessions:	Typical compulsions
Contamination: Fear of dirt or germs, bodily waste or fluids (a feeling of dirtiness)	Repeated washing/cleaning, ritual behavior or thinking
Ordering: Concern with order, symmetry (balance) and exactness	Concern with order, symmetry (balance) and exactness
Perfectionism: Worry that a task has been done poorly, or a mistake has been made	Checking drawers, door locks and appliances to be sure they are shut, locked or turned off (see also hypochondriasis)
Intrusive thoughts: blasphemous, sexual, violent	Ritual behavior or "superstitious thinking"
"I might use it later."	hoarding

## Obsessive-compulsive disorder

Treatments include:

- 1) SSRI's: usually high dose, take longer for effect
- 2) Clomipramine (Anafranil)
- 3) Behavior Therapy:  
Exposure-Response Prevention
- 4) Psychosurgery for treatment-refractory cases



## **Specific Phobia, Social Phobia, Acute Stress Disorder Anxiety Disorder, NOS**

Social Phobia (often overlaps with  
Avoidant Personality Disorder)

Common, but often difficult to treat

Specific Phobia

Usually best treated with  
desensitization, but medication  
augmentation occasionally indicated

## **Generalized Anxiety Disorder\***

- Excessive worries for at least six months about real life problems such as school and work performance.
- Accompanied by anxiety symptoms
  - 3 or more of the following:
    - Restlessness or feeling keyed-up or on edge
    - Easy fatigability
    - Trouble concentrating
    - Irritability
    - Muscle tension
    - Sleep disturbance

## Anxiety Disorders Psychopharmacology

### Antidepressants

SSRI's – first line, 6m duration of treatment, can be used with  
bdz's, side effect management essential

\*(for ocd, medication treatment of choice is serotonergic  
agents, often need to be used for longer periods at upper  
range of dosages)

### Tricyclics

#### Other antidepressants

- Mirtazapine (Remeron)
- Venlafaxine (Effexor)
- Duloxetine (Cymbalta)
- Bupropion (Wellbutrin)
- Nefazodone (Serzone)
- Trazodone (Desyrel)

**Buspirone** – partial agonist of 5HT<sub>1a</sub>

- 5-20mg tid, takes 2-6 weeks
- no w/d sx, easy to use, may be preferred in elderly

## Anxiety Disorders Psychopharmacology

### Anxiolytics– benzodiazepines

- All share same mechanism of action
- Vary by speed of onset, metabolism and duration of action
- Shorter-acting usually means faster speed of onset: eg,
  - alprazolam (Xanax)
  - triazolam (Halcion)
- Longer-acting: diazepam (Valium), clonazepam (Klonopin), lorazepam (Ativan)

## **Anxiety Disorders Psychopharmacology**

### Anxiolytics– benzodiazepines

- Main side effects include: sedation, ataxia, amnesia, potential for abuse
- Generally useful for short-term anti-anxiety, tolerance frequently develops within 1-2 weeks
- Should not be discontinued abruptly (esp. shorter acting bdz's): taper over 1-3 weeks

## **Anxiety Disorders Other sleepers**

### New Sleepers

- Zolpidem (Ambien, Ambien CR)
- Zaleplon (Sonata)
- Eszopiclone (Lunesta)
- Ramelteon (Rozerem)

### Old "Sleepers"

- Trazodone
- Tricyclics (doxepin)
- Mirtazapine
- Antihistamines (diphenhydramine, hydroxyzine)
- antipsychotics

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### **Case Vignette#4**

A 42-year-old man with a history of asthma, irritable bowel syndrome, and schizophrenia presents with a chief complaint of "I feel like jumping out of my skin." He has a history of intermittent medication compliance. Vital signs and physical examination are normal, except for mild rigidity of upper extremities.

## Case Vignette#4 Question

Which of the following medications is the most likely cause of his chief complaint?

- a. Lithium carbonate 600mg po bid
- b. Ibuprofen 400mg tid
- c. Albuterol inhaler two puffs tid
- d. Prochlorperazine 10mg bid
- e. Olanzapine 10mg qhs

## Case Vignette#4 Answers Discussed

- a. Lithium carbonate 600mg po bid
- b. Ibuprofen 400mg tid
- c. Albuterol inhaler two puffs tid
- d. Prochlorperazine 10mg bid (Compazine)
- e. Olanzapine 10mg qhs (Zyprexa)

Potent D2 blockers can cause **akathisia** and EPS

## Psychotic Disorders

“psychosis”: perceptions, thoughts or behaviors that are not based in reality (ie, impairment in reality testing)

Examples: auditory hallucinations, paranoid ideation, delusions

Key points:

- Rule out substance abuse (or other drugs)
- Rule out delirium (which entails disorientation, fluctuating level of consciousness, inattention)
- Psychosis may be present in other psychiatric disorders, not just schizophrenia (eg, psychotic features may be present in major depression or bipolar disorder)

## Psychotic Disorders\*

- Schizophrenia
  - Paranoid, disorganized, catatonic, undifferentiated, residual types
- Schizophreniform disorder
- Brief psychotic disorder
- Schizoaffective disorder
- Delusional disorder
- Shared psychotic disorder (“folie a deux”)

## Psychotic Disorders\*

### Schizophrenia (DSM-IV)

Of unknown etiology, probably heterogeneous neurodevelopmental disorders

DSM-IV Criteria:

- A. At least two of the following: (1) delusions, (2) hallucinations, (3) disorganized speech, (4) grossly disorganized or catatonic behavior, (5) negative symptoms
- B. Marked decrement in psychosocial functioning
- C. Continuous signs of the disturbance for at least 6 months
- D, E, F – exclusion criteria (ie, not due to another psychiatric disorder, medical condition)

## Psychotic Disorders: Traditional Antipsychotics

### Side effects of traditional neuroleptics:

- EPS (extrapyramidal symptoms): parkinsonism (can be treated with anticholinergics), dystonias, akathisia
- Acute dystonic reactions (oculogyric crises): treated with anticholinergic
- Tardive dyskinesia
- Hyperprolactinemia: with assoc. amenorrhea, galactorrhea, sexual dysfunction, osteoporosis
- Neuroleptic malignant syndrome: can be life-threatening, presents with severe rigidity, fever, leukocytosis, tachycardia, blood pressure instability, rhabdomyolysis; treatment is mostly supportive [stop antipsychotic], also dantrolene, bromocriptine, ECT

## Psychotic Disorders: Traditional Antipsychotics

**Antipsychotics** (aka neuroleptics, "major" tranquilizers), divided by degree of potency

Potency refers to degree of D2 antagonism relative to anticholinergic activity

Low-potency vs. high-potency neuroleptics:

- Low-potency associated with less EPS (extrapyramidal symptoms), less parkinsonism (can be treated with anticholinergics)
- All associated with tardive dyskinesia, akathisia
- Greater sedation and weight gain with low-potency
- Anticholinergic side effects greater with low potency neuroleptics: orthostasis, urinary retention, weight gain, blurred vision

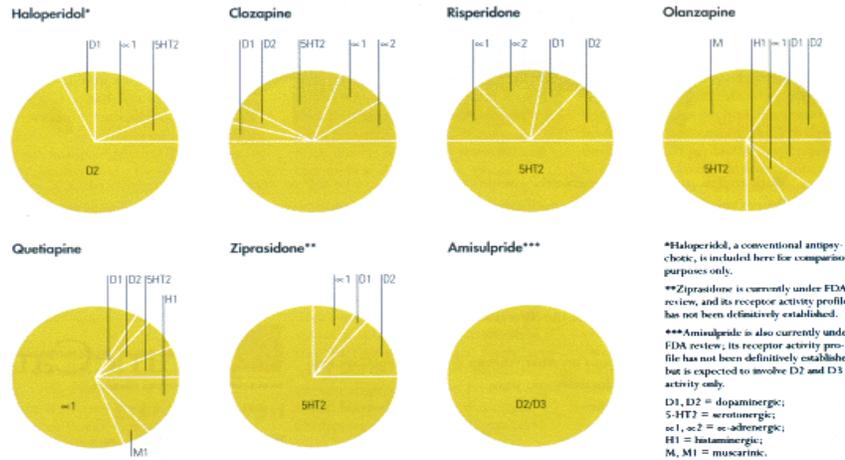
## Psychotic Disorders: Traditional Antipsychotics\*

"Low potency": chlorpromazine (Thorazine), thioridazine (Mellaril)

"Mid potency": trifluoperazine (Stelazine), thiothixene (Navane), perphenazine (Trilafon)

"High potency": haloperidol (Haldol), fluphenazine (Prolixin)

## Receptor activity of atypical antipsychotics



## Psychotic Disorders: Atypical Antipsychotics

- Multiple receptor effects: serotonin and dopamine receptor subtypes
- Lower rates of EPS, including tardive dyskinesia
- Neuroleptic malignant syndrome very rare
- High rate of weight gain, dyslipidemia, hypercholesterolemia, hyperglycemia

Examples: listed in order of rate of weight gain/sedation (greatest to lowest)

Olanzapine (Zyprexa)	2.5mg-20mg at hs
Quetiapine (Seroquel)	12.5mg-600mg at hs
Risperidone (Risperdal)	0.25mg-6mg at hs or twice daily
Invega (paliperidone)	
Ziprasidone (Geodon)	20-160mg a day
Aripiprazole (Abilify)	5-30mg a day

## **Internal Medicine Board Certification Review: Psychiatry Outline**

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## **Case Vignette#5**

A 77yo male, widowed Chinese retired accountant, who is healthy except for mild hypertension and a history of chronic multiple somatic complaints, now complains of "heavy head", as well as decreased energy, hypersomnolence and low mood for the past seven months. Screening neuro exam is unremarkable. Routine labs done two months ago are also noncontributory.

## Case Vignette#5 Question

Which of the following is the MOST appropriate in the management of this patient?

- a. The goal should be complete remission of symptoms.
- b. Initiate citalopram 20mg daily.
- c. Avoid discussing social issues with patient.
- d. Instruct patient to return to clinic for follow-up "as needed".
- e. Instruct patient to go to Emergency Department "as needed".

## Case Vignette#5 Answers Discussed

- a. "Curing the patient" should not be the goal in this situation
- b. Antidepressants can be helpful for subclinical depressions.
- c. Focus on social issues
- d. Regular visits decreases inadvertent reinforcement of symptom production.
- e. As above.

## Somatoform Disorders\*

Somatization Disorder  
Conversion Disorder  
Pain Disorder  
Hypochondriasis  
Factitious Disorder (Munchausen's syndrome)  
Malingering  
Body Dysmorphic Disorder  
Somatoform Disorder, Not Otherwise Specified

## Somatoform Disorders

	Motivation: unconscious	Motivation: conscious
Production of symptoms: unconscious	Conversion Disorder	N.A.
Production of symptoms: conscious	Factitious Disorder	Malingering

## **Somatoform Disorders**

### **Somatization Disorder**

- 8 or more unexplained medical symptoms (0.5% prevalence)
  - "Abridged somatization": 4 or more unexplained physical symptoms
- 4.4% prevalence in general population  
22% prevalence in primary care practice
- Somatoform disorders often overlap with each other and with general medical conditions

## **Somatoform Disorders**

### Conversion Disorder

- Frequently sudden onset ("hysteria")
- Symptoms may include paralysis, gait or coordination disturbance, seizures ("pseudoseizures")
- 13-30% later develop general medical condition

## Somatoform Disorders

### Pain Disorder

- These patients can be particularly challenging
- Often perceived as angry or drug-seeking
- Pain medications often have abuse/tolerance potential
- Patients not infrequently have substance abuse histories
- TCA's can be helpful
- Mindfulness-Based Stress Reduction may also be helpful

## Somatoform Disorders

### Hypochondriasis

- Preoccupied with fears of having a serious disease based upon misinterpretation of bodily symptoms [fyi: average American has one unexplained symptom per week]
- Preoccupation persists despite appropriate medical evaluation and reassurance

### Additional DSM criteria

- Lasts at least 6m
- Not delusional → psychotic disorder
- Not confined to a concern about appearance → body dysmorphic disorder or eating disorder

Tip: rule out OCD-like condition(s)!

## **Management of Chronic Major Somatization\***

### 1) Care Rather Than Cure

Don't try to eliminate symptoms completely

Focus on coping and functioning as goals of treatment

### 2) Diagnostic and Therapeutic Conservatism

Review old records before ordering tests

Respond to requests just as for patient who does not somatize

Frequent visits and physical examinations

Benign remedies

(Adapted from Barsky AJ. Clinical Crossroads: A 37-Year-Old Man With Multiple Somatic Complaints. *JAMA* 1997; 278: 673-9)

## **Management of Chronic Major Somatization\***

### 3) Validation of Distress

Don't refute or negate symptoms

Patient-physician relationship not predicated on symptoms

Focus on social history

Regular visits (not prn) – consider scheduled telephone contacts

Once set, try not to alter the frequency of visits

(Adapted from Barsky AJ. Clinical Crossroads: A 37-Year-Old Man With Multiple Somatic Complaints. *JAMA* 1997; 278: 673-9)

## Management of Chronic Major Somatization\*

### 4) Providing a Diagnosis

Emphasize dysfunction rather than structural pathology

Describe amplification process and provide specific example

Cautious reassurance

Introduce stress model of disease, if appropriate

### 5) Psychiatric Consultation

To diagnose psychiatric comorbidity

For recommendations about pharmacotherapy

For cognitive-behavioral therapy to improve coping or psychotherapy

(Adapted from Barsky AJ. Clinical Crossroads: A 37-Year-Old Man With Multiple Somatic Complaints. *JAMA* 1997; 278: 673-9)

## Internal Medicine Board Certification Review: Psychiatry Outline

Mood Disorders

Anxiety Disorders

Psychotic Disorders

Somatoform Disorders

**Substance Abuse Disorders**

Personality Disorders

Suicide

## Case Vignette#6

A 44 year-old, divorced, white man presents after crashing his car into a telephone pole. He admits to drinking approximately 4-6 drinks a day for the past ten years with a h/o withdrawal seizures. He reports his last drink was 12 hours ago and that "I'm seeing little bugs again." Patient denies loss of consciousness. Pulse is 120/min and blood pressure is 182/92 mmHg. Except for a moderate tremor, physical examination and routine blood work are unremarkable.

## Case Vignette#6 Question

Which of the following is the LEAST appropriate intervention?

- a. Admit patient to the hospital
- b. IV fluids with glucose, followed by thiamine 100mg, multivitamins and folate
- c. Diazepam 20mg iv
- d. Head imaging
- e. Assess hopelessness and future orientation

## **Case Vignette#6 Answers Discussed**

- a. Admit patient to the hospital
- b. IV saline with glucose, followed by thiamine 100mg, multivitamins and folate [give thiamine THEN glucose, don't overhydrate]
- c. Diazepam 20mg iv
- d. Head imaging
- e. Assess hopelessness and future orientation – [assess suicidality]

## **Substance Abuse Disorders**

- Lifetime incidence: approx. 20%
- Fewer than 10% of affected are in treatment
- No definition for addiction in DSM
- Abuse or dependence
- Practical definition: “persistent usage despite negative consequences” [assess for negative consequences – DUI's, blackouts, CAGE]

## **Substance Abuse Disorders\***

Negative consequences:

- 1) Medical: liver, pancreas, stomach, anemia
- 2) Psychiatric: changes in mood, behavior and cognition
- 3) Interpersonal problems
- 4) Occupational problems
- 5) Legal or financial problems

## **Substance Abuse Disorders\***

10 groups of drugs listed in the DSM:

"uppers": cocaine, amphetamine, caffeine, nicotine

"downers": alcohol, opioids, benzodiazepines, sedative-hypnotics, barbiturates

Psychotomimetics: cannabis, hallucinogens, inhalants, phencyclidine

## **Substance Abuse Disorders**

### Key Diagnostic Points

- Diagnosis of dependence requires either tolerance or withdrawal.
- Perceptual changes in Hallucinogen Intoxication occur while the patient is in a state of full wakefulness and alertness.
- Phencyclidine Intoxication is characterized by nystagmus, hypertension and numbness or diminished responsiveness to pain.
- Mydriasis is a sign of intoxication (amphetamine, cocaine, hallucinogens) and a sign of withdrawal with some CNS depressants (opioids).

## **Smoking Cessation Nicotine Dependence**

## **Smoking Cessation (Nicotine Dependence)**

- Nicotine replacement therapy (NRT) has an average one year quit rate 16% vs. 10% for placebo (1)
- Amongst former smokers, retrospective studies indicate that “cold turkey” was the most successful intervention. Eg, amongst 2069 ex-smokers, 25% quit by “cold turkey” method vs. 15% by NRT or bupropion.(2)

## **Patient education: Nicotine Replacement Therapy\***

- NRT is safe.
- NRT is not addictive.
- NRT is best continued until patient is sure he/she can stay off cigarettes.
- If NRT is not working, can 1) increase dosage, 2) use more than one NRT at the same time, 3) use other smoking cessation meds at the same time, 4) use telephone advice on quitting tips
- NRT gum or patch should be used in a specific manner.
- Cost of NRT is a frequent barrier and there are cheaper brands.
- NRT is not a sign of weakness of the patient.

## **Smoking Cessation Pharmacology**

- Zyban (Bupropion)
- Chantix (varenicline)
  - Partial agonist at nicotinic receptors
  - Common side effects of nausea (38%), insomnia (30%), and vivid dreams (13%)
  - Recent reports of depression, anxiety and suicidal ideation
  - 34 completed suicides about of about 4 million users → 1/100K  
(n.b. baseline US suicide rate 10/100K)

## **Alcohol Abuse/Dependence**

## Alcohol Abuse/Dependence

- Obtain NIAAA guide  
(<http://www.medscape.com/viewprogram/6771>)
- Can't rely on lab tests  
(although elevated GGT and MCV are often early signs of alcoholism)
- CAGE questionnaire: **C**-Cut down, **A**-Annoyed, **G**-Guilty, **E**-Eye opener  
[yes to any one of these is a positive screen]

## Alcohol Abuse/Dependence

- 1. Ask about Quantity**  
(men max = 4 drinks/day, 14 drinks/wk, women max = 3 drinks/day, 7 drinks/wk)
- 2. Assess for DSM diagnosis**  
tolerance, withdrawal, loss of control
- 3. Make anti-drinking statement**  
"You are drinking more than is medically safe."  
"I strongly recommend that you cut down (or quit)."
- 4. Make plan to decrease drinking**
  - Keep track of drinking
  - Set specific realistic goals: eg, decrease by 10-20%/wk
  - Schedule 1-2 d/wk as a "no-drink day", eat before drinking
  - Identify triggers, and develop strategies to avoid them: eg, if trigger is coming home after work, try: going to gym, keep no alcohol in the house, drink other non-alcoholic beverage

## **Alcohol Abuse/Dependence Management\***

- Persistent, supportive encouragement for treatment
- Referrals for AA, group, or residential treatment, or acute detox
- Motivational interviewing
- Psychopharmacology: disulfiram (Antabuse), naltrexone (ReVia, Vivitrol), ssri's, acamprosate (Campral)

## **Substance Abuse Disorders Alcohol Withdrawal**

- Frequently include insomnia, tachycardia, tremor, headache ("hangover"), gi upset
- In chronic users, withdrawal can progress to seizures, hallucinations and delirium tremens
- Usual onset is within 6 to 48 hours after last ingestion of alcohol

## **Substance Abuse Disorders Alcohol Withdrawal**

Management of severe withdrawal includes:

- i.v. thiamine (to prevent Wernicke's encephalopathy)
- Glucose
- Longer-acting benzodiazepines: diazepam (Valium), chlordiazepoxide (Librium), lorazepam (Ativan) – lorazepam less hepatic metabolism
- Dosage: usually based on withdrawal symptoms (chlordiazepoxide 25-100mg qid) for the first 24 hours, then tapered by 20% each day over the 5 days

## **Benzodiazepines in Alcohol Abuse Disorders**

- Benzodiazepines that are primarily excreted renally or by Phase II metabolism (conjugation):
  - lorazepam (Ativan)
  - oxazepam (Serax)
  - temazepam (Restoril)
- Still can trigger hepatic encephalopathy

## **Alcohol Dependence/Abuse Outpatient Management**

### Disulfiram (Antabuse), 250-500mg daily

- inhibits acetaldehyde dehydrogenase, can cause nausea/vomiting, headache, flushing and CV collapse
- initial side effects include: fatigue, metallic taste in the mouth
- can cause liver toxicity so check LFT's
- works best in motivated individuals

## **Alcohol Dependence/Abuse Outpatient Management**

### Naltrexone (Revia)

opioid antagonist, can trigger opiate withdrawal  
black box warning: drug induced hepatitis, check LFT's (Vivitrol, naltrexone extended release injectable)

### Acamprosate (Campral)

Amino acid analogue, affects GABA/glutamate neurotransmission

Diarrhea in 10%

Not particularly impressive efficacy

## Opiate Dependence/Abuse Pharmacology

Naltrexone (Revia)

Methadone

Opioid agonist, available only through specialized licensed clinics

Suboxone (buprenorphine/naloxone)

Buprenorphine – partial opioid agonist

Addition of naloxone prevents suboxone from being ground up and used intravenously

Suboxone to be taken sublingually (naloxone only limited absorption)

Patients must start with mild withdrawal

Prescription of suboxone requires special training

## Internal Medicine Board Certification Review: Psychiatry Outline

Mood Disorders

Anxiety Disorders

Psychotic Disorders

Somatoform Disorders

Substance Abuse Disorders

**Personality Disorders**

Suicide

## **Personality Disorders**

Enduring pattern of inner experience and behavior that:

- Deviates markedly from the expectations of the patient's culture
- Is pervasive and inflexible
- Has an onset in adolescence or early adulthood
- Is stable over time
- Leads to distress or impairment

## **Personality Disorders\***

Cluster A – Odd or Eccentric

Paranoid, Schizoid, Schizotypal

Cluster B – Dramatic, Emotional or Erratic

Antisocial, Borderline, Histrionic, Narcissistic

Cluster C – Anxious or Fearful

Avoidant, Dependent, Obsessive-Compulsive

## **Personality Disorders: Management\***

- Respectful, non-judgmental attitude
- Acknowledge affect (emotion)
- Be aware of countertransference (ie, physician's own emotional reactions)
- Set realistic expectations
- Set limits and provide consistent structure
- Maintain professional boundaries
- Label maladaptive behavior(s) of patient
- Seek consultation – colleague, mental health professional

## **Internal Medicine Board Certification Review: Psychiatry Outline**

Mood Disorders

Anxiety Disorders

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Somatoform Disorders

Substance Abuse Disorders

Personality Disorders

**Suicide**

## **Case Vignette#7**

A 44 year-old, divorced, white man presents after crashing his car into a telephone pole. Physical examination and routine blood work are unremarkable. On further interview, he acknowledges that he has been thinking about committing suicide, but currently denies any current intent or plan to kill himself.

## **Case Vignette#7 Question**

Which of the following is the LEAST important intervention before discharging the patient from the emergency room?

1. Initiating pharmacotherapy for depression.
2. Ensuring that firearms and lethal medications have been secured or removed from patient's access.
3. Determining that a supportive person is available.
4. Scheduling a follow-up appointment with a mental health professional.
5. Giving the patient the name and number of a clinician who can be called in an emergency

## Case Vignette#7

### Answers Discussed

Which of the following is the LEAST important intervention before discharging the patient from the emergency room?

1. Initiating pharmacotherapy for depression.
2. Ensuring that firearms and lethal medications have been secured or removed from patient's access.
3. Determining that supportive person is available.
4. Scheduling a follow-up appointment with a mental health professional.
5. Giving the patient the name and number of a clinician who can be called in an emergency

## Suicide\*

- Number 3 cause of death in young adults, number 11 over all.
- 25,000 deaths per year in the U.S.
- Almost of third of people who kill themselves visit a physician in the week before they die (More than a half visit a physician in the month before they die).
- Most cases do not report suicidal ideation, most are not asked.
- Most cases associated with major psychiatric disorder.
- Doctors twice as likely to kill themselves as the general population.

## Suicide Risk Assessment: SAD PERSONS Mnemonic\*

- **S**ex
- **A**ge
- **D**epression (especially with global insomnia, severe anhedonia, severe anxiety, agitation, and panic attacks)
- **P**revious attempt
- **E**thanol abuse (recent)
- **R**ational thought loss (eg, psychosis)
- **S**ocial supports lacking
- **O**rganized plan
- **N**o spouse
- **S**ickness (ie, co-morbid medical conditions)

## Suicide

Before Discharging a patient, Check:

- 1) **Firearms** and lethal **medications** have been secured or removed
- 2) A **supportive person** is available
- 3) A **follow-up appointment** with a mental health professional has been scheduled
- 4) The patient has the **name and number** of a clinician who can be called in an emergency

## **Internal Medicine Board Certification Review: Summary**

Don't forget the three "S"'s!

Emphasis on diagnosis/evaluation.

Emphasis on psychopharmacology.

Psychiatric questions are generally fairly straightforward, so long as they are in your differential diagnosis.

Read the answers first!

## **Internal Medicine Board Certification Review**

# Good Luck!