Psychiatry

Medicine Boards Review
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July 11, 2010

Goals

☐ Help you pass the boards
☐ Provide practical knowledge
☐ Cover the basics

☐ Acknowledgements
  ■ Descartes Li, M.D.
  ■ Caroline Tsai, Pharm. D.

Focus

☐ Diagnoses
☐ Medications
  ■ Other treatment modalities will not be covered
☐ Risk Assessment
Diagnoses

- Hundreds of distinct diagnoses in DSM IV
- Vast majority fall into a handful of categories
- Mood, Anxiety, Psychotic, Somatoform, Substance Related, Eating disorders
- Mental disorder due to a medical condition
- Personality Disorders

Case #1

- A 40 year-old woman lost her job four months ago. She has been eating and sleeping more than usual and often feels tired. She denies feeling sad but feels guilty about not helping with the finances. At times her guilt leads her to think about suicide. She continues to enjoy spending time with her husband and friends but often has trouble concentrating.

Which is the most likely diagnosis?

1. Dysthymia
2. Adjustment Disorder
3. Major Depressive Disorder
4. Bipolar Disorder
5. Generalized Anxiety Disorder
The Correct Answer Is…

1. Dysthymia
2. **Adjustment Disorder**
3. Major Depressive Disorder
4. Bipolar Disorder
5. Generalized Anxiety Disorder

### Mood Disorders

- **Major Depressive Disorder**
- **Dysthymic Disorder**
- **Bipolar I Disorder**
- **Bipolar II Disorder**

### Major Depression (2 weeks)

- Sadness
- Interest or pleasure is diminished
- Guilt or worthlessness
- Energy is low
- Concentration is poor
- Appetite changes
- Psychomotor slowing or agitation
- Sleep changes, Suicidality or thoughts of death
Which is not true of Dysthymia?
1. Sad ≥ 2 years
2. ↓ Interest/Pleasure
3. Low self-esteem
4. Indecisiveness
5. Hopelessness

Dysthymic Disorder
- Depressed mood ≥ 2 years
- Change in appetite
- Change in sleep
- ↓ Energy
- ↓ Self-Esteem
- ↓ Concentration
- Hopelessness
### Bipolar I & II (mania vs. hypomania)

<table>
<thead>
<tr>
<th>A) <em>Elevated (or Irritable)</em></th>
<th>M: 1 week</th>
<th>H: 4 days</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Grandiose</td>
<td>M: Can be psychotic</td>
<td>H: No psychosis</td>
</tr>
<tr>
<td>2. ↑ Sleep</td>
<td>M: Often hospitalized</td>
<td>H: No hospitalization</td>
</tr>
<tr>
<td>3. Talkative</td>
<td>M: Major impairment</td>
<td>H: Mild impairment</td>
</tr>
<tr>
<td>4. Racing thoughts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Distractibility</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. ↑ Activity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. ↑ Pleasurable activities</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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### Case #2

- Two weeks ago, a 30 year old man had a period of intense fear which lasted 20 minutes. During this time, he experienced chest pain, SOB, sweating, nausea and numbness. He thought he was going to die and went to the ED where a full medical work up was completely normal. He has had no further symptoms.

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### Which is the most likely diagnosis?

1. Acute Stress Disorder
2. Panic Disorder
3. Somatization Disorder
4. Social Phobia
5. None of the above
The Correct Answer Is…

1. Acute Stress Disorder
2. Panic Disorder
3. Somatization Disorder
4. Social Phobia
5. None of the above

Panic Disorder

- Panic Attacks (palpitations, sweating, SOB, chest pain, nausea, lightheaded, fear of dying or going crazy, chills, hot flushes, numbness
  1. Concern about having more attacks
  2. Worry about implications (“going crazy”)
  3. Major change in behavior

Post Traumatic Stress Disorder

1) ≥ One month
2) Threat of death/injury

A) Re-experience trauma
B) Avoidance/Numbing
C) Increased arousal

*Acute stress d/o (< 1 mo)
Other Anxiety Disorders

- Phobias
  - Specific (fear)
  - Social (embarrassment)
- Obsessive-Compulsive Disorder
  - Can have one without the other
- Generalized Anxiety Disorder
  - ≥ 6 months in duration
  - Restless, fatigue, poor concentration, poor sleep

Which is a black box warning for SSRI’s?

1. ↑ Seizure
2. ↑ Suicide
3. ↑ SIADH
4. ↑ Serotonin Syndrome
5. ↑ Platelet Dysfunction

The correct answer is…

1. ↑ Seizure
2. ↑ Suicide
3. ↑ SIADH
4. ↑ Serotonin Syndrome
5. ↑ Platelet Dysfunction
Selective Serotonin Reuptake Inhibitors

- Contraindicated with MAOI’s
- Nausea (90% of receptors in GI tract)
- Sexual Dysfunction
- Hyponatremia
- Bruxism
- Fairly safe in OD

<table>
<thead>
<tr>
<th>Name</th>
<th>Indications</th>
<th>Side Effects</th>
<th>Special</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citalopram (Celexa)</td>
<td>MDD</td>
<td>Insomnia</td>
<td>↑ Drug Interact</td>
</tr>
<tr>
<td>Escitalopram (Lexapro)</td>
<td>MDD, GAD</td>
<td>Insomnia</td>
<td>↑ Drug Interact</td>
</tr>
<tr>
<td>Fluoxetine (Prozac)</td>
<td>MDD, OCD, PMDD</td>
<td>Insomnia</td>
<td>Most activating</td>
</tr>
<tr>
<td>Fluvoxamine (Luvox)</td>
<td>OCD</td>
<td>Sedation, GI</td>
<td>Short 1/2</td>
</tr>
<tr>
<td>Paroxetine (Paxil)</td>
<td>MDD, OCD, SAD, Panic, GAD, PTSD, PMDD</td>
<td>Sedation, Anticholinergic, Weight gain</td>
<td>Short 1/2, Fetal heart defects</td>
</tr>
<tr>
<td>Sertraline (Zoloft)</td>
<td>MDD, OCD, Panic, PTSD, SAD, PMDD</td>
<td>GI upset, Weight gain</td>
<td></td>
</tr>
</tbody>
</table>

Serotonin Norepinephrine Reuptake Inhibitors

- Contraindicated with MAOI

<table>
<thead>
<tr>
<th>Name</th>
<th>Indications</th>
<th>Side Effects</th>
<th>Special</th>
</tr>
</thead>
<tbody>
<tr>
<td>Venlafaxine (Effexor)</td>
<td>MDD, GAD</td>
<td>Insomnia</td>
<td>Neuropathic pain Short 1/2</td>
</tr>
<tr>
<td>Desvenlafaxine (Pristig)</td>
<td>MDD</td>
<td>Insomnia, Sweating</td>
<td>Short 1/2</td>
</tr>
<tr>
<td>Duloxetine (Cymbalta)</td>
<td>MDD, Diabetes, peripheral neuropathic pain</td>
<td>Anticholinergic, Hepatotoxicity, ↓ Appetite</td>
<td>Neuropathic pain, Stress urinary incontinence</td>
</tr>
</tbody>
</table>
Other Common Antidepressants

<table>
<thead>
<tr>
<th>Name</th>
<th>Indications</th>
<th>Side Effects</th>
<th>Special</th>
</tr>
</thead>
<tbody>
<tr>
<td>mirtazapine (Remeron)</td>
<td>MDD</td>
<td>Sedation</td>
<td>No sexual dysfunction</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Weight gain</td>
<td>Good in HIV</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Orthostasis</td>
<td>Few interactions</td>
</tr>
<tr>
<td>nefazodone SHT &amp; NE blockade</td>
<td>MDD</td>
<td>Sedation</td>
<td>Black box for hepatoxicity</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dizziness</td>
<td>low sexual dysfunction</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>bupropion (Wellbutrin)</td>
<td>MDD</td>
<td>Insomnia</td>
<td>No sexual dysfunction</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Agitation</td>
<td>Avoid in Sz &amp; Off-label ADHD</td>
</tr>
</tbody>
</table>

Serotonin Withdrawal Syndrome

- Onset: 1-3 days after abrupt d/c
- Duration: 3-7 days
- Symptoms:
  - anxiety, agitation, parasthesias, dizziness, nausea, fatigue, lethary

Serotonin Syndrome

- Etiology
  - Too much of one agent
  - Two or more agents
- Symptoms
  - anxiety, restlessness, flushing, confusion, tremor, fever, ↓ vitals
- Treatment
  - D/C agent, Hydration
Tricyclic Antidepressants (TCA’s)
- Amitriptyline (Elavil), clomipramine (Anafranil), doxepin (Sinequan), imipramine (Tofranil), desipramine (Norpramin), nortriptyline (Pamelor), protriptyline (Vivactil)
- Norepinephrine & Serotonin reuptake blockade
- Uses: MDD, OCD, Migraine, Neuropathic pain, Insomnia
- Side Effects: Anticholinergics, Orthostasis, Weight gain, Sexual dysfunction, Cardiac conduction delay
- Can check blood levels

Monoamine Oxidase Inhibitors (MAO’s)
- tranylcypromine (Parnate), phenlzine (Nardil), selegeline (EmSam) patch
- Inhibits breakdown of monoamines (NE, DA, 5HT)
- Indications: MDD
- Side Effects: weight gain, insomnia, orthostasis, sexual dysfunction
- Hypertensive crisis with tyramine containing foods (aged cheese, cured meats, fava beans, soy sauce)
- Serotonin Syndrome with other antidepressants

Which is not FDA approved for Bipolar Mania?
1. Lithium
2. Depakote (divalproex)
3. Abilify (aripiprazole)
4. Zyprexa (olanzapine)
5. Neurontin (gabapentin)
Which is not FDA approved for Bipolar?

1. Lithium
2. Depakote (divalproex)
3. Abilify (aripiprazole)
4. Zyprexa (olanzapine)
5. Neurontin (gabapentin)

Bipolar Disorder Treatments (Mania)

- Lithium
  - Complications: nephrogenic diabetes insipidus, hypothyroidism
  - Pregnancy: class D, cardiac valve defects
- Divalproex (valproate, Depakote)
  - Complications: thrombocytopenia, liver toxicity, pancreatitis
  - Pregnancy: class D – neural tube defects
- Carbamazapine (valproate, Depakote)
  - Complications: aplastic anemia, liver toxicity, auto-induction
  - Pregnancy: class D – neural tube defects
- Oxcarbazepine, lamotrigine (rash), atypical antipsychotics

Bipolar Depression Treatments

- Very few medications with FDA approval
  - Prescribing an antidepressant to a patient already on a mood stabilizer has little to no efficacy.
  - Prescribing an antidepressant alone to a patient with bipolar disorder can cause a manic episode.
- Symbyax (olanzapine/fluoxetine)
- Seroquel (quetiapine)
Case # 3

☐ A 28 y-o male post-doc believes that his neighbor has been spying on him and reading his discarded mail for the past 6 months. “He has been surreptitiously following me and video taping me to get me kicked out of my program.” The patient denies depressed or elevated mood, decreased interest or hallucinations. He denies drug use.

Which diagnosis is most likely?

1. Brief Psychotic Disorder
2. Schizoaffective Disorder
3. Delusional Disorder
4. Schizophrenia (paranoid)
5. Schizophrenia (undifferentiated)

The Answer Is…

1. Brief Psychotic Disorder
2. Schizoaffective Disorder
3. Delusional Disorder
4. Schizophrenia (paranoid)
5. Schizophrenia (undifferentiated)
Schizophrenia

- 6 months of social/occupational impairment
- Two or more symptoms for a month:
  1. Delusions
  2. Hallucinations
  3. Disorganized Speech
  4. Disorganized Behavior
  5. Negative Symptoms (avolition, flat affect)

- Brief Psychotic (< 1 m); Schizophreniform (< 6 m)

Schizoaffective Disorder

- Criteria are met for schizophrenia
- Criteria are met for MDD or Mania
- 2 weeks of psychosis without mood symptoms
- Mood symptoms must be present for a substantial portion of the overall illness

Traditional Antipsychotics

- High Potency
  - ↑ D2 blockade and ↓ anticholinergics
  - ↑ risk of extrapyramidal symptoms (EPS)
  - i.e. haloperidol (Haldol), fluphenazine (Prolixin)

- Low Potency
  - ↓ D2 blockade and ↑ anticholinergics
  - ↓ risk of EPS
  - i.e. chlorpromazine (Thorazine), thioridazine (Mellaril)
Traditional Antipsychotic Side Effects

- EPS – parkinsonism, dystonias, akathisia, tardive dyskinesia, tardive akathisia
  - Often treated with anticholinergics
- Hyperprolactinemia – galactorrhea
- Neuroleptic Malignant Syndrome:
  - Fever, rigidity, AMS, ↑CK, ↓vitals
  - Treat: d/c med, supportive care, bromocriptine (D2 agonist), dantrolene (muscle relaxant), ECT

Which is a black box warning for all atypical antipsychotics?

1. ↑ Seizure Risk
2. ↑ QT Interval
3. Dementia-related psychosis
4. MI, acute recent
5. None of the above

Which is a black box warning for all atypical antipsychotics?

1. ↑ Seizure Risk
2. ↑ QT Interval
3. Dementia-related psychosis
4. MI, acute recent
5. None of the above
Atypical Antipsychotics

- Dopamine, Acetylcholine, Serotonin
- Lower rates of EPS
- NMS is much rarer
- Weight gain, hyperlipidemia, hypercholesterolemia, hyperglycemia

Atypical Side Effects

<table>
<thead>
<tr>
<th>EPS</th>
<th>Weight Gain</th>
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</thead>
<tbody>
<tr>
<td>Risperidone</td>
<td>Clozapine</td>
</tr>
<tr>
<td>Olanzapine</td>
<td>Olanzapine</td>
</tr>
<tr>
<td>Aripiprazole</td>
<td>Quetiapine</td>
</tr>
<tr>
<td>Ziprasidone</td>
<td>Risperidone</td>
</tr>
<tr>
<td>Quetiapine</td>
<td>Ziprasidone</td>
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<tr>
<td>Clozapine</td>
<td>Aripiprazole</td>
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</table>

Atypical Antipsychotics

<table>
<thead>
<tr>
<th>FDA Indications</th>
<th>Schizophrenia</th>
<th>Acute mania</th>
<th>Bipolar mania</th>
<th>Bipolar depression</th>
<th>Depression</th>
<th>Agitation in schizophrenia</th>
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<tbody>
<tr>
<td>Clozapine (Clozaril)</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>Risperidone</td>
<td>yes</td>
<td>yes</td>
<td>*consta yes</td>
<td>yes</td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>Olanzapine</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>no</td>
<td>no</td>
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<tr>
<td>Aripiprazole</td>
<td>yes</td>
<td>yes</td>
<td>adj w/Li or VPA</td>
<td>yes</td>
<td>no</td>
<td>no</td>
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<tr>
<td>Ziprasidone</td>
<td>yes</td>
<td>yes</td>
<td>adj w/Li or VPA</td>
<td>IM form only</td>
<td>no</td>
<td>no</td>
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<tr>
<td>Quetiapine</td>
<td>yes</td>
<td>yes</td>
<td>adj w/Li or VPA</td>
<td>IM form only</td>
<td>no</td>
<td>no</td>
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<tr>
<td>Geodon</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
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<td>yes</td>
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<tr>
<td>Aripiprazole (Abilify)</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
</tbody>
</table>
Electroconvulsive Therapy (ECT)

- Indications
  - Depression
  - Mania
  - Schizophrenia
  - Catatonia
  - NMS
- High Risk
  - Recent MI, CHF, tumor
- Safe in pregnancy

Which is not a somatoform disorder?

1. Conversion Disorder
2. Factitious Disorder
3. Hypochondriasis
4. Pain Disorder
5. Body Dysmorphic Disorder

The correct Answer is…

1. Conversion Disorder
2. **Factitious Disorder**
3. Hypochondriasis
4. Pain Disorder
5. Body Dysmorphic Disorder
Symptom/Motivation Diagnostic Box

<table>
<thead>
<tr>
<th>Symptom/Motivation Diagnostic Box</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production of symptoms:</td>
</tr>
<tr>
<td>Unconscious:</td>
</tr>
<tr>
<td>Motivation:</td>
</tr>
<tr>
<td>Unconscious:</td>
</tr>
<tr>
<td>Somatoform:</td>
</tr>
<tr>
<td>N.A.:</td>
</tr>
<tr>
<td>Production of symptoms:</td>
</tr>
<tr>
<td>Conscious:</td>
</tr>
<tr>
<td>Motivation:</td>
</tr>
<tr>
<td>Conscious:</td>
</tr>
<tr>
<td>Factitious:</td>
</tr>
<tr>
<td>Malingering:</td>
</tr>
</tbody>
</table>

Somatoform Disorders

- **Somatization**: (4 pain, 2 GI, 1 sexual or reproductive, 1 pseudoneurological)
- **Conversion**: (motor or sensory dysfunction due to psychological factors)
- **Pain**: (psychological, psych + GMC, GMC only)
- **Hypochondriasis**: (preoccupation that one has a serious disease. Misinterpretation of symptoms)
- **Body Dysmorphic**: (imagined deficit)
Eating Disorders

Anorexia Nervosa
- Body weight less than 85% of that expected
- Fear of gaining weight
- Distorted view of body weight or shape
- Amenorrhea*
- Types
  - Restricting
  - Binge-Eating/Purging

Bulimia Nervosa
- Binge Eating
  - Increased food intake
  - Lack of control
- Compensatory behavior to prevent weight gain
- Body shape heavily impacts self-evaluation
- Not anorexia

Anorexia Labs
- Anemia
- ↓ Mg, ↓ Zn, ↓ P
- ↓ estrogen/testosterone
- ECG – Sinus Brady
- EEG – Diffuse changes
- CT – ↑ Ventricle to brain ratio
- * Prozac has FDA approval

Bulimia Labs
- ↓ K, ↓ Na, ↓ Cl
- Vomiting → alkalosis
- Laxatives → acidosis
- Tooth erosion
Substance Use Disorders

- **Catchment Area Study**
  - 20,000 adults
  - Alcohol 13.5%
  - Drugs 7%

- Screening is always recommended

<table>
<thead>
<tr>
<th>Substance Abuse</th>
<th>Dependence</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 sx within 12 months</td>
<td>3 sx within 12 Months</td>
</tr>
<tr>
<td>1. Failure to fulfill role obligations</td>
<td>1. Tolerance</td>
</tr>
<tr>
<td>2. Physically hazardous</td>
<td>2. Withdrawal</td>
</tr>
<tr>
<td>3. Legal problems</td>
<td>3. More than intended</td>
</tr>
<tr>
<td>4. Social or Interpersonal problems</td>
<td>4. Attempts to cut down</td>
</tr>
<tr>
<td></td>
<td>5. ↑ Time spent for use</td>
</tr>
<tr>
<td></td>
<td>6. Give up activities</td>
</tr>
<tr>
<td></td>
<td>7. Aware of damage done</td>
</tr>
</tbody>
</table>

Alcohol Dependence Treatments

- **Disulfiram (Antabuse)**
  - Inhib. Acetylaldehyde dehydrogenase
  - Causes N/V, head ache, flushing if used w/EtoH
  - Works best in motivated individuals

- **Naltrexone (Revia)**
  - Opiate antagonist
  - Black box warning for hepatitis

- **Acamprosate (Campral)**
  - Amino acid analogue, affects GABA/glutamate
Opiate Dependence Treatments

- Methadone
  - Opiate agonist
  - ↑ QT interval → torsades
- Buprenorphine
  - Opiate agonist-antagonist
  - Addition of naloxone prevents IV use (Suboxone)
- Naltrexone (see previous slide)

Substance Induced Psychiatric Illness

- Illicit Drugs – Can mimic anything
- Prescribed Medications
  - Anticholinergics - Confusion
  - Steroids – Highly dose dependent
  - Antiparkinsonian Medications – 20% with sx
  - * Beta Blockers
    - Jama 2002, review of 15 trials, n=35,000
      - Not associated with an increased risk of depression

Psychiatric Illness Secondary to a GMC
Psychiatric Illness Secondary to a GMC

- GMC → physiological & neurochemical changes → psychiatric symptoms
- Treat the GMC → Psych symptoms resolve
- Analogy: Elderly with UTI
- Hundreds of medical illnesses can mimic psychiatric illnesses

Psychiatric Illness Secondary to a GMC

- Endocrine
  - Thyroid
  - Diabetes
  - Cushing’s Syndrome
  - Addison’s Disease
- CNS
  - Tumors, Parkinson’s, Seizures, Infections (syphilis, HIV, etc)
- Vitamin Deficiency
  - B12, Thiamine
- Metabolism
  - AIP, Wilson’s disease
- Toxins (CO, lead, mercury, aluminum)

Case # 4

- A 25 year old man is preoccupied with being criticized in social settings. He left his last job because he felt that others would likely disapprove of him. He tends to be very guarded with his girlfriend, because he thinks she will probably make fun of him.
Which diagnosis is most likely?

1. Avoidant P.D.
2. Schizoid P.D.
3. Paranoid P.D.
4. Dependent P.D.
5. Interpersonal P.D.

The correct diagnosis is…

1. Avoidant P.D.
2. Schizoid P.D.
3. Paranoid P.D.
4. Dependent P.D.
5. Interpersonal P.D.

Personality Disorders

A. Pattern of inner experience and behavior that deviates from the cultural norm. (Two or more of the following)
1. Cognition (perception)
2. Affectivity
3. Interpersonal Functioning
4. Impulse Control
Cluster A ("weird")
1. Paranoid – Distrust
2. Schizoid – Detachment and ↓ emotional expression
3. Schizotypal – Eccentric

Cluster C ("worried")
1. Avoidant – Social inhibit., feelings of inadequacy
2. Obsessive-Compulsive – Perfection, order, control
3. Dependent – Clinging

Cluster B ("wild")
1. Antisocial – Disregard for and violation of the rights of others
2. Borderline – Instability (relationships, self-image)
3. Histrionic – Excessive emotionality and attention seeking
4. Narcissistic – Need for admiration, ↓ empathy

Case #5
A 66 year-old, divorced, Caucasian man with two sons presents with SI. Since his divorce three years ago, he has become more depressed and has been drinking more. He has a history of one prior suicide attempt at age 17 when his father died. He endorses vague AH telling him that he is a "bad father". He denies HI or access to firearms.

Which is not a risk factor for suicide?
1. Age > 65
2. Divorced
3. Alcohol
4. Children
5. Hallucinations
Which is **not** a risk factor for suicide?

1. Age > 65  
2. Divorced  
3. Alcohol  
4. **Children**  
5. Hallucinations

---

**Suicide**

- U.S. rate is 11 per 100,000  
- 11th leading cause of death (3rd for age 15-24)  
- Firearms > Suffocation > Overdose  
- Men > Women (roughly 4 times)  
- White > Nonwhite (except Native American)  
- Older white > Younger white  
- Younger non-white > Older non-white

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**Suicide Risk Factors**

- Sex  
- Age  
- Depression  
- Previous attempt  
- Ethanol  
- Rational thought loss  
- Sickness  
- Organized plan  
- No spouse  
- Social support lacking
Good Luck!