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## Depression, Suicide and Gender

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*November 10, 2011*



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## Teri Pearlstein, MD Financial Disclosures

*Research support from Pfizer.*

*This talk will discuss unapproved uses of a commercial product, or investigational use of a product not yet approved by the US Food and Drug Administration.*



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## Prevalence of Major Depressive Disorder

43,093 adults  $\geq 18$  years in United States<sup>1</sup>

- Lifetime MDD 17.1 % in women vs. 9 % in men
- 12-month MDD 6.9% in women vs. 3.6% in men
- Highest prevalence in whites, Native Americans
- Mean age of onset 30.4 years

Female:male 2:1 ratio reported in 89,037 adults  $\geq 18$  years from 18 high-, middle-, and low-income countries<sup>2</sup>

<sup>1</sup>Hasin DS et al., Arch Gen Psychiatry 2005;62:1097-1106; <sup>2</sup>Bromet E et al., BMC Med 2011;62:9:90.



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## Gender Differences in Depression

- *Earlier age of onset*
- *More severe symptoms*
- *More self-criticism, guilt, worthlessness*
- *Longer episodes*
- *More likely to seek help*
- *Comorbid anxiety and somatic symptoms*
- *Atypical symptoms: hypersomnia, hyperphagia, weight gain, low energy, interpersonal sensitivity*

*Marcus SM et al., J Affect Disord 2005;87:141-50; Grigoriadis S et al., Ann Clin Psychiatry 2007;19:247-55; Kornstein SG et al., Am J Psychiatry 2000;157:1445-52.*



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## Contributors to Gender Differences in Depression

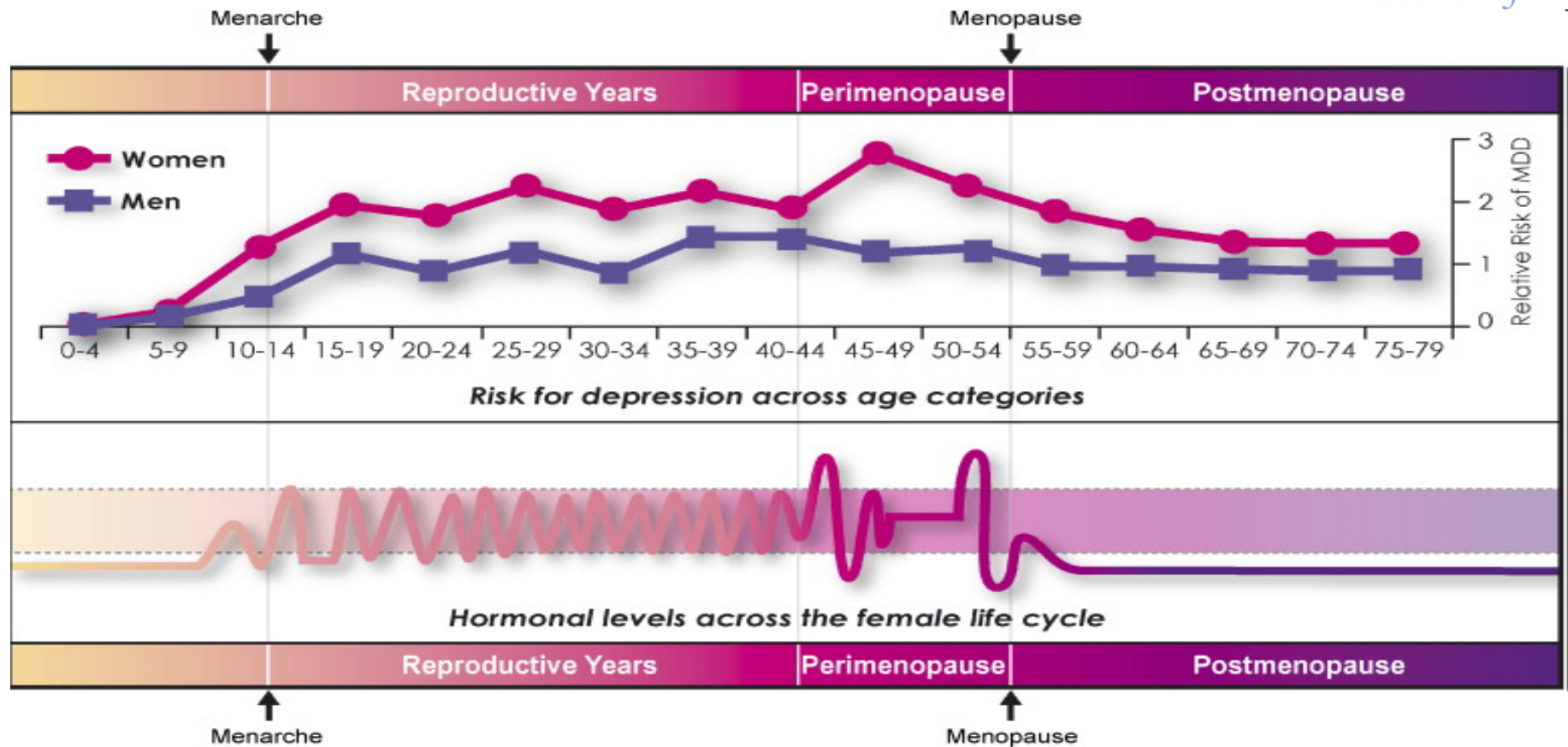
- *Childhood sexual and physical abuse*
- *Intimate partner violence, other adult victimization*
- *Multiple roles*
- *Orientation toward and concern for others*
- *Altered HPA axis stress response*
- *Susceptibility to stress-related disorders*
- *Gonadal steroid hormones*

*Oldehinkel AJ et al., Neurosci Biobehav Rev 2011;35:1757-70; Grigoriadis S et al., Ann Clin Psychiatry 2007;19:247-55.*



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## Risk of Depression and Estradiol Levels



*Deecher D et al., Psychoneuroendocrinology 2008;33:3-17.*



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## Screening for Depression

- *Validated screening tools are available*
- *Positive screen should be followed by diagnostic interview*
- *No evidence that screening for depression in unselected populations within primary care improves treatment rates for depression or outcome*
- *USPSTF recommends screening only if staff-assisted care and follow-up available*
- *Screening in high-risk populations may be more effective*

*Farr SL et al., Prev Chronic Dis 2011;8:A122.*



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## Patient Health Questionnaire-2 and PHQ-9

### PHQ-2

- |   |   |   |   |   |
|---|---|---|---|---|
| 1. Over the last 2 weeks, how often have you been bothered by feeling down, depressed, or hopeless?               | 0 | 1 | 2 | 3 |
| 2. Over the last 2 weeks, how often have you been bothered by having little interest or pleasure in doing things? | 0 | 1 | 2 | 3 |

### PHQ-9

Over the last 2 weeks, how often have you been bothered by any of the following problems?

- |   |   |   |   |   |
|---|---|---|---|---|
| 1. Little interest or pleasure in doing thing   | 0 | 1 | 2 | 3 |
| 2. Feeling down, depressed, or hopeless   | 0 | 1 | 2 | 3 |
| 3. Trouble falling or staying asleep, or sleeping too much  | 0 | 1 | 2 | 3 |
| 4. Feeling tired or having little energy  | 0 | 1 | 2 | 3 |
| 5. Poor appetite or overeating  | 0 | 1 | 2 | 3 |
| 6. Feeling bad about yourself—or that you are a failure or have let yourself or your family down  | 0 | 1 | 2 | 3 |
| 7. Trouble concentrating on things, such as reading the newspaper or watching television  | 0 | 1 | 2 | 3 |
| 8. Moving or speaking so slowly that other people could have noticed? Or the opposite—being so fidgety or restless that you have been moving around a lot more than usual | 0 | 1 | 2 | 3 |
| 9. Thoughts that you would be better off dead or of hurting yourself in some way  | 0 | 1 | 2 | 3 |

0=Not at All; 1=Several Days; 2=More Than Half the Days; 3=Nearly Every Day

PHQ-9=9-item Patient Health Questionnaire.

Questions 1 and 2 constitute the 2-item Patient Health Questionnaire (PHQ-2).

**Arroll B et al., *Ann Fam Med* 2010;348-53; Zuithoff NP et al., *BMC Fam Pract* 2010;11:98; Kroenke K et al., *J Gen Intern Med* 2001;16:606-13; Kroenke K et al., *Med Care* 2003;41:1284-92.**





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## Psychotherapy for Depression

*Psychotherapy may be sufficient for mild-moderate depressive episodes<sup>1</sup>*

*Cognitive Behavior Therapy<sup>2</sup>*

*Interpersonal Psychotherapy<sup>3</sup>*

*Mindfulness-Based Therapies<sup>4</sup>*

*Others: psychodynamic, behavioral, motivational, emotion-focused, supportive, couples, family, group*

*Combined psychotherapy and pharmacotherapy may be superior to either alone*

<sup>1</sup>Fournier JC et al., *JAMA* 2010;303:47-53; <sup>2</sup>Tolin DF, *Clin Psychol Rev* 2010;30:710-20; <sup>3</sup>Cuijpers P et al., *Am J Psychiatry* 2011;168:581-92; <sup>4</sup>Fjorback LO et al., *Acta Psychiatr Scand* 2011;124:102-19.

# Selective Serotonin Reuptake Inhibitors (SSRIs) for Major Depression



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• Generic Name	Starting Dose (mg/day)	Usual Dose (mg/day)
• <i>Citalopram</i>	20	20–40*
• <i>Escitalopram</i>	10	10–20
• <i>Fluoxetine</i>	20	20–60
• <i>Paroxetine</i>	20	20–60
• <i>Paroxetine, extended release</i>	12.5	25–75
• <i>Sertraline</i>	50	50–200
• <i>Vilazodone</i>	10	20–40

*APA Practice Guideline for the Treatment of Patients with Major Depressive Disorder, 3<sup>rd</sup> Ed., 2010;167(10).*



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## Antidepressants for Major Depression cont.

Generic Name	Starting Dose (mg/day)	Usual Dose (mg/day)
<i>Serotonin norepinephrine reuptake inhibitors (SNRIs)</i>		
• Venlafaxine, immediate release	37.5	75–375
• Venlafaxine, extended release	37.5	75–375
• Desvenlafaxine	50	50
• Duloxetine	60	60–120
<i>Norepinephrine-serotonin modulator</i>		
• Mirtazapine	15	15–45
<i>Dopamine norepinephrine reuptake inhibitor</i>		
• Bupropion, immediate release	150	300–450
• Bupropion, sustained release	150	300–400
• Bupropion, extended release	150	300–450

*APA Practice Guideline for the Treatment of Patients with Major Depressive Disorder, 3<sup>rd</sup> Ed., 2010;167(10).*



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## Antidepressants for Major Depression cont.

### *Serotonin modulators*

- *Nefazodone*
- *Trazodone*

### *Tricyclics and tetracyclics*

*Amitriptyline*

*Nortriptyline*

*Imipramine*

*Desipramine*

*Doxepin*

*Trimipramine*

*Protriptyline*

*Maprotiline*

### *Monoamine oxidase inhibitors (MAOIs)*

- *Irreversible nonselective inhibitors: Phenzelzine, Tranylcypromine, Isocarboxazid*
- *Irreversible MAO B selective inhibitor: Selegiline transdermal*
- *Reversible MAO A selective inhibitor: Moclobemide*

*APA Practice Guideline for the Treatment of Patients with Major Depressive Disorder, 3<sup>rd</sup> Ed., 2010;167(10).*



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## Alternative Treatments for Depression

- *Bright light therapy*
- *Fish oil*
- *SAMe*
- *Hypericum*
- *Acupuncture*
- *Exercise*
- *Repetitive transcranial magnetic stimulation (rTMS)*

*Freeman MP et al., J Clin Psychiatry 2010;71:669-81.*



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## Augmentation Strategies for Depression

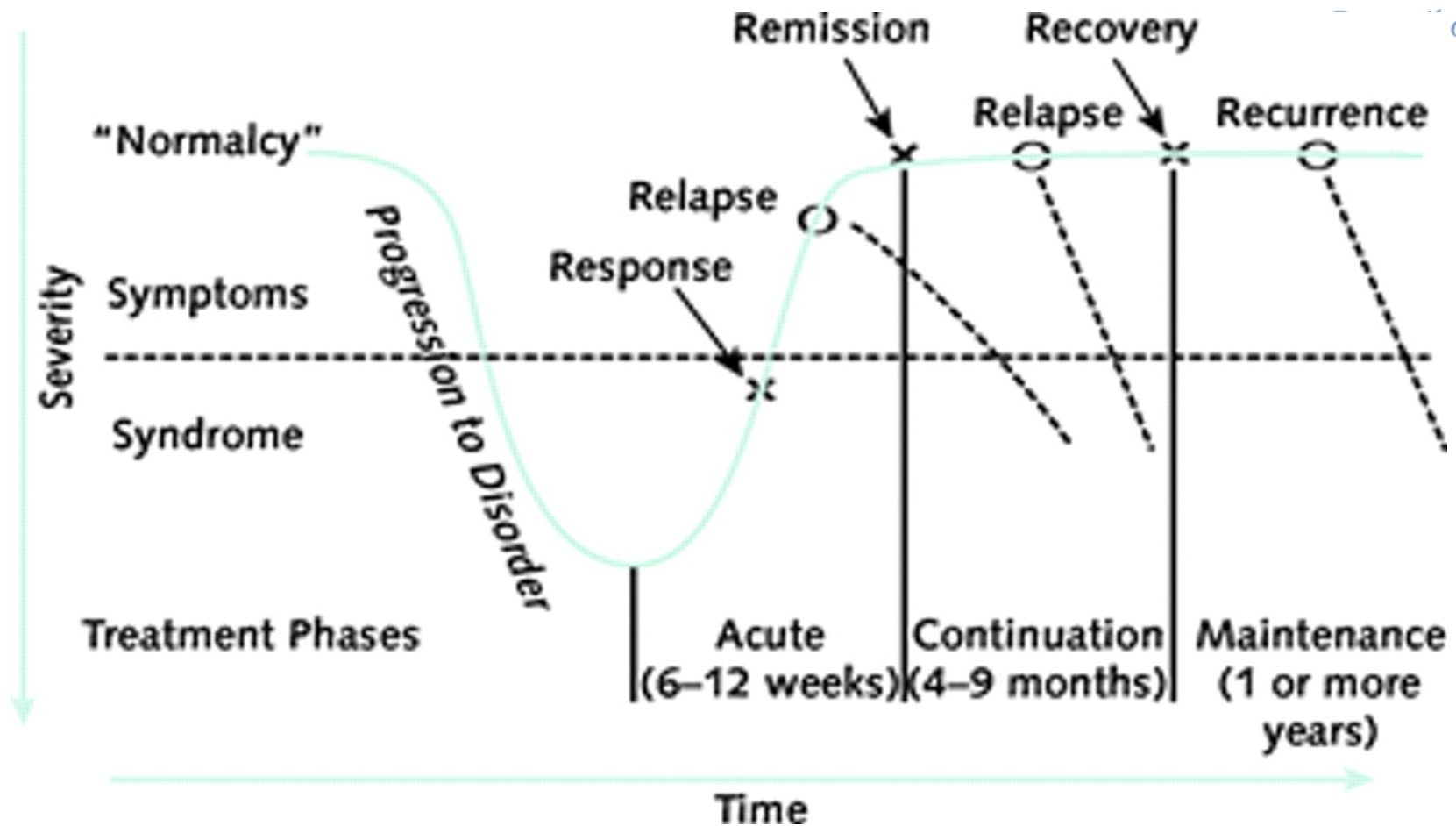
- *Switch or add an antidepressant*
- *Lithium*
- *Thyroid*
- *Atypical antipsychotics: aripiprazole, quetiapine, olanzapine*
- *Antiepileptics: lamotrigine, topiramate*
- *Folic acid*
- *Stimulants*
- *ECT, vagus nerve stimulation (VNS)*

Shelton RC et al., *CNS Drugs* 2010;24:131-61; Philip NS et al., *Expert Opin Pharmacother* 2010;11:709-22.

# Phases of Treatment of Major Depression



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Qaseem A et al. *Ann Intern Med* 2008;149:725-33;  
Kupfer DJ, *J Clin Psychiatry* 1991;52(Suppl):28-34.

**Annals of Internal Medicine**



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## Concerns with Antidepressants

- *Side effects: weight gain, sexual dysfunction*
- *Citalopram – 40 mg/day maximum*
- *Suicidality*
- *Serotonin syndrome*
- *Fetal and neonatal exposure*
- *Interactions with other drugs*
- *Bone loss*





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## Suicidal Thoughts and Behaviors in US adults aged ≥18 years

- 8.3 million (3.7%) had suicidal thoughts in past year (2008-09)
- 2.3 million (1%) made suicidal plans in past year
- 1 million (0.5%) made a suicide attempt in the past year
- 36,035 deaths from suicide in 2008=11.8 suicides per 100,000
- 10<sup>th</sup> leading cause of death in US
- Highest rates in White (not Hispanic), American Indian and Alaskan Native
- Highest rates ages 40-59
- 90% completed suicides have current psychiatric disorder

*MMWR 2011;60(13):1-22; [www.cdc.gov/violenceprevention/suicide/index.html](http://www.cdc.gov/violenceprevention/suicide/index.html).*



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## Risk Factors for Suicide

- *Separation from partner or relationship conflict*
- *Previous suicide attempt(s)*
- *Current mood disorder*
- *Current alcohol or drug abuse*
- *Current psychosis*
- *Childhood sexual abuse*
- *Family history of suicide or violence*
- *Physical illness*
- *Availability of means*

*Schrijvers DL et al., J Affect Disord 2011:Apr 27[Epub]; Hawton K et al., Lancet 2009; 373:1372-81; [www.cdc.gov/violenceprevention/suicide/index.html](http://www.cdc.gov/violenceprevention/suicide/index.html).*



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## Gender Differences in Suicidality

### Men

- *4 times higher rate of completed suicide*
- *More lethal means: firearms, hanging*
- *Increased risk with substance abuse, antisocial personality disorder, schizophrenia, attention deficit hyperactivity disorder*
- *Less likely to seek and accept treatment*

### Women

- *3 times higher rate of attempting suicide*
- *Less lethal means: overdose*
- *Increased risk with major depression, borderline personality disorder*
- *Decreased risk during pregnancy*
- *More likely to seek and accept treatment*

*APA Practice Guideline, 2003; Schrijvers DL et al., J Affect Disord 2011; Apr 27[Epub].*



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## Screening for Suicide

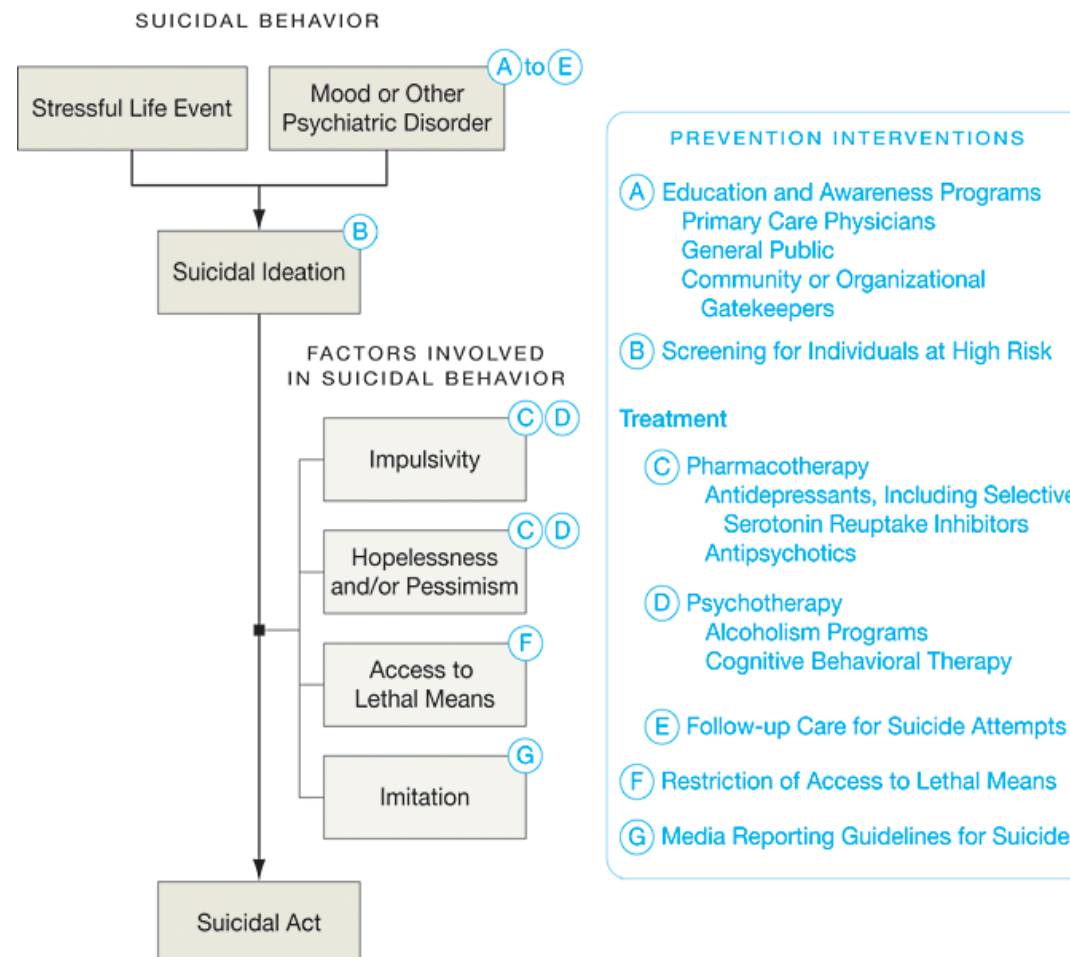
### *IS PATH WARM?*

- *Ideation—Threatened or communicated*
- *Substance abuse—Excessive or increased*
- *Purposeless—No reasons for living*
- *Anxiety—Agitation/Insomnia*
- *Trapped—Feeling there is no way out*
- *Hopelessness*
- *Withdrawing—From friends, family, society*
- *Anger (uncontrolled)—Rage, seeking revenge*
- *Recklessness—Risky acts, unthinking*
- *Mood changes (dramatic)*



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# Targets of Suicide Prevention Interventions



*Mann JJ et al., JAMA 2005;294:2064-74.*



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## Summary

- *Prevalence of major depression is 2:1 women to men following puberty*
- *Women have unique risk factors, symptoms, course, co-morbidities, and treatment concerns*
- *Primary care should routinely screen for depression, followed by clinical interview and treatment as indicated*
- *Treatment adherence and response should be actively monitored for at least 6 months*



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## Summary continued

- *Screening and treatment can successfully intervene with suicidal ideation, plan, attempt, and completion*
- *Women make more suicide attempts than men*
- *Men complete suicide more than women*
- *Education of physicians and restricting access to lethal means have demonstrated efficacy in prevention of suicide*
- *More study is needed of public awareness and education, screening programs, and media education prevention strategies*