
 **SCHOOL OF PUBLIC HEALTH**  
UNIVERSITY AT ALBANY State University of New York

**Public Health Live – T<sup>2</sup>B<sup>2</sup>**

**Diabetes:  
What's depression got to do with it?**

**February 21, 2008**



The findings and conclusions in this report are those of the authors and do not necessarily represent the views of the Centers for Disease Control and Prevention.

**Guest Speaker**

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- NYS Association of County Health Officials
- NYS Nurses Association

**Viewer Call-In**

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**Evaluations**

Please visit  
**[www.t2b2.org](http://www.t2b2.org)**  
to fill out your evaluation and post test.

**Nursing Contact Hours, CME & CHES  
are available.**

*Thank you!*

## What is Diabetes ?

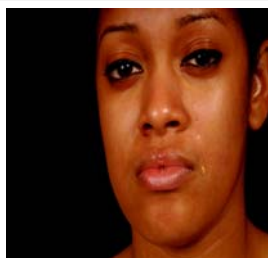
Diabetes is a group of diseases marked by high levels of blood glucose resulting from defects in insulin production, insulin action, or both.



Centers for Disease Control and Prevention. National Diabetes fact sheet: general information and national estimates on diabetes in the United States, 2005. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2005.



## What is Depression?



Król MJ, Twisk JWR, Beekman ATF, Heine RJ, Snook FJ, Pouwer F. Depression as a risk factor for the onset of type 2 diabetes mellitus. *Am J Psychiatry* 2006; 163: 837-845.

- Depression is a mood disorder that can disrupt a person's life in a number of ways.
- 121 million people currently suffer from depression.
- Depression can strike anyone. Effects vary depending on a person's age and gender.



## Symptoms of Depression

- Loss of self-esteem
- Sleep problems
- Thoughts of suicide
- Frequent feelings of sadness
- Irritability
- Changes in appetite and weight (increase/decrease)
- Difficulty concentrating
- Feelings of inappropriate guilt

American Psychiatric Association 2000. (DSM-IV-TR) *Diagnostic and statistical manual of mental disorders*, 4th edition, text revision. Washington, DC: American Psychiatric Press, Inc.

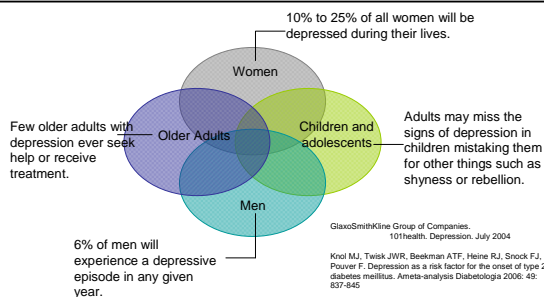


## Risk Factors for Depression

- Gender (female)
- Age (reproductive)
- Limited health insurance
- Unemployment/Underemployment
- Lacking access to care
- Marital status (single)
- Childhood abuse
- Difficulties in interpersonal relationships
- Recent stressful events



## Who Gets Depressed?



## The Cost of Depression

- Depression in diabetes is associated with increased health care costs.
  - cost is approximately \$192 million.
- Total health care expenditure for individuals with depression and diabetes is 4.5 times higher than that for those without depression.

Egede LE, Zheng D, Simpson K. Comorbid depression is associated with increased health care use and expenditures in individuals with diabetes. *Diabetes Care* 2002; 25: 464-470.



## Health Care Costs

- Postponing care can mean worsening health and increasing treatment costs
- The cost of care escalates for persons with depression and diabetes



## Health Care, Diabetes and Depression

### Patients with diabetes and depression:

- Spend 5x more on medications than those who have diabetes but do not have depression
- Have more visits to primary care provider
- Less likely to adhere to a behavioral protocol for self-management



## Depression and Glycemic Control

- Cortisol abnormalities associated with depression can affect glycemic control
- Insulin resistance has been found to accompany depression
- Remission of depression is associated with a reduction in A1C levels

Lustman PJ, Clouse RE. Depression in diabetes patients. The relationship between mood and glycemic control. *Journal of Diabetes and its Complications* 2005; 19: 113-122.



## Diabetes and Depression: Is there a Link?

- Depression is 2x as common in people who have diabetes as it is in people who do not have the disease.
- Recent meta-analysis found association between depression and hyperglycemia

Anderson RJ, Freedland KE, Clouse RE, Lustman PJ. The prevalence of comorbid depression in adults with diabetes. *Diabetes Care* 2001; 24: 1069-1076.



## Diabetes and Depression: Is there a Link?

- Improvements in depressive symptoms predicted improved glycemic control
- Improvements in glycemic control correlated with improved depressive symptoms
- Yet...it is unclear which usually come first: the depression or the diabetes.



## Diabetes and Depression: Is there a Link?

- Depressed adults have a 37% increased risk of developing type 2 diabetes.
- As diabetes complications worsen, the chances of becoming depressed increases.

Kinder LS, Kamarck TW, Baum A, Orchard TJ. Depressive symptomatology and coronary heart disease in type 1 diabetes mellitus: A study of possible mechanisms. *Health Psychol* 2002; 21: 542-552.



## Psychotropic Medication and Diabetes

- Weight gain: common adverse effect of psychotropic drugs
- Clinically significant weight gain increases risk for:
  - Hypertension
  - Dyslipidemia
  - Cancer
  - Arthritis
  - Type 2 diabetes
  - Coronary heart diseases



## Depression in Diabetes is Serious

- Adherence to treatment plans may be challenging
- Depression can result in poor physical and mental functioning
- Depressed individuals are more likely to adopt unhealthy behaviors
- Social isolation is also a concern for individuals suffering from depression



Reasons Why People May be Reluctant to Seek Help	
• Cost	• Cultural differences
• Shame	• Stigma
• Uninformed	

## Impact of Rising Costs of Health Care Seeking Behavior

- “Sometimes it’s a choice between paying the electric bill and going to the doctor.”
- Recent report (Kaiser Family Foundation) suggests that more women delay or go without health care because of the cost.
- “Women’s poor health can be traced to inadequate employment.”



## Depression Related Complaints

<u>Culture</u>	<u>Complaints</u>
-Latino	“nerves” and headaches
-Asian	weakness, tiredness, “imbalance”
-Middle Eastern	“problems of the heart”
-African American	“bad nerves,” “evil”



## Diverse Expressions of Depression

- Typical assessments focus on emotional symptomatology
- Current ways of assessing depression may need revisions
- Need to consider diverse expressions of “depression”



## Studies on African Americans and Depression

- Appetite and psychomotor changes
- Anger
- Irritability and abruptness
- Denial of illness



## Case Vignette

- Mrs. Jones is a 55 year old African American woman diagnosed with diabetes several years ago. She calls her illness “sugar.” Ever since being diagnosed, she has struggled to accept the diagnosis and to follow the treatment plan. She takes her insulin erratically, doesn’t check her sugar level and routinely goes over board eating sweets. She avoids exercise because she doesn’t like to leave the house if she doesn’t have to and she doesn’t want to “sweat her hair out.”



## Case Vignette

- Her family complains that she is frequently “evil” and has a chronic “attitude.” She has no energy, and just isn’t fun anymore. Lately, she even refuses to answer the phone. She admits that she has “bad nerves”, and says she’ll just pray about it. She refuses to see a psychiatrist when her family practitioner suggests it. She responds to that suggestion with “I am not crazy.” Her family practitioner decides to screen her for depression, and she scores high on the depression scale.



## Case Vignette

- He incorporates an antidepressant into her treatment plan. In a few weeks, Ms. Jones feels better and becomes more adherent with her diabetes treatment.



## Depression Treatment

- Depression and Type 2 diabetes are both potentially preventable and controllable.
- Only 30% of patients with both diseases receive adequate treatment for depression
- Fewer than 20% complete more than 4 visits of psychotherapy...Yet,
- 80% of those who seek treatment show improvement



Zhang X, Norris SL, Gregg EW et al. Depressive symptoms and mortality among persons with and without diabetes. American Journal of Epidemiology 2005; 161: 652-660.



## Treating Depression

- Depression needs to be diagnosed early
- Psychotherapy and medication are most effective
- Treatment should include a multidisciplinary team



## Screening Tools for Depression

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### Geriatric Depression Scale

- Short form includes 15 items, assesses depressive symptomatology

### Patient Health Questionnaire-9

- Self-administered survey; assesses 9 DSM-IV criteria for depression

### Beck Depression Inventory

- Self-administered 21 item survey measuring attitudes and symptoms of depression



## If Your Patient is Depressed...

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- Involve a mental health provider (psychiatrist, psychologist, social worker)
- Assess the patient for suicidal or homicidal thoughts
- Develop a treatment plan and follow-up
- Make a referral for psychotherapy
- Consider antidepressants



## Community Mental Health Resources

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- Primary care providers
- Mental health professionals (psychiatrists, psychologists, social workers, counselors)
- Insurance providers
- Community health centers
- Hospital psychiatry departments/outpatient clinics



[http://www.allaboutdepression.com/res\\_07.html](http://www.allaboutdepression.com/res_07.html)



## Community Mental Health Resources

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- Emergency rooms in times of crisis
- State hospital outpatient clinics
- Family service/social agencies
- Private clinics and facilities
- Employee Assistance Programs
- Local medical and/or psychiatric societies



[http://www.allaboutdepression.com/res\\_07.html](http://www.allaboutdepression.com/res_07.html)



## Resources for Diabetes Prevention and Control

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- American Association of Diabetes Educators  
[www.diabeteseducator.org](http://www.diabeteseducator.org)  
1-800-338-3633
- American Diabetes Association  
[www.diabetes.org](http://www.diabetes.org)
- Centers for Disease Control and Prevention's Division of Diabetes Translation  
[www.cdc.gov/diabetes](http://www.cdc.gov/diabetes)
- Diabetes Action Research and Education Foundation  
[www.diabetesaction.org](http://www.diabetesaction.org)



## Resources for Diabetes Prevention and Control

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- Diabetes Education and Sports Association  
[www.diabetes-exercise.org](http://www.diabetes-exercise.org)
- Diabetes Prevention Program  
<http://www.bsc.gwu.edu/dpp/manuals.htmlvdoc>
- National Diabetes Information Clearinghouse  
<http://diabetes.niddk.nih.gov>  
<http://diabetes.niddk.nih.gov/spanish/index.asp>  
(Spanish Web page)
- The National Diabetes Education Program  
[www.ndep.nih.gov](http://www.ndep.nih.gov)  
[www.cdc.gov/diabetes/ndep](http://www.cdc.gov/diabetes/ndep)  
[www.diabetesatwork.org](http://www.diabetesatwork.org)  
[www.betterdiabetescare.nih.gov](http://www.betterdiabetescare.nih.gov)



## Resources for Depression

- American Psychological Association's Web site:  
[www.apa.org](http://www.apa.org)
- A Pathway for Life Long Mental Health: A Mental Health Resource Guide  
[www.freedomfromfear.org](http://www.freedomfromfear.org)
- American Psychiatric Association  
[www.psych.org](http://www.psych.org)  
[www.healthyminds.org](http://www.healthyminds.org)
- Depression and Bipolar Support Alliance  
[www.dbsalliance.org](http://www.dbsalliance.org)
- Depression Booklet:  
[www.1on1health.com](http://www.1on1health.com)



## Resources for Depression

- Depression Health Center. WebMD's Web site:  
[http://my.webmd.com/medical\\_information/condition\\_centers/depression/default.htm](http://my.webmd.com/medical_information/condition_centers/depression/default.htm)
- Depression—You Don't Have to Feel that Way. American Family Physician. Published by the American Academy of Family Physicians. March 1, 2000.  
Available at: [www.aafp.org/afp/20000301/1523ph.html](http://www.aafp.org/afp/20000301/1523ph.html)
- Depression in the Workplace Magazine,  
Available at: [www.mangedcaremag.com/workplace](http://www.mangedcaremag.com/workplace)
- Depression Screening Test: An Online Self-test for depression.  
Available at: <http://psychcentral.com/depquiz.htm>



## Resources for Depression

- Mental Health Matters: Self Help Center: Video and Audio Tapes.  
Available at:  
[www.mental-health-matters.com/selfhelp/m\\_media.php](http://www.mental-health-matters.com/selfhelp/m_media.php)
- National Alliance on Mental Illness:  
[www.nami.org](http://www.nami.org)
- National Business Group on Health. An Employer's Guide to Behavioral Health Services: A Roadmap and Recommendations for Evaluating, Designing, and Implementing Behavioral Health Services.  
Available at:  
[http://www.businessgrouphealth.org/pdfs/fullreport\\_behavioralhealthservices.pdf](http://www.businessgrouphealth.org/pdfs/fullreport_behavioralhealthservices.pdf)



## Resources for Depression

- National Institute of Mental Health (NIMH): [www.nimh.nih.gov](http://www.nimh.nih.gov)
- NIMH's publications on depression, please call Toll-free 1-800-421-4211
- For NIMH's publication on diabetes and depression, visit: <http://www.nimh.nih.gov/publicat/index.cfm>
- National Mental Health Association  
[www.nhma.org](http://www.nhma.org)



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# Who Gets Depressed?

