

The Impact of Depression on Diabetes

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The Impact of Depression on Mortality and Morbidity
Including Other Diseases
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Diabetes in Canada

- Approximately 2 million people have diabetes in Canada.
- Types of diabetes:
 - Type 1 diabetes – less than 10% of cases
 - Type 2 diabetes – greater than 90% of cases
 - Gestational diabetes – diabetes during pregnancy

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Why is Diabetes a Concern?

- Diabetes is associated with:
 - Cardiovascular disease – heart attack and stroke
 - Kidney disease
 - Eye disease and blindness
 - Increased risk of limb amputation
- The lifespan for someone with diabetes is 13 years less than someone without diabetes.

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Depression

- Highly prevalent, disabling illness.
- Frequently follows a recurrent or chronic course.
- Significantly impairs quality of life.

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Depression and Chronic Medical Conditions

- Depression appears to be related to a number of chronic medical conditions:
 - Chronic obstructive pulmonary disease (COPD)
 - Osteoporosis
 - Rheumatoid arthritis
 - Cardiovascular disease
 - Diabetes

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Depression and Diabetes

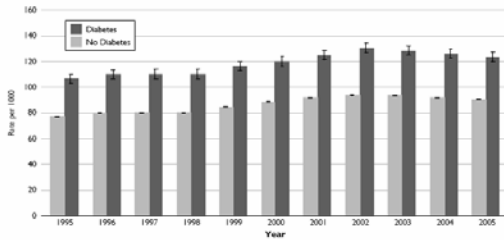
- Important questions:
 - Does depression cause diabetes?
 - Does diabetes cause depression?
- Studies have found risk for type 2 diabetes to be 1.23 to 2.56 times higher in people with depression/depressive symptoms compared to people without, but no difference in risk of depression for people with and without diabetes.
- Appears that having depression increases the risk of developing type 2 diabetes.

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Affective Disorders and Diabetes in Alberta

Figure 8.1 Age and Sex-Adjusted Rates of Affective Disorder, 1995-2005

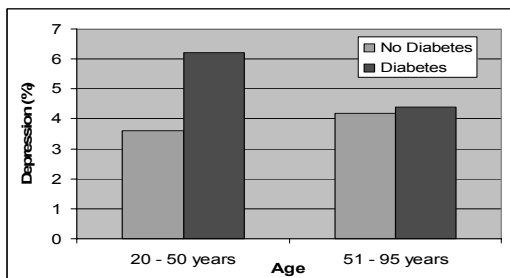


Source: Alberta Diabetes Atlas, 2007

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History of Depression in People with Diabetes in Saskatchewan



Source: Brown LC, et al. Diabetes Care 2005;28:1063-1067.

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Why is This Relationship Important?

- People with diabetes and comorbid depression have:
 - Increased complications due to diabetes;
 - Increased work loss;
 - Individuals with diabetes and depression are 3.25 times more likely to have extended (≥ 7) work loss days.
 - Decreased self-care activities;
 - Less physical activity
 - Unhealthy diet
 - Decreased adherence to medications

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Why is This Relationship Important? (Cont.)

- Increased health care use and expenditures;
 - Higher ambulatory care use
 - More prescriptions filled
 - 4.5 times higher health care expenditures.
- Increased risk of mortality.

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Potential Mechanisms Behind Relationship

- Biochemical changes: increase in cortisol levels associated with depression.
- Signs and symptoms of depression:
 - Weight changes
 - Decreased motivation
 - Decreased self-care activities
 - Fatigue
- Medications used to treat depression.
- Burden of having a chronic illness.

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Conclusions

- Individuals with a history of depression had a greater risk of developing new-onset type 2 diabetes.
- May be important to screen for diabetes in people diagnosed with depression.
- More research is needed to further investigate the mechanism behind the relationship between depression and diabetes.

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