Alcohol Consumption among Adults Diagnosed With Diabetes or Prediabetes, New Mexico, 2012-2014

Diabetes Advisory Council Meeting
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September 9, 2016
Background: Diabetes and Prediabetes

• Diabetes is a disease in which blood glucose levels are above normal
  • The body either doesn't make enough insulin or can't use its own insulin as well as it should

• Types of Diabetes
  • Type 1 diabetes
  • Type 2 diabetes
  • Gestational diabetes
  • Other specific types of diabetes

• Prediabetes is a condition where a person has a blood sugar level higher than normal, but not high enough for a diagnosis of diabetes
  • Without lifestyle changes to improve their health, 15% to 30% of people with prediabetes will develop type 2 diabetes within five years.
Background: Diabetes

• Diabetes can cause serious health complications including heart disease, blindness, kidney failure, and lower-extremity amputations

• Diabetes is the seventh leading cause of death in the United States

• In 2014, 22 million people had diagnosed diabetes
  • Prevalence of diabetes is increasing
  • 27.8% of people with diabetes are undiagnosed
Background: Alcohol

• 3rd leading cause of preventable death
  • Nationally, approximately 88,000 deaths per year
  • In New Mexico, 1,426 deaths in 2015

• Substantial contribution to premature death
  • 1 in 10 deaths among working age adults is attributable to alcohol in the U.S.
  • 1 in 6 deaths among working age adults is attributable to alcohol in New Mexico

• New Mexico has one of the highest per capita costs of excessive alcohol
  • $2.2 billion ($2.77 per drink or $1,084 per person) in 2010
  • 41% of these costs were paid by the government
  • 75% of these costs are from binge drinking

New Mexico Leads the Nation in Alcohol-Attributable Death

Average annual alcohol-attributable death rate* by state, United States, 2006-2010

- U.S. total: 27.9
- New Mexico: 51.2

*Deaths per 100,000 population, age-adjusted to the 2000 U.S. standard population

Stahre M., Prev Chronic Dis, 2014
<table>
<thead>
<tr>
<th>Drink Description</th>
<th>Carbohydrates (g)</th>
<th>Calories (kcal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>12 fl oz of regular beer (5% alcohol)</td>
<td>13</td>
<td>155</td>
</tr>
<tr>
<td>8.5 fl oz of malt liquor (7% alcohol)</td>
<td>9</td>
<td>145</td>
</tr>
<tr>
<td>5 fl oz of table wine (12% alcohol)</td>
<td>4</td>
<td>125</td>
</tr>
<tr>
<td>1.5 fl oz of 80-proof distilled spirits (40% alcohol)</td>
<td>0</td>
<td>97</td>
</tr>
</tbody>
</table>

Background: Alcohol and Diabetes

• But it can be tricky! Alcohol may increase blood sugar in the short term but can cause hypoglycemia over the long-term
  • Light to moderate amounts of alcohol likely have little impact on glycemic control

• Excessive alcohol consumption may affect judgment and encourage overeating, which may affect glycemic control

• Alcohol can interfere with the effects of some oral medications and insulin

• Excessive alcohol consumption can exacerbate diabetes-related complications
  • E.g. nerve damage, eye disease

American Diabetes Association Tips for Alcohol

• If you choose to drink, have it with food
  • Especially important for those on insulin and diabetes pills such as sulfonylureas and meglitinides

• Do not omit food from your regular meal plan and replace it with alcohol
  • If you use carbohydrate counting to plan meals, do not count alcohol in your plan as a carbohydrate choice

• Wear an I.D. that notes you have diabetes

• Sip your drink slowly to savor it and make it last

• Have a zero calorie beverage to keep yourself hydrated

• Try a light beer or wine spritzer
  • Remember that heavy craft beers can have twice the alcohol and calories as a light beer

• For mixed drinks, choose calorie-free drink mixers like diet soda, club soda, diet tonic water or water

• Do not drive or plan to drive for several hours after you drink alcohol
Alcohol and Diabetes in New Mexico

• In 2014, more then 1 in 10 (11.5%) of adults in New Mexico reported that they had been diagnosed with diabetes

• 8.2% of adults in New Mexico reported DIAGNOSED prediabetes

• 13.7% of adults in New Mexico reported binge drinking in the preceding 30 days
  • Binge drinking is defined as $\geq 4$ drinks on an occasion for women or $\geq 5$ drinks on an occasion for men

• 5.7% of adults in New Mexico reported heavy drinking in the preceding 30 days
  • Heavy drinking is defined as $\geq 8$ drinks per week for women or $\geq 15$ drinks per week for men
Alcohol Screening and Brief Intervention (A-SBI)

• Involves screening for excessive drinking, using AUDIT, AUDIT-C, or single question screener and providing a brief intervention, such as motivational interviewing, for those who screen positive

• A-SBI can reduce the amount consumed on an occasion by 25% in those who drink too much

• United States Preventive Service Task Force recommends all adults be screened (B recommendation)
Objective

Describe patterns of excessive alcohol consumption and assess alcohol screening among adults diagnosed with diabetes or prediabetes
Methods

• Data from the 2012-2014 New Mexico Behavioral Risk Factor Surveillance System (BRFSS) were used (N = 27,029)
  • Three years were aggregated to ensure robust estimates among smaller demographic populations

• Assessed binge drinking and heavy drinking patterns

• Estimates were calculated for adults who had ever been diagnosed with diabetes and compared to adults who had never been diagnosed with diabetes

• Association was assessed by age, gender, race/ethnicity, and education

• Used data from 2014 BRFSS to assess A-SBI among adults diagnosed with diabetes
Prevalence of Binge Drinking and Heavy Drinking by Diabetes and Prediabetes Diagnosis Status, New Mexico, BRFSS, 2012-2014
Prevalence of Binge Drinking and Heavy Drinking by Diabetes Diagnosis Status and Gender, New Mexico, BRFSS, 2012-2014

Binge drinking

Heavy drinking
Prevalence of Binge Drinking and Heavy Drinking by Diabetes Diagnosis Status and Age Group, New Mexico, BRFSS, 2012-2014

- **Binge drinking**
- **Heavy drinking**

The graph shows the prevalence of binge and heavy drinking among adults with diabetes, adults without diabetes, and adults with prediabetes across different age groups (18-34, 35-54, 55-64, 65+). The prevalence is represented as a percentage. The x-axis indicates the age group, while the y-axis represents the prevalence (%) of binge and heavy drinking.
Prevalence of Binge Drinking and Heavy Drinking by Diabetes Diagnosis Status and Race/Ethnicity*, New Mexico, BRFSS, 2012-2014

*Asian, Pacific Islander, and African American prevalence estimates could not be calculated due to small sample
Prevalence of Binge Drinking and Heavy Drinking by Diabetes Diagnosis Status and Educational Status, New Mexico, BRFSS, 2012-2014
### A-SBI among Adults Diagnosed with Diabetes or Prediabetes, New Mexico, BRFSS, 2014

<table>
<thead>
<tr>
<th></th>
<th>Adults with Diabetes</th>
<th>Adults without Diabetes</th>
<th>Adults with Prediabetes</th>
<th>Adults without Preiabetes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>95% CI</td>
<td>%</td>
<td>95% CI</td>
</tr>
<tr>
<td>Asked about alcohol use during checkup</td>
<td>78.7 (74.4, 82.4)</td>
<td>84.2 (82.7, 85.7)</td>
<td>84.5 (79.6, 88.4)</td>
<td>84.3 (82.6, 85.8)</td>
</tr>
<tr>
<td>Asked about amount</td>
<td>67.4 (63.1, 71.4)</td>
<td>73.6 (71.8, 75.4)</td>
<td>73.3 (68.0, 78.0)</td>
<td>73.7 (71.8, 75.6)</td>
</tr>
<tr>
<td>Screened for binge drinking</td>
<td>38.6 (34.3, 43.0)</td>
<td>36.7 (34.7, 38.8)</td>
<td>39.7 (34.0, 45.6)</td>
<td>36.4 (34.3, 38.7)</td>
</tr>
<tr>
<td>Offered advise on harmful levels of drinking</td>
<td>32.7 (28.6, 37.1)</td>
<td>23.7 (22.0, 25.6)</td>
<td>23.4 (19.1, 28.3)</td>
<td>23.9 (22.0, 25.9)</td>
</tr>
</tbody>
</table>
Summary

• Generally, adults who have been diagnosed with diabetes are at lower risk for excessive drinking compared to adults who are not diagnosed with diabetes

• However this is not the case among all demographic groups
  • Adults aged 18-34 years (binge drinking and heavy drinking)
  • American Indians (heavy drinking)

• Adults diagnosed with prediabetes are equally likely to drink excessively as adults who are not diagnosed with prediabetes

• Adults diagnosed with diabetes are less likely to be asked about their alcohol use
Conclusions

• While overall risk of excessive drinking is low, risk is not equally distributed between demographic groups

• Health care providers should incorporate A-SBI in care for all patients who have diabetes
  • Alcohol screening and brief counseling can reduce the amount consumed on an occasion by 25% in those who drink too much
  • United States Preventive Service Task Force recommends ALL adults be screened (B recommendation)
Thank you! Questions?

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