DIABETES is a group of diseases resulting in high levels of blood glucose (form of sugar) due to defects in insulin production, action, or both. Diabetes can lead to serious complications and premature death. People who have diabetes can work with health care providers and support systems to take action, control the disease, and lower their risk for complications.

- In 2011, 10.1% of Indiana adults reported having some form of diabetes\(^1\)\(^+\)
- Type 1 diabetes is the result of the body’s inability to produce insulin and typically develops in childhood or adolescence (approximately 5% of cases).
- Type 2 diabetes, the most common form, occurs when the body is no longer able to effectively produce or use insulin (approximately 95% of cases).

Diabetes prevalence increases with age [Fig 1]. Individuals with diabetes have higher rates of premature death, functional disability, and other conditions such as coronary heart disease (CHD), heart attack and stroke [Fig 2].\(^1\) Diabetes was the seventh leading cause of death in Indiana in 2009. This was consistent across most racial and ethnic groups in Indiana, except among black residents, where it was the fourth leading cause of death.\(^2\)

**Figure 1.** Diabetes prevalence by age, Indiana, 2011\(^1\)\(^+\)

<table>
<thead>
<tr>
<th>Age (years)</th>
<th>Percent of adults</th>
</tr>
</thead>
<tbody>
<tr>
<td>18–24</td>
<td>1.8%</td>
</tr>
<tr>
<td>25–34</td>
<td>2.6%</td>
</tr>
<tr>
<td>35–44</td>
<td>5.8%</td>
</tr>
<tr>
<td>45–54</td>
<td>8.3%</td>
</tr>
<tr>
<td>55–64</td>
<td>14.2%</td>
</tr>
<tr>
<td>65+</td>
<td>18.7%</td>
</tr>
</tbody>
</table>

**Figure 2.** Prevalence of cardiovascular disease by diabetes status, Indiana, 2009\(^1\)

- Normal glucose
- Pre-diabetes
- Diabetes

<table>
<thead>
<tr>
<th>Condition</th>
<th>Normal glucose</th>
<th>Pre-diabetes</th>
<th>Diabetes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coronary Heart Disease</td>
<td>3.6%</td>
<td>8.1%</td>
<td>15.2%</td>
</tr>
<tr>
<td>Heart Attack</td>
<td>4.0%</td>
<td>8.0%</td>
<td>17.6%</td>
</tr>
<tr>
<td>Stroke</td>
<td>2.4%</td>
<td>8.4%</td>
<td>10.3%</td>
</tr>
</tbody>
</table>

**Depression**\(^3\)
- People who have diabetes are twice as likely to develop depression as those who do not.
- People who have depression are 60% more likely to develop diabetes than those who do not.

**Diabetes and cardiovascular disease (CVD)**
- In 2011, 71.9% of Indiana residents who have diabetes reported having high blood pressure, and 69.4% reported having high cholesterol.\(^1\)
- Adults who have diabetes are 2 to 4 times more likely to die from a heart attack or stroke than those without diabetes.\(^4\)

**Gestational diabetes mellitus (GDM)**
- GDM is a condition where females develop high blood glucose levels during pregnancy.
- In 2008, 4.5% of Indiana births involved GDM.\(^5\)
- Females with a history of GDM have a lifetime risk 7 times higher of developing type 2 diabetes than females with normal blood sugar levels during pregnancy.\(^6\)

**Kidney disease**
- Diabetes is the leading cause of kidney failure, accounting for 44% of known cases of end-stage renal disease among Indiana residents in 2010.\(^7\)

**Nervous system disease**\(^8\)
- About 60% to 70% of people with diabetes have mild to severe forms of nervous system damage due to diabetes (diabetic neuropathy).
- Diabetic neuropathy may result in impaired hand or feet sensation, pain, digestive disturbances, sexual dysfunction or other conditions.

**Vision**
- Diabetes is the leading cause of new blindness among adults.\(^4\)
- In 2011, 18.1% of Indiana adults with diabetes reported vision problems due to diabetes.\(^1\)

**Wounds and amputation**
- Foot ulceration and lower-limb amputation are common outcomes of poorly managed diabetes.
- Diabetes is the leading cause of non-traumatic amputations, responsible for 44% of lower-limb amputations among Indiana residents in 2010.\(^8\)

* Unless specified otherwise, diabetes refers to both type 1 and type 2 diabetes, but not gestational diabetes.
† Prevalence figures are for adults 18 and older.
Diabetes

Risk factors for type 2 diabetes
- Impaired glucose tolerance or impaired fasting glucose, also known as pre-diabetes
- A parent or sibling with diabetes
- Physical inactivity
- Being overweight or obese
- Certain races—American Indians, blacks, Hispanics, and Asian Americans—are at higher risk of developing type 2 diabetes.
- Women who have delivered a baby weighing nine pounds or more or with a history of GDM
- Women with polycystic ovarian syndrome
- History of low HDL cholesterol, high triglycerides, or high blood pressure
- Visceral fat distribution, such as abdominal storage of fat
- Smoking
- Some medications prescribed for other conditions increase the risk for insulin resistance, which may lead to diabetes.
  - Some steroids and atypical antipsychotics are associated with increased weight gain, hyper-triglyceridemia, and diabetes.

Take Action: Steps you can take to prevent or manage diabetes
- Manage your diabetes with guidance from your health care provider
- Maintain a healthy blood pressure
- Maintain a healthy cholesterol level
- Be tobacco free (www.in.gov/quitline)
- Maintain a healthy weight
- Eat a healthy diet
- Participate in regular physical activity
- Learn to recognize the onset of symptoms or physical changes due to diabetes
- Monitor any changes in health status when being treated or taking medications for other conditions
- If you have diabetes and are planning a pregnancy, consult a health care provider
- If you are pregnant and have not been previously diagnosed with diabetes, get screened for GDM at 24–28 weeks gestation
- If you had GDM during pregnancy:
  - Get screened for persistent diabetes at 6–12 weeks postpartum
  - Thereafter, get screened for diabetes or pre-diabetes at least every three years

Community resources
- For a listing of diabetes programs by county, visit the Indiana Diabetes Education and Support Program Directory or call the Indiana Family Helpline at 1-855-HELP-1ST (855-435-7178).
- Diabetes Prevention Program (DPP): a program that aids in prevention of type 2 diabetes for individuals who are at risk of diabetes. Contact the “Y” (formerly YMCA) in Bloomington, Fort Wayne, and Indianapolis.
- Diabetes Education Empowerment Program with Tobacco Cessation (DEEP TC): helps people with diabetes develop the skills to better manage the disease (Offered in English and Spanish).
- Living a Healthy Life: a 6-week workshop for people with chronic illnesses, which empowers them to manage their disease, control symptoms, and learn how health problems affect their lives.
- For mental health services, call the Indiana Family Helpline at 1-855-HELP-1ST (855-435-7178) or visit the Community Mental Health Services Locator.

References

For additional information on the impact of diabetes in Indiana, please visit: www.chronicdisease.isdh.in.gov