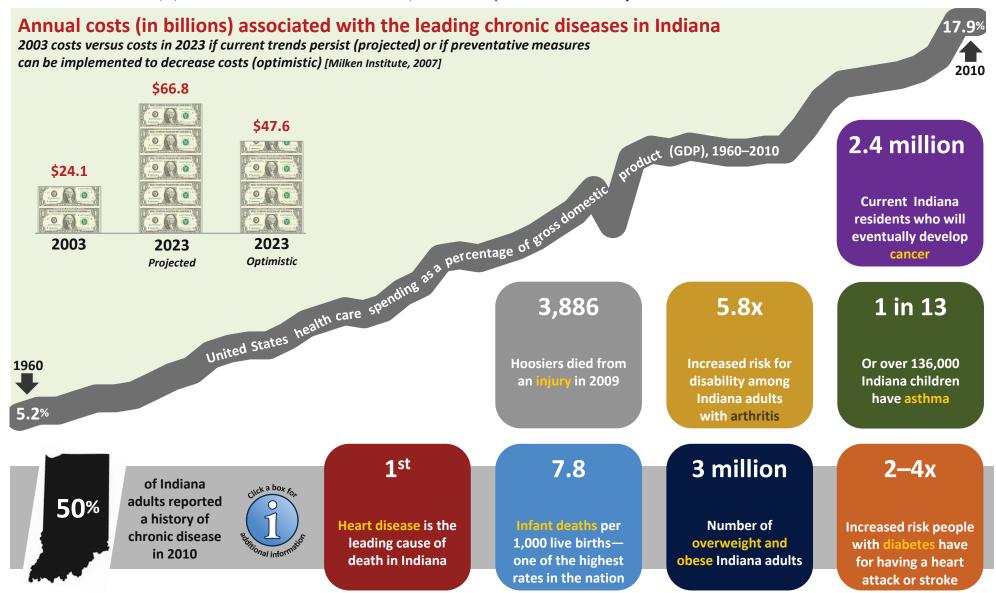
CHRONIC DISEASE AND INJURY IN INDIANA (2012)



Chronic diseases and injuries have a considerable impact on morbidity (health) and mortality (death) in Indiana and across the country. In 2010, almost 50% of Indiana adults reported having a history of heart disease, stroke, cancer, chronic lower respiratory disease (like asthma), diabetes, or arthritis. Spending on medical care for people with these diseases is responsible for much of the growing impact of health care costs in Indiana. In 2003, \$24.9 billion was spent on care for Indiana residents with these chronic diseases, excluding arthritis. If current illness and health behaviors trends persist, costs related to chronic diseases could reach \$66.8 billion by 2023. Additionally, injury is the leading cause of death among Indiana residents ages 1–44 and the fifth leading cause of death overall. In 2009, 3,886 Hoosiers died and an additional 50,800 were hospitalized because of injuries.



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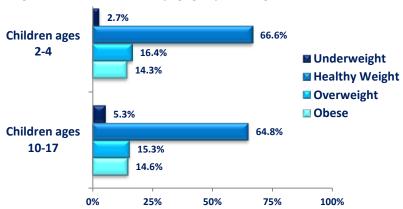


OVERWEIGHT AND OBESITY



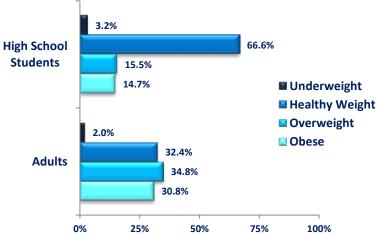
OVERWEIGHT AND OBESITY are terms for ranges of weight that are greater than what is generally considered healthy for a given height. The terms also identify weight ranges that have been shown to increase the risk for certain diseases and other health problems. In 2011, 30.7% of children ages 2–4 in the Indiana Special Supplemental Nutrition Program for Women, Infant, and Children (WIC) were considered overweight or obese [Fig 1].¹ In 2007, an estimated 30% of Indiana youth ages 10–17 were considered overweight or obese [Fig 1].²

Figure 1. Percent of children by age group and weight status, Indiana* 1, 2



In 2011, 30.2% of Indiana high school students were considered either overweight or obese [Fig 2].³ Additionally, 65.6% of Indiana adults[†] were considered either overweight or obese [Fig 2].⁴ This amounts to over 3 million Hoosier adults, which is equal to the population of the state of Iowa.

Figure 2. Percent of high school students and adults $^{\rm T}$ by weight status, Indiana, 2011 $^{\rm 3,4}$



^{*}Data for children ages 10-17 from 2007

Calculating weight status: Body Mass Index (BMI)

- People's weight status is determined by using their weight and height to <u>calculate</u> their BMI.
- □ For most people, their BMI is closely related to the amount of body fat they have.
- Because children's body composition varies with age and sex, their BMI is determined using age- and sex-specific percentiles for BMI rather than the BMI categories used among adults.

Adult BMI categories

- □ Underweight: Below 18.5
- Healthy Weight: 18.5–24.9
- □ Overweight: 25.0–29.9
- □ Obese: 30.0 and above

Child BMI categories

- □ Underweight: Less than the 5th percentile
- Healthy Weight: 5th percentile to less than the 85th percentile
- Overweight: 85th percentile to less than the 95th percentile
- Obese: Greater than or equal to the 95th percentile

Risk factors for becoming overweight or obese⁵

- Physical inactivity
- Unhealthy diet and eating habits
- Social and economic issues
- Family lifestyle
- Genetics
- Age
- Not breastfed as an infant⁶

Health consequences of being overweight or obese⁷

- Hypertension (high blood pressure)
- High total cholesterol, low HDL cholesterol, and/or high levels of triglycerides
- Type 2 diabetes
- Coronary heart disease
- Stroke
- Gallbladder disease
- Osteoarthritis
- Sleep apnea and respiratory problems
- Some cancers (e.g., endometrial, breast and colon)

^TAdults are people ages 18 years and older



OVERWEIGHT AND OBESITY



Economic consequences

Indiana

- During an average year, Hoosiers pay \$3.5 billion in obesity-related medical costs.⁸
 - 36.9% of these costs are financed by the public sector through Medicare and Medicaid.⁸

United States

- □ In 2008, obesity-related health care costs were estimated at \$147 billion. 9
 - This equals 9.1% of annual medical spending.¹⁰
- ☐ If obesity rates remain level, there would be a \$550 million savings in medical expenses over the next two decades. 10
- □ If obesity rates continue to rise following current trends, total health care costs attributable to obesity and overweight will more than double every decade by 2030.¹⁰
 - This would equate to \$860 to \$956 billion, or 15.6% to 17.6% of total health care costs.¹¹

TAKE ACTION: Steps you can take to prevent or manage being overweight or obese

- Maintain a proper diet and nutrition
 - Eat more <u>fruits</u> and <u>vegetables</u> and less high-fat, high-sugar, and high- sodium foods.
 - Drink more water and fewersugary drinks

■ Be physically active

- Adults should have 150 minutes of moderateintensity aerobic activity OR 75 minutes of vigorous-intensity aerobic activity each week.
- Children should have 60 minutes or more of moderate- or vigorous-intensity aerobic activity each day.
- Limit screen time (TV, computer and video games) for children to less than two hours per day.

■ Support Breastfeeding

 New mothers are recommended to continue breastfeeding for at least 12 months.

Community resources

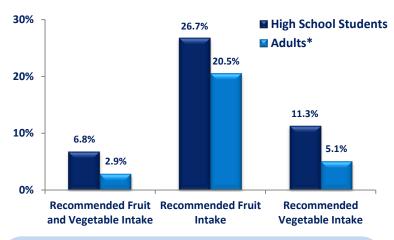
- □ Calculate your or your child's BMI at: www.cdc.gov/healthyweight/assessing/bmi.
- To help Hoosiers and their families eat better, move more, and avoid tobacco visit INShape Indiana.
- Recommended Community Strategies and Measurements to Prevent Obesity in the United States contains 24 recommended obesity prevention strategies focusing on environmental and policy level changes.
- Stories from the Field highlights what state programs, including Indiana's, are doing to prevent obesity and other chronic diseases.
- <u>Burden of Obesity in Indiana 2011 Report</u> provides a roadmap for targeting interventions for at-risk groups and others in order to improve weight status, physical activity levels, and fruit and vegetable consumption.
- <u>Youth Risk Behavior Survey posters</u> illustrate the impact of overweight and obesity on Indiana high school students.
- For more information on what is being done in Indiana, visit the <u>Indiana Healthy Weight Initiative</u> website.
- □ For more tips, check out *Indiana's Comprehensive Nutrition and Physical Activity Plan, 2010–2020*.

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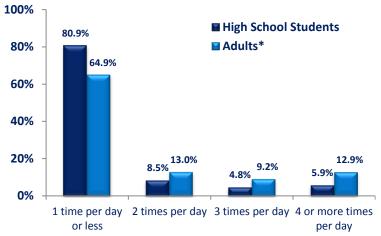
A **HEALTHY DIET** can reduce the risk of chronic diseases such as cardiovascular disease, hypertension, type 2 diabetes, osteoporosis and some cancers. In 2011, 6.8% of Indiana high school students and 2.9% of Indiana adults reported eating the recommended amount of fruits and vegetables during the past week [Fig 1]. The recommended amounts are based on the U.S. Department of Agriculture's MyPlate age- and sex-specific guidelines.

Figure 1. Percent of high school students and adults* who ate the recommended servings of fruit and vegetables per day, Indiana, 2011



Based upon age and sex, an individual should consume no more than 120–330 "empty" calories per day. One can (12 fl. oz.) of regular soda contains an estimated 136 empty calories. In 2011, 80.9% of Indiana high school students and 64.9% of Indiana adults drank a sugar-sweetened beverage 1 or fewer times per day during the past week [Fig 2].^{2,3}

Figure 2. Percent of high school students and adults* by sugar-sweetened beverage intake per day, Indiana, 2011



Sugar-sweetened beverage intake

Obstacles to a healthy diet

Food insecurity⁴

- Defined as the limited or uncertain availability of nutritionally adequate and safe foods or the limited or uncertain ability to acquire acceptable foods in socially acceptable ways.
- □ In 2007, 36.2 million U.S. residents (12.2%) lived in food-insecure households. 12.4 million were children under age 18.

Food deserts

- Defined as an area with limited access to affordable and nutritious food.⁵
 - 7% of Hoosiers have limited access to healthy food.⁶
 - Indiana has 120 food deserts in 33 counties.

Fast-food restaurants

- Full-service and fast-food restaurants account for about 77% of all food-away-from-home sales in the U.S.⁸
- 50% of restaurants in Indiana are fast-food establishments. 6

How to add fruits and vegetables to your diet

Farmers markets⁹

- □ Provide community members with access to fresh fruits and vegetables that are often locally grown.
- □ Currently, Indiana has 163 farmers markets in 60 counties.

Community gardens

- Gardens on shared open spaces that are maintained by a group of community members.
- Include healthy and affordable fresh fruits and vegetables.

Farm-to-School programs

- □ Schools (K−12) serve students produce purchased from local farms. The programs help:
 - Make school cafeteria meals more healthful
 - Improve student nutrition
 - Provide agriculture, health and nutrition educational opportunities
 - Support local and regional famers

^{*}Adults are people ages 18 years and older





Health benefits of a healthy diet¹⁰

- Eating a diet rich in vegetables and fruits as part of an overall healthy diet may:
 - Reduce risk for cardiovascular disease, including heart attack and stroke;
 - Protect against certain types of cancers.
- Diets rich in foods containing fiber, such as some vegetables and fruits, may reduce the risk of heart disease, obesity and type 2 diabetes.
- Eating vegetables and fruits rich in potassium as part of an overall healthy diet may lower blood pressure and may also reduce the risk of developing kidney stones and help to decrease bone loss.
- Eating foods such as fruits that are lower in calories per cup instead of some other higher-calorie food may be useful in helping to lower calorie intake.

TAKE ACTION: Steps you can take to eat a healthy diet

- Eat the recommended daily servings of each food group^{11†}
 - 2 ½ cups of vegetables
 - 2 cups of fruits
 - 6 ounces of grains
 - 3 cups of dairy
 - 5 ½ ounces of protein foods
- Eat a variety of <u>fruits</u> and <u>vegetables</u>. Try new recipes while increasing your daily fruit and vegetable intake.
- Drink water instead of sugar-sweetened beverages. This lowers the amount of calories you consume from other beverages.
- Reduce or limit the following in your diet:
 - Sodium
 - Saturated fatty acids
 - Trans fatty acids

Community resources

- □ <u>Dietary Guidelines for Americans 2010</u> is the federal government's evidence-based nutritional guidance to promote health, reduce the risk of chronic diseases, and reduce the prevalence of overweight and obesity through improved nutrition and physical activity.
- □ ChooseMyPlate.gov features practical information and tips to help Americans build healthier diets.
- <u>Burden of Obesity in Indiana 2011 Report</u> provides a roadmap for targeting interventions for at-risk groups and others in order to improve weight status, physical activity levels, and fruit and vegetable consumption.
- □ Youth Risk Behavior Survey posters provide an illustration of Indiana high school students' nutritional levels.
- □ For more information on what is being done in Indiana, visit the Indiana Healthy Weight Initiative website.
- □ For more tips, check out *Indiana's Comprehensive Nutrition and Physical Activity Plan, 2010-2020*.

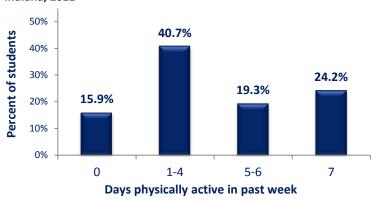
- 1. U.S. Department of Agriculture and U.S. Department of Health and Human Services. <u>Dietary Guidelines for Americans</u>, 2010. 7th Edition, Washington, DC: U.S. Government Printing Office, December 2010.
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- 10. United States Department of Agriculture. (2012). <u>ChooseMyPlate.gov, Why is it Important to eat...</u>
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Daily recommended values may vary by sex and age



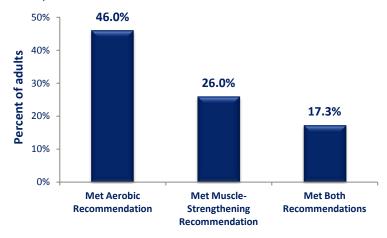
PHYSICAL ACTIVITY, including both aerobic and strength-training activities, is part of a healthy lifestyle and plays a vital role in achieving and maintaining a healthy weight. Regular physical activity reduces the risk of chronic disease and helps to improve overall health. In 2011, 24.2% of Indiana high school students reported being physically active for at least 60 minutes each day during the past week, meeting the Centers for Disease Control and Prevention's (CDC) physical activity recommendations for children [Fig 1]. Almost 16% reported no physical activity during the past week.

Figure 1. Percent of high school students by days physically active, Indiana, 2011



In 2011, 17.3% of adults* met the CDC's physical activity recommendations for adults of 150 minutes or more of moderate-intensity aerobic activity each week AND muscle strengthening activities on 2 or more days per week [Fig 2].² Almost 29.2% reported no physical activity outside of their normal work.²

Figure 2. Percent of adults* meeting physical activity recommendations, Indiana, 2011²



Obstacles to physical activity

Screen time (2011)¹

- □ 51.4% of Indiana high school students watched 2 or more hours of TV per day on an average school day.
- □ 44.2% of Indiana high school students played video games or used a computer for something not school-related 2 or more hours per day on an average school day.

Commuting

- □ The average commute time for Indiana residents is 23.2 minutes.³
 - Each hour spent in a car per day is associated with a 6% increase in the risk for obesity.⁴
- □ Only 2.2% of the population indicated walking as their mode of transportation to work.³

Unsafe environments

- Only 20% of people in Indiana are currently covered by Complete Streets policies.⁵
- □ Complete Streets are roadways designed to safely and comfortably provide for the needs of all users, including, but not limited to, motorists, cyclists, pedestrians, transit and school bus riders, movers of commercial goods, persons with disabilities, seniors and emergency users.

Examples of types of physical activity

Moderate-intensity aerobic activity⁶

- Walking fast
- Doing water aerobics
- Riding a bike on level ground or with few hills
- Playing doubles tennis
- Pushing a lawn mower

Vigorous-intensity aerobic activity⁶

- Jogging or running
- Swimming laps
- Riding a bike fast or on hills
- Playing singles tennis
- Playing basketball

^{*}Adults are people ages 18 years and older





Health benefits of physical activity in adults*7

- Strong evidence of reduced rates of:
 - All-cause mortality
 - Coronary heart disease
 - High blood pressure
 - Stroke
 - Metabolic syndrome
 - Type 2 diabetes
 - Some cancers (e.g., breast and colon)
 - Depression
 - Falling
- □ Strong evidence of:
 - Increased cardiorespiratory and muscular fitness
 - Healthier body mass and composition
 - Improved bone health
 - Increased functional health
 - Improved cognitive function

Economic consequences⁸

- The annual cost directly attributable to inactivity in the United States is an estimated \$24 to \$76 billion.
 - These amounts equal 2.4% to 5% of the total expenditure on health care.

TAKE ACTION: Steps you can take to be physically active

- Add physical activity to your life
 - Choose a variety of activities to reach recommended physical activity levels
 - Make physical activity a regular part of your day at home, work, or for leisure
 - Engage in physical activity with family and friends
- Limit total non-educational screen time (computer and television use) to no more than 2 hours per day for children⁹
- □ Commute actively when possible
 - Add movement on your way to and from work to increase your physical activity level
- Support active environments
 - Promote the adoption of urban design, land use and transportation policies that plan, build and maintain communities that are more walkable and bikeable for all residents
 - Make walking and bicycling to school safe for children
 - Promote and support parks, playgrounds and trails

Community resources

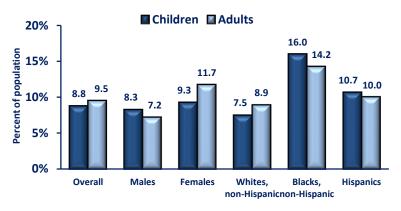
- INShape Indiana has programs for all types of people seeking to increase their physical activity level.
- 2008 Physical Activity Guidelines for Americans provides guidelines to help individuals ages 6 and older improve their health through appropriate physical activity.
- □ Community Health Resources highlight the CDC's best resources to help you plan, implement and evaluate community health interventions and programs to address chronic disease and health disparities issues.
- <u>Burden of Obesity in Indiana 2011 Report</u> provides a roadmap for targeting interventions for at risk groups and others to improve weight status, physical activity levels, and fruit and vegetable consumption.
- □ <u>Indiana Youth Risk Behavior Survey posters</u> provide a visual depiction of the level of physical activity among Indiana's high school students.
- For more information on what is being done in Indiana, visit the <u>Indiana Healthy Weight Initiative</u> website.
- □ For more tips, check out *Indiana's Comprehensive Nutrition and Physical Activity Plan, 2010-2020*.

- $1.\ Indiana\ State\ Department\ of\ Health.\ (2012).\ \textit{Youth\ Risk\ Behavior\ Surveillance-United\ States,\ 2011.}$
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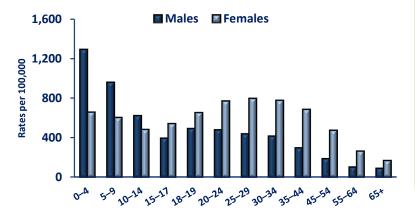
ASTHMA is a chronic inflammatory disease that affects the airways and lungs, causing recurring periods of wheezing, chest tightness, shortness of breath and coughing. It is a serious public health concern that affects approximately 7 million children and 18.7 million adults in the United States. In Indiana, an estimated 136,202 (1 in 13) children and 457,670 (1 in 11) adults currently have asthma. The burden of asthma is highest among black children and adults [Fig 1].

Figure 1. Current asthma* prevalence, adults and children, Indiana, 2010²



The rates of emergency department (ED) visits among males and females are different across the lifespan. Most male ED visits occur during childhood, and the highest rate of female ED visits occurs during the middle adult years [Fig 2]. In 2010, the age-adjusted asthma ED visit rate among females was 541.2 per 100,000 and 417.4 per 100,000 among males.³

Figure 2. Asthma emergency department rates by age and sex, Indiana, 2010³



^{*}Current asthma was measured by asking if the child/adult still had asthma

Asthma triggers

The cause of asthma is unknown, but people with asthma have inflamed airways which cause them to be more reactive and sensitive to triggers.

Common triggers include:

- Pet hair or dander
- Changes in weather, usually cold weather
- Chemical irritants
- Cockroaches, dust mites and pests
- Exercise
- Food
- Mold
- Outdoor air pollutants and ozone
- Pollen
- Respiratory infections, such as the common cold
- Stress
- Tobacco and wood smoke

Emergency department (ED) visits

ED visits have increased among Indiana residents significantly since 2004, but leveled off during the past 3 years. During 2010:³

- 30,192 people visited the ED with a principal diagnosis of asthma—a decrease of nearly 1,000 visits from 2009.
- ☐ The overall age-adjusted ED visit rate was 480.7 cases per 100,000 people.
- 38.0% of the asthma-related ED visits were among children.
- Black residents (1,297.9 per 100,000 people) visited the ED for asthma at a much higher rate than white residents (333.6 per 100,000 people).

Hospitalizations

While the rate of asthma-related hospitalizations in 2010 was the lowest since 2007, it was still the 4th leading cause of hospitalization due to illness among Indiana children under age 18. During 2010: ³

- 8,351 asthma-related hospitalizations occurred, down 8.7% from 2009.
- Overall, females had higher rates of hospitalization than males (153.1 versus 98.3 per 100,000 people); however, male children had higher rates than female children (172.2 versus 103.5 per 100,000 people).
- Black residents (351.4 per 100,000 people) were hospitalized nearly 4 times more often than white residents (94.4 per 100,000 people).





Mortality⁴

- In 2009, 71 Indiana residents' deaths had asthma listed as the underlying cause.
 - 31 were males and 40 were females
 - 46 were whites and 25 were blacks
 - 9 were children

Management among persons with current asthma⁵

- Although asthma is rarely fatal, poorly controlled asthma can lead to missed school or work and the inability to participate in daily activities.
 - During 2006–2010, 60.5% of Indiana children had their usual activities limited due to their asthma, and 44.7% of school-aged children missed 1 or more days of school because of it.
 - In 2010, 34.7% of Indiana adults missed work or could not participate in daily activities due to their asthma.
- □ Creating an Asthma Action Plan is important in learning how to control asthma long-term and in recognizing early symptoms of an attack, yet only 28.6% of adults and 47.7% of children with asthma had an action plan during 2006–2010.
- Routinely seeing a health care provider is one way to manage one's asthma. During 2006–2010, 50.0% of adults and 24.0% of children did not see their doctor for routine visits concerning their asthma.

TAKE ACTION: Steps you can take to prevent or control asthma

- While there is no cure for asthma, make sure to manage your (or your child's) asthma by knowing and attempting to avoid asthma triggers
- Avoid smoking or secondhand smoke
- Limit outdoor exercise on Ozone Action Days or days with poor air quality
- Take medications prescribed by your health care provider
- Work with your health care provider to create an Asthma Action Plan—these plans include information concerning daily treatment, medications, short- and long-term control measures, and explain when to seek medical treatment
- Know early asthma warning signs to head off an episode before it gets worse
- Ensure students and employees have immediate access to quick-relief medications
- Encourage schools, child care centers, and workplaces to participate in <u>no-idle zones</u>, <u>Ozone</u> <u>Action Days</u> and other environmental health actions

Community resources

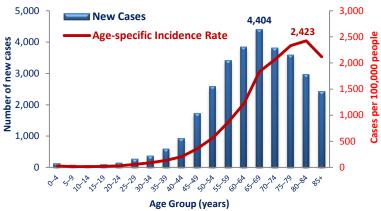
- Fly a Flag for Clean Air Program: a program for schools to create public awareness of outdoor air quality conditions so children can continue to play while protecting themselves.
- □ <u>Indiana Joint Asthma Coalition</u> (InJAC): a voluntary group of people and organizations working to reduce the burden of asthma in Indiana.
- For a list of asthma coalitions, programs and resources in Indiana, go to InJAC's Resources page, or call the Indiana Family Helpline at 1-855-HELP-1ST (855-435-7178). Additional information can be found at the Asthma Community Network.
- To get help with tobacco cessation, call the <u>Indiana Tobacco Quitline</u> at 1-800-QUIT-NOW (800-784-8669), or visit www.quitnowindiana.com.
- AIRNow: an index for reporting daily air quality in local regions.
- Knozone: a program to improve Indianapolis' air quality.

- 1. Centers for Disease Control and Prevention. (2012). National Health Interview Survey (NHIS), 2010.
- 2. Centers for Disease Control and Prevention. (2011). <u>Behavioral Risk Factor Surveillance System Prevalence Data, 2010</u>.
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- 4. Indiana State Department of Health. (2012). Indiana Mortality Report, 2009.
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CANCER is a group of diseases characterized by uncontrolled growth and spread of abnormal cells. Anyone can get cancer at any age; however, middle and older aged people are most likely to develop cancer. In Indiana, during 2008, 70% of all cancers cases occurred among people ages 55–84, including 23% among people ages 55–64, 26% among people ages 65–74, and 21% among people ages 75–84 [Fig 1].

Figure 1. Number and rate of new cancer diagnoses, Indiana, 2008



INDIANA'S age-adjusted cancer incidence rate during 2004–2008 was 475.6 per 100,000 people. This was statistically higher than, but very similar to, the national rate of 471.8 per 100,000 people (<1% difference) [Table 1]. However, during the same period, Indiana's age-adjusted mortality rate was 8% higher than the national rate (195.8 versus 181.3 deaths per 100,000 people). This included being over 10% higher among Indiana males and almost 7% higher among Indiana females.

Table 1. Incidence and death rate comparisons between Indiana and the United States by sex and race, 2004–2008

	Incidence rates			Mortality rates		
	Indiana	United States	Difference (%)	Indiana	United States	Difference (%)
Total	475.6 [†]	471.8	+0.8	195.8 [†]	181.3	+8.0
Males	556.2	552.1	+0.7	245.8 [†]	223.1	+10.2
Females	422.4 [†]	415.9	+1.6	163.6 [†]	153.3	+6.7
Whites	470.0	470.9	-0.2	194.1 [†]	180.0	+7.8
Blacks	490.7	483.1	+1.6	236.3 [†]	220.9	+7.0

Chances of getting cancer

- On a national level,
 - Males have almost a 1 in 2 chance of developing cancer during their lifetime
 - Female's lifetime risk of developing cancer is slightly more than 1 in 3
- □ About 2.4 million Indiana residents, or 2 in 5 people now living in Indiana, will eventually develop cancer.
- □ On average, during 2004–2008, 30,272 Hoosiers were diagnosed with cancer each year.
 - 15,434 of those were male
 - 14,838 of those were female

Most common cancers in Indiana (2008)

- Breast cancer is the most common among females (116.6 cases per 100,000 females).
- Prostate cancer is the most common among males (124.0 cases per 100,000 males).
- Lung, including bronchus, and colon cancers are the next most common among both sexes.

Deaths from cancer in Indiana

- □ Cancer is the second leading cause of death (2008: 13,126 deaths) following heart disease.
- About 12,960 Indiana residents were expected to have died of cancer in 2011. This translates to approximately 36 people every day or almost 2 people every hour.
- Annually, lung cancer is responsible for the most cancer-related deaths among both sexes (2008: 4,166 deaths).
- Although rare, cancer is the second leading cause of death following deaths from accidents among children ages 5 to 14 (2008: 137 deaths).

Economic impact of cancer in Indiana

- □ \$1.01 billion was spent on the direct costs of treating Indiana residents with cancer in 2003.
- □ \$2.76 billion is the estimate of what will be spent on the direct costs for cancer care in 2023 if current trends continue.

Sources for Table 1: Indiana State Cancer Registry (Indiana data); U.S. Cancer Statistics Working Group. United State Cancer Statistics: 1999-2008 Incidence and Mortality Web-based Report. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute; 2011. Accessed at wonder.cdc.gov on Dec 21, 2011 (U.S. data)

^{*}Age-adjusted rates per 100,000 people

 $^{^\}dagger$ Indiana rate is significantly higher (P<.05) than the U.S. rate





Cancer screening

- Many cancers can be prevented or identified at an early stage if people obtain early detection screenings.
- □ In Indiana, during 2010:
 - 80.2% of women ages 18 and older had a Pap test during the past 3 years (cervical cancer).
 - 71.3% of women ages 40 and older had a mammogram during the past 2 years (breast cancer).
 - 64.4% of men ages 40 and older had ever had a prostate-specific antigen (PSA) test (prostate cancer).
 - 62.8% of people ages 50 and older had ever had a colonoscopy or sigmoidoscopy (colorectal cancer).

Burden of cancer among blacks in Indiana (2004–2008)

- □ Incidence: 490.7 cases per 100,000 people
- Mortality: 236.3 deaths per 100,000 people
- ☐ The overall disparities between blacks and whites in cancer incidence and mortality rates have been gradually decreasing.
- However, blacks still had almost a 5% greater incidence of cancer and over a 21% higher mortality rate than whites.

Burden of cancer among Hispanics in Indiana

- □ Incidence (2004–2008): 341.3 cases per 100,000 people
- Mortality (2002–2006): 88.7 deaths per 100,000 people
- In Indiana and the United States, for all cancers combined, and for the most common cancers (prostate, female breast, colorectal, and lung), incidence and mortality rates have been lower among Hispanics than among non-Hispanic whites.

TAKE ACTION: Steps you can take to prevent or control cancer

- Be tobacco free
- Avoid secondhand smoke
- Limit alcohol consumption
- Maintain a healthy weight throughout life
- □ Consume a healthy diet that:
 - Emphasizes plant sources
 - Supports a healthy weight
 - Includes 5 or more servings of a variety of vegetables and fruit each day
 - Includes whole grains in preference to processed (refined) grains
 - Has minimal processed and red meats
- Adopt a <u>physically active</u> lifestyle
- Protect yourself from too much sun exposure
- □ Talk to your primary health care provider about:
 - Any potential signs and symptoms of cancer, including unexplained weight loss, fever, fatigue, pain and skin changes
 - Cancer screening options for breast, cervical, colorectal and prostates cancers
 - Vaccine options that can protect you from developing cancer, like against hepatitis B and human papillomavirus (HPV)

GET INVOLVED: Join the Indiana Cancer Consortium (ICC)

- The ICC is a statewide network of over 100 agencies including the Indiana State Department of Health.
- Seeks to reduce the cancer burden in Indiana through the development, implementation, and evaluation of a comprehensive plan that addresses cancer across the continuum from prevention through palliation.
- Become a member at <u>www.indianacancer.org</u>.

Community resources

- To get help with tobacco cessation, call the <u>Indiana Tobacco Quitline</u> at 1-800-QUIT-NOW (800-784-8669), or visit www.quitnowindiana.com.
- □ To help Hoosiers and their families eat better, move more, and avoid tobacco go to INShape Indiana at www.inshapeindiana.org.
- To learn more about how to support healthy eating and physical activity throughout Indiana visit the Indiana Healthy Weight Initiative at www.inhealthyweight.org.
- To learn more about cancer, visit the American Cancer Society at www.cancer.org.

Reference: Indiana Cancer Consortium, Indiana State Department of Health and the American Cancer Society Great Lakes Division; *Indiana Cancer Facts and Figures 2012*. March, 2012. Available at http://indianacancer.org/resources-for-indiana-cancer-consortium-members/indianacancerfactsandfigures2012/.

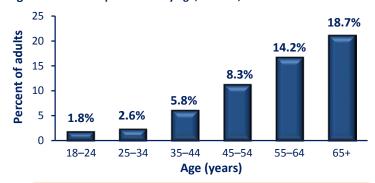




DIABETES is a group of diseases resulting in high levels of blood glucose (form of sugar) due to defects in insulin production, action, or both. Diabetes can lead to serious complications and premature death. People who have diabetes can work with health care providers and support systems to take action,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

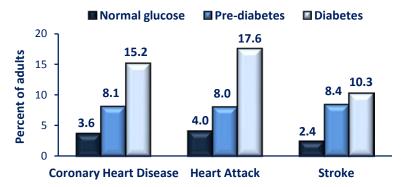
- □ In 2011, 10.1% of Indiana adults reported having some form of diabetes¹*[†]
- Type 1 diabetes is the result of the body's inability to produce insulin and typically develops in childhood or adolescence (approximately 5% of cases).
- □ Type 2 diabetes, the most common form, occurs when the body is no longer able to effectively produce or use insulin (approximately 95% of cases).

Figure 1. Diabetes prevalence by age, Indiana, 2011^{1*}



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]. 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.

Figure 2. Prevalence of cardiovascular disease by diabetes status, Indiana, 2009¹⁷



Depression³

- 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 disease⁴

- □ 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.





Risk factors for type 2 diabetes⁴

- □ 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.³

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 <u>healthy weight</u>
- Eat a healthy <u>diet</u>
- Participate in regular <u>physical activity</u>
- 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 <u>Indiana Diabetes Education and Support Program Directory</u> or call the <u>Indiana Family Helpline</u> at 1-855-HELP-1ST (855-435-7178).
- □ <u>Diabetes Prevention Program (DPP)</u>: 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.
- <u>Diabetes Education Empowerment Program with Tobacco Cessation (DEEP TC)</u>: 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 <u>Indiana Family Helpline</u> at 1-855-HELP-1ST (855-435-7178) or visit the <u>Community Mental Health Services Locator</u>.

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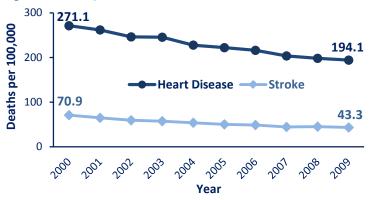


HEART DISEASE AND STROKE



CARDIOVASCULAR DISEASE (CVD) is a term used to describe a group of diseases that affect the heart or blood vessels, including those in the brain. While CVD includes many conditions, this fact sheet focuses on heart disease and stroke. Although their respective mortality rates have declined over time, heart disease and stroke are still responsible for almost one-third of all Indiana deaths and remain a major public health issue [Fig 1].^{1*}

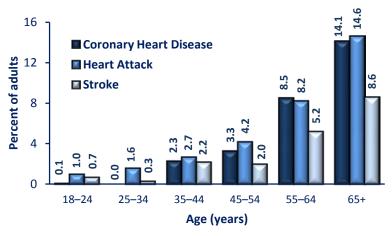
Figure 1. Mortality from heart disease and stroke, Indiana, 2000–2009 to



Indiana prevalence (2011)²

- Prevalence of coronary heart disease (CHD), heart attack, and stroke typically increased with age [Fig 2]. ‡
- Males experienced CHD and heart attacks more often than females, but stroke prevalence was comparable.
- Higher income and educational levels were associated with lower prevalence of CHD, heart attack, and stroke.

Figure 2. Cardiovascular disease prevalence by age and type, Indiana, 2011^{2‡}



Heart attacks and **strokes** are typically sudden events caused by a blockage that prevents normal blood flow to the heart or brain (ischemic stroke), respectively.³

- □ The most common cause of blockage is atherosclerosis, the hardening and narrowing of arteries due to the accumulation of fats, cholesterol and other substances.
- Strokes can also result from a ruptured or leaking blood vessel in the brain (hemorrhagic stroke).

Transient ischemic attacks (TIA) occur when the brain's blood supply is briefly interrupted. Symptoms produced are similar to a stroke, but are usually short-term with no permanent damage.

- TIAs are sometimes called "mini-strokes."
- Almost one in three ischemic strokes is preceded by a TIA.⁴

Heart disease and stroke emergency department (ED) visits and hospitalizations (Indiana, 2010)⁵

- Accounted for 12.0% of all ED visits.
 - The overall age-adjusted ED visit rate was 61.3 per 10,000 people.
- Accounted for 7.0% of all in-patient hospitalizations.
 - The overall age-adjusted in-patient hospitalization rate was 45.3 per 10,000 people.

Heart disease and stroke mortality (Indiana, 2009)

- 13,442 Indiana residents died of heart disease, making it the leading cause of death overall.
 - Heart disease was the leading cause of death among white residents, and the second leading cause of death among black and Hispanic residents.
- 2,991 Indiana residents died of stroke, making it the fourth leading cause of death overall.
 - Stroke was the fourth leading cause of death among white residents, third leading cause among black residents, and sixth leading cause among Hispanic residents.

^{*} For heart disease mortality, all forms of CVD are included, except stroke, essential hypertension, hypertensive renal disease, atherosclerosis, and vessel disease.

[†] Mortality rates are age-adjusted per 100,000 people using the 2000 U.S. Standard Population.

[‡] For prevalence, coronary heart disease is captured as angina or ischemic heart disease exclusive of myocardial infarction (heart attack).



HEART DISEASE AND STROKE



Heart disease and stroke risk factors²

Managing risk factors is a key component of a comprehensive CVD prevention or management plan.

In Indiana, during 2011:

- □ 33% of adults reported having *high blood pressure*.
- Nearly 40% of adults reported having **high cholesterol**.
- 25.6% of adults currently *smoked cigarettes*.
- 46% of Indiana adults indicated that they met the aerobic *physical activity* recommendation of at least 150 minutes of moderate aerobic exercise per week.
- 66% of Indiana adults were considered *overweight* or *obese*.
- Proper *nutrition* plays an important role in managing risk.
 - 20.5% of adults ate the recommended servings of fruits.
 - 5.1% of adults ate the recommended servings of vegetables.
- Diabetes is a major risk factor for negative CVD outcomes.
 - 31.9% of people with CHD reported having diabetes.
 - 31.9% of people who had a heart attack reported having diabetes.
 - 32.8% of people who had a stroke reported having diabetes.

TAKE ACTION: Steps you can take to prevent or manage heart disease and stroke

- Be tobacco free (<u>www.in.gov/quitline</u>)
- Maintain a healthy <u>blood pressure</u>
- Maintain healthy <u>cholesterol</u> levels
- Ask your health care provider if <u>aspirin therapy</u> will help reduce your risk of heart attack or stroke
- Properly manage your <u>diabetes</u> with guidance from health care professionals
- Eat a healthy <u>diet</u>
- Avoid excess <u>sodium</u> (salt)
- Participate in regular <u>physical activity</u>
- Maintain a <u>healthy weight</u>
- Manage stress
- Practice good hygiene
 - Regular hand washing can help prevent viral or bacterial infections that can place stress on your heart
 - Regular brushing and flossing can help prevent viral or bacterial infections that can increase the risk of cardiovascular events
- □ Get an annual flu shot
 - If you have a cardiovascular condition, having the flu places you at greater risk for a heart attack
- Learn to recognize the warning signs of a <u>heart</u> <u>attack</u> or <u>stroke</u>. Fast response can save lives.

Community resources

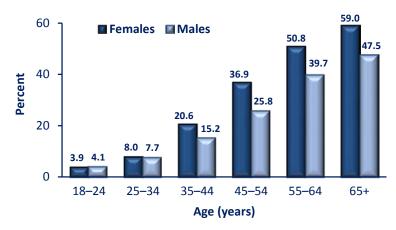
- □ <u>Living a Healthy Life</u>: a 6-week workshop for people with chronic illnesses, which empowers them to manage their disease, control symptoms, and learn how health problems affect their lives.
- Million Hearts: a national initiative to prevent 1 million heart attacks and strokes over 5 years.
- □ <u>Diabetes Prevention Program (DPP)</u>: a program that aids in prevention of type 2 diabetes for people who are at risk of diabetes. Contact the "Y" (formerly YMCA) in Bloomington, Fort Wayne, and Indianapolis.
- □ <u>Indiana Tobacco Quitline</u>: a free phone-based counseling service to help Indiana smokers quit. For support call 800-QUIT-NOW (800-784-8669).
- For mental health services, call the <u>Indiana Family Helpline</u> at 1-855-HELP-1ST (855-435-7178) or visit the Community Mental Health Services Locator.

- 1. Indiana State Department of Health. (2012). Vital Records, 2009.
- 2. Indiana State Department of Health. (2012). Behavioral Risk Factor Surveillance System, 2011.
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ARTHRITIS is inflammation of one or more joints. The primary symptoms associated with arthritis are joint pain and stiffness. Arthritis is the leading cause of disability in the United States, and can significantly impact productivity and quality of life. For public health purposes, arthritis includes all of the diseases and conditions that affect joints and the tissues in and around the joints. Overall, the burden of arthritis in the United States is considerable and accounts for an estimated \$128 billion in direct and indirect costs annually.²

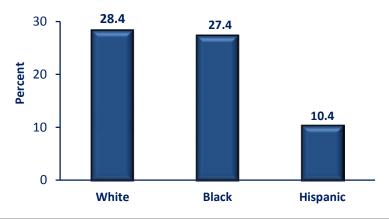
Figure 1. Prevalence of arthritis by age and sex, Indiana, 2011^{3*}



Indiana Prevalence (2011)^{3*†}

- 27.5% of Indiana adults reported having some form of arthritis.
- Arthritis prevalence increased with age and was reported more commonly among females [Fig 1].
- Prevalence of arthritis was comparable between whites and blacks, but lower among Hispanics [Fig 2].

Figure 2. Prevalence of arthritis by race and ethnicity, Indiana, 2011^{3*†}



Osteoarthritis (OA):

- Most common form of arthritis.
- Results from the erosion of joint cartilage and underlying bones.
- Most often caused by long-term wear and tear, a specific injury, or an illness.

Rheumatoid arthritis (RA):

- Occurs when the body's immune system attacks joints and causes inflammation.
- □ Can affect anyone and at any age, but is most common among women and older individuals.
- May lead to joint deformity and disability.

Risk factors for arthritis

- **Age**—The risk of developing most types of arthritis increases with age [Fig 1].⁴
- Sex—In 2011, more female Indiana residents (31.6%) reported having arthritis than male residents (23.0%).³
 - Additionally, several arthritis-related conditions, including fibromyalgia, lupus and osteoporosis, occur more commonly among females.
 - Gout is more common among males.
- ☐ **Genetics**—Specific genes are associated with certain types of arthritis, including RA, lupus, and ankylosing spondylitis.⁵
- Being **overweight** or **obese**—Knees, hips and the spine are particularly at risk to stress caused by excess body weight.⁶
- Previous joint injury.⁶
- □ Occupation—Jobs with activities that apply repetitive stress on joints.⁷
- □ Certain types of **infections**, including gonorrhea, Lyme disease, *Staphylococcus aureus*, and tuberculosis.^{8,9}
- ☐ Certain **medical conditions**, including conditions mentioned above, inflammatory bowel disease, psoriasis and sickle cell anemia.^{8,9}
- □ Certain **medicines**, including corticosteroids and other drugs that suppress the immune system.^{8,9}

^{*}Arthritis prevalence is defined as having arthritis, rheumatoid arthritis, gout, lupus or fibromyalgia.

[†]Prevalence figures are for adults 18 years and older.





Effects of arthritis on Indiana adults' activity levels ${2011}^{3^{\dagger}}$

- 50.5% of adults (one out of two) with arthritis reported activity limitations (disability) compared to only 14.5% of those without arthritis.
- Of those with arthritis:
 - 21.1% reported that it greatly interfered with their normal social activities.
 - 37.0% reported that it affected their work.
 - 20.2% needed to use special equipment (e.g., cane, wheelchair).

Arthritis-related hospitalizations (2010)¹⁰

- Over 41,000 Indiana residents received inpatient treatment listing arthritis as one of the three primary reasons for needing care.
- These stays accounted for almost \$1.6 billion in medical charges.
- □ The most common procedures include joint replacement or revisions for knees, hips, shoulders, and elbows and spinal fusions or other spinal procedures.

TAKE ACTION: Steps you can take to prevent or manage arthritis

- Manage your arthritis with guidance from your health care provider
- Learn arthritis management strategies
 - Learning techniques to reduce pain and physical limitations can be beneficial.

■ Be active

- Research has shown that physical activity decreases pain, improves function, and delays disability.
- Maintain a <u>healthy weight</u>
- Eat a **healthy diet**
 - Talk to your health care provider about foods that may help protect your joints and prevent flare-ups.
- Be tobacco free and limit alcohol consumption
 - Both weaken the structure of bones, which increases risk for fractures and joint damage.
- Protect your joints
 - Avoid positions or movements that apply excess stress to your joints.
 - Use larger, stronger joints to bear weight or carry items.

Community resources

- □ <u>Living a Healthy Life</u>: 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.
- Restart Living: a 6-week self-management program for people with chronic illnesses, including arthritis, with workshops available in person or through the Internet.
- □ <u>INShape Indiana</u>: a resource that motivates, educates, and connects Hoosiers to services that help them eat better, move more, and avoid tobacco.
- <u>Indiana Tobacco Quitline</u>: a free phone-based counseling service to help Indiana smokers quit. For support call 800-QUIT-NOW (800-784-8669).

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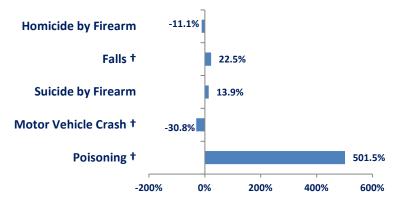
INJURY is the leading cause of death among Indiana residents ages 1–44 and the fifth leading cause of death overall. The majority of injuries are unintentional; however, some can be inflicted intentionally through self-harm or by another individual. Injuries are not the result of an accident, but are correctable events with specific risks for occurrence. Injuries affect all groups of people, regardless of age, race or economic status. In 2009, 3,886 Hoosiers were fatally injured and an additional 50,800 were hospitalized. Figure 1 shows the age-adjusted injury death rates during 1999 to 2009.

Figure 1. Injury death rates* by year, Indiana, 1999–2009¹



In Indiana, unintentional poisonings, unintentional falls and suicides by firearm are leading causes of injury death that increased from 1999 to 2009 [Fig 2]. Unintentional poisoning deaths among adolescents, young adults and adults have sharply increased in recent years, mostly as a result of prescription drug misuse and abuse. Unintentional fall deaths have also increased and are expected to continue to increase as Indiana's population ages.

Figure 2. Percent change in death rates* by injury type, Indiana, 1999 vs. 2009¹



^{*}Age-adjusted rates † Unintentional

Unintentional poisonings

A poison is any substance, including medication, that is harmful to your body if too much is eaten, inhaled, injected, or absorbed through the skin.³ Nationally, 91% of unintentional poisoning deaths result from drug overdoses.³ Annually, the nonmedical use of prescription painkillers (e.g., opioids or narcotic pain relievers) causes more deaths than heroin and cocaine combined and totals more than \$50 billion in economic costs.^{4,5}

In the United States (2010):

- □ On average, 87 people died each day as a result of unintentional poisonings; 2,277 were treated in emergency departments.³
- Enough painkillers were prescribed to medicate every adult around-the-clock for a month.⁴
- □ About 12 million people, ages 12 and older, reported nonmedical use (i.e., misuse or abuse) of prescription painkillers during the last month.⁴

In Indiana (2009):¹

- Unintentional poisoning is the leading cause of injury death overall and surpassed motor vehicle crashes as the leading cause in 2009.
- □ There were 790 unintentional poisoning deaths, accounting for 20% of all injury deaths.
- □ The unintentional poisoning death rate increased 502% from 1999 to 2009 [Fig 2].
- Adults ages 25–64 are at greatest risk of death due to unintentional poisoning.

Motor vehicle crashes (MVC)

MVC deaths have declined in recent years; however, they still remain a leading cause of injury death in the United States and Indiana.¹

In the United States:

- MVCs are the leading cause of death among those ages 10–34.
- □ In 2010, nearly 33,000 people were killed in MVCs and an additional 2.2 million were injured.⁷

In Indiana (2010): 8

- There were 754 MVC fatalities, an 11% increase from 2009.
- The economic costs of MVCs exceeded \$4.4 billion.



INJURY AND VIOLENCE



Unintentional falls

Falls are among the most frequent and preventable causes of injury. Common results of falls, including hip fractures, head traumas, lacerations and limited mobility, increase the risk of early death, specifically among older adults.9

In the United States (adults ages 65 and older):

- An estimated 1 out of 3 will fall each year, but less than half will discuss the fall with a healthcare provider. 10,11
- In 2000, the total direct medical costs of all fall injuries exceeded \$19 billion. Approximately \$0.2 billion of this cost was associated with fatal deaths while \$19 billion was for nonfatal falls. 12

In Indiana (2009):

- Falls were the leading cause of injury hospitalization for all ages, totaling over 11,000 hospitalizations.²
- There were 303 fall-related deaths among adults ages 65 and older, which accounted for 81% of the total fall-related deaths (Total = 374 deaths).¹
- The unintentional falls death rate increased 22.5% from 1999 to 2009 [Fig 2].1

TAKE ACTION: Steps you can take to prevent or manage injuries

Medication safety

- Only take prescription medications that are prescribed to you by a healthcare provider
- Never take larger or more frequent medication doses
- Never share or sell your medications
- Properly dispose unused, unneeded or expired medications (National Drug Take Back Days)
- Put the Poison Help number, 1-800-222-1222, on or near your home phone and save it on your cell phone

Fall prevention

- Begin a regular exercise program that includes balance exercises
- Have your health care provider review your medicines
- Have your vision routinely checked
- Make your home safer by completing an in-home assessment of fall hazards (Checklist)

Motor vehicle safety

- Always wear a seatbelt and ensure proper use of car seats for infants and children
- Eliminate driving distractions, including use of cell phones for text messaging
- Never drive impaired or ride with impaired drivers
- Report drivers who are exhibiting signs of impaired driving to law enforcement

Community resources

- To find an addiction or mental health services provider, visit the county listing of providers.
- For poisoning information and educational materials visit the Indiana Poison Center website.
- For a listing of permanent car seat fitting stations and upcoming clinics in Indiana, visit Indiana's Automotive Safety Program website.
- To learn more about traffic safety efforts and child passenger safety training in Indiana, visit the Indiana Criminal Justice Institute website.
- □ Local Area Agencies on Aging offer fall prevention programming for older adults. Contact information for agencies can be found online or by calling: 317-205-9201.
- SilverSneakers is an innovative health, exercise and wellness program that helps older adults live healthy, active lifestyles and is offered at health centers throughout the state.

- 1. Centers for Disease Control and Prevention (CDC), 2010. WISQARS (Web-based Injury Statistics Query and Reporting System). Atlanta, GA: US Department of Health and Human Services. Available at http://www.cdc.gov/injury/wisqars/. Accessed July 23, 2012.
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