



Key Facts: Influenza and Adults and Children with Diabetes

Diabetes in the United States

- Diabetes is the fifth deadliest disease in the United States.¹
- Nearly 21 million Americans (seven percent prevalence), one-third undiagnosed, have diabetes.¹
- If trends continue, more than one-third of Americans born in 2000 will go on to develop diabetes.¹
- While type 2 diabetes is on the rise in children, type 1 remains one of the most common chronic diseases in childhood.²
 - Approximately one in every 400-600 children and adolescents has type 1 diabetes.
- According to the American Diabetes Association (ADA), total prevalence by race/ethnicity:
 - Non-Hispanic Blacks: Roughly 13 percent of those aged 20 years or older have diabetes (3.2 million total).
 - Hispanic and Latino Americans: According to available data, approximately 9.5 percent of this population aged 20 years or older has diabetes (an estimated 2.5 million).
 - American Indians and Alaska Natives: 15 percent aged 20 years or older have diabetes (118,000 people).
 - Asian Americans and Pacific Islanders: According to available data, certain groups within this population (20 years of age and older) are approximately 1.5-2 times more likely to have diabetes compared to non-Hispanic Whites.
 - Non-Hispanic Whites: About 13 million of all non-Hispanic whites aged 20 years or older have diabetes (more than 8 percent of the population).

Impact of Influenza in People with Diabetes

- People with diabetes may have impaired immune function, leading to increased morbidity and mortality from influenza infection.³
 - Influenza can interfere with blood glucose management, putting those with diabetes at increased risk of high or low blood sugar, and those with type 1 diabetes, in particular, are at increased risk of diabetic coma.⁴
 - Influenza can exacerbate underlying diabetes and other chronic conditions.
- Many health care professionals come in contact with persons with diabetes, and all can play a role in preventing influenza.

Importance of Annual Influenza Vaccination

- Influenza vaccination is safe and effective in adults and children with diabetes.³
- The Centers for Disease Control and Prevention (CDC), ADA and other leading medical groups recommend all children and adults with diabetes (aged six months and older) receive an annual influenza vaccination.^{3,5}
 - Despite these longstanding recommendations, immunization rates remain alarmingly low.^{6,7}
 - In persons with diabetes aged 18 to 49 years: 40 percent vaccination rate.
 - In persons with diabetes aged 50 to 64 years: 50 percent vaccination rate.
 - Estimates show more than ten million Americans with diabetes go unprotected against influenza each year.
- Influenza vaccination is also important for close contacts of people with diabetes to help prevent the spread of influenza infection to these vulnerable individuals.
 - This includes household members and health care workers.

- Studies have found more than 70 percent reduction in hospitalizations and death among adults with diabetes receiving an influenza vaccination.⁸
- In addition, research has shown nearly 80 percent decrease in hospital admissions among children and adults with diabetes.⁹

Influenza: Disease Overview

- Influenza, commonly called the flu, is a highly contagious virus that can infect the nose, throat and lungs, and is one of the most severe illnesses of the winter season.⁵
- The disease causes an estimated 36,000 deaths and more than 200,000 hospitalizations in the U.S. each year.^{10,11}
- Up to 1 in 5 Americans are infected with the influenza virus each season.⁵
- Symptoms may include high fever, chills, dry cough, headache, runny nose, sore throat and muscle pain; these symptoms can persist for days followed by fatigue for up to two weeks.¹²
- Children with influenza may have symptoms that are uncommon in adults, like diarrhea, vomiting or nausea.¹²

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¹ American Diabetes Association (ADA). The dangerous toll of diabetes. Available at: <http://www.diabetes.org/diabetes-statistics/dangerous-toll.jsp>. Accessed June 1, 2006.

² ADA. Total Prevalence of Diabetes and Pre-diabetes. Available at: <http://www.diabetes.org/diabetes-statistics/prevalence.jsp>. Accessed February 7, 2007.

³ ADA. Position Statement: Influenza and pneumococcal immunization in diabetes. *Diab Care* 2004;27(Suppl 1):S111-S112.

⁴ ADA. Diabetes myths. Available at: <http://www.diabetes.org/diabetes-myths.jsp>. Accessed June 1, 2006.

⁵ Centers for Disease Control and Prevention (CDC). Prevention and control of influenza. Recommendations of the Advisory Committee on Immunization Practices (ACIP). *MMWR* 2006;55(RR-10):1-41.

⁶ CDC. Influenza and pneumococcal vaccination coverage among persons aged >65 years and persons aged 18-64 years with diabetes or asthma—United States, 2003. *MMWR* 2004;53(43):1007-1015.

⁷ Department of Health and Human Services. Healthy people. Available at: <http://www.diabetes.org/diabetes-myths.jsp>. Accessed June 1, 2006.

⁸ Looijmans-Van Den Akker I, Verheij T, Buskens E, Nichol KL, Rutten G, Hak E. Clinical effectiveness of first and repeat influenza vaccinations in adult and elderly diabetic patients. *Diab Care* 2006;29:1771-1776.

⁹ Colquhour AJ, Nicholson KG, Botha JL, Raymond NT. Effectiveness of influenza vaccine in reducing hospital admissions in people with diabetes. *Epidemiol Infect* 1997;119:335-341.

¹⁰ Thompson WW, Shay DK, Weintraub E, et al. Mortality associated with influenza and respiratory syncytial virus in the United States. *JAMA* 2003;289:179-186.

¹¹ Thompson WW, Say DK, Weintraub E, et al. Influenza-associated hospitalizations in the United States: 1979-1980 through 2000-2001 respiratory seasons. *JAMA* 2004;292:1333-1340.

¹² Cox NJ, Subbarao K. Influenza. *Lancet* 1999;354(9186):1277-1282.