

# NIH...

## Turning Discovery Into Health

### HEALTH IMPROVEMENTS

In the last 25 years, NIH-supported biomedical research has directly led to human health benefits that both extend lifespan and reduce illnesses:

- ***Prolonging Life and Reducing Disability:*** Our nation has gained about one year of longevity every six years since 1990. A baby born today can look forward to an average lifespan of nearly 79 years – nearly three decades longer than a baby born in 1900. Not only are people living longer, they are staying active longer. From 1982 through 2005, the proportion of older people with chronic disabilities dropped by almost a third.
- ***Heart Disease:*** NIH research has generated new techniques for heart attack prevention, effective drugs for lowering cholesterol and controlling blood pressure, and strategies for dissolving blood clots. As a result, the death rate for coronary disease is 60 percent lower—and for stroke, more than 70 percent lower—than during the era of World War II. Better treatment of acute conditions, better medications, and improved health-related behaviors—all made possible by NIH research—account for as much as two-thirds of this reduction.
- ***Chronic Disability:*** From 1982-2004, the reported chronic disability among American seniors dropped nearly 30 percent. Health improvements from NIH research played a major role in this, including better prevention and treatment of heart attacks and strokes, advances in treatment of arthritis, and improved technologies for cataract surgery.
- ***Age-Related Macular Degeneration (AMD):*** Forty years ago there was little or nothing one could do to prevent or treat advanced AMD and blindness. Because of new treatments and procedures based on NIH research, 750,000 Americans who would have gone blind over the next five years instead will continue to have useful vision.
- ***Breast Cancer:*** The five-year survival rate for women diagnosed with breast cancer was 75 percent in the mid-1970s. Because of NIH-supported research, the five-year survival rate has risen to over 90 percent.
- ***Cervical Cancer:*** Cervical cancer is a deadly cancer in women. Due to groundbreaking NIH research, an FDA-approved vaccine (Gardasil) now is available to prevent the development of cervical cancer.
- ***Colon Cancer:*** From 1974-1976, in an NIH-sponsored study, the five-year survival for patients with colon cancer was 50 percent. In 2009, based on NIH-supported clinical trials using new diagnostics and treatments, a comparable patient group has a five-year survival rate of over 70 percent.

- **Cochlear Implants:** Because of NIH-supported research, children who are profoundly deaf but receive a cochlear implant within the first two years of life now have the same skills, opportunities, and potential as their normal-hearing classmates.
- **Type 1 Diabetes:** Thirty to forty years ago, 30 percent of patients died within 25 years of a diagnosis of type 1 diabetes. Today, due to tight blood glucose control, heart disease and stroke in patient with type 1 diabetes have been reduced by over 50 percent.
- **Hepatitis B:** In the mid-1980s, hepatitis B infection caused untreatable and fatal illness. Due to intensive vaccination programs based on NIH research, the rate of acute hepatitis B has fallen by more than 80 percent.
- **HIV/AIDS:** In the 1980s, the diagnosis of HIV infection was a virtual death sentence. Due to antiviral drugs developed by NIH, today an HIV-positive 20-year-old can be expected to reach the age of 70.
- **Infant Health:** In 1976, the infant mortality rate was 15.2 infant deaths per 1,000 live births. By 2006, that rate had fallen to 6.7 deaths per 1,000 live births. Much of this progress can be attributed to NIH research in the areas of neonatal care unit procedures and new drugs administered to women at risk for premature birth.
- **Childhood Leukemia:** Survival rates for children with the most common childhood leukemia (acute lymphocytic leukemia) is now 90 percent.