

# Injury In America



**Defining Risk ... Increasing Safety**





# Injury:

## The Leading Health Threat in the First Four Decades of Life

**I**njury in America. It's endemic. It's accepted. Motor vehicle crashes, homicides, debilitating falls and concussions are so common that people believe they're inevitable.

They aren't. In 1992, the National Center for Injury Prevention and Control (Injury Center) was established at the Centers for Disease Control and Prevention. Since then, it has been examining the reasons injuries occur and helping state and local health departments and community groups put together programs to prevent them. CDC's injury research and programs protect Americans from harm.

Consider:

- Injury is the leading killer of Americans in the first four decades of life;
- Violent and unintentional injuries cause more than 146,000 deaths each year and cost an estimated \$260 billion annually (in 1995 dollars);
- Treatment of injuries and their long-term effects account for 12% of medical spending in the United States; and
- Hospital emergency departments treat an average 55 people for injuries every minute.

Injury comprises a fundamental threat to human health and life. At the beginning of the 20<sup>th</sup> century, accidents were seventh among the leading causes of death in the U.S. By the beginning of the 21<sup>st</sup>, they had moved up to fifth place.

In confronting this threat, CDC employs the same scientific methods it uses to prevent infectious disease – defining the health problem, identifying

risk and protective factors, developing and testing prevention strategies. CDC works to ensure that proven techniques move from testing to widespread adoption – so that Americans at greatest risk of injury will be safer from harm.

### CDC's Injury Research Shows What Works to Keep People Safe

Connecting research to the community has been a primary focus of CDC. Through a network of more than 20 research centers based in colleges and universities across America, CDC and its partners are building a dynamic research infrastructure. These research centers work to identify critical gaps in knowledge of injury risks and protection, conduct important research to address these gaps and offer their findings to community public health workers to shape into effective programs to help each of us.

CDC believes that evaluating how well programs work and investigating the best ways of conveying good information to people in need are just as important as finding the root causes of an injury. So its injury program deliberately established linkages between research institutions, agencies working in injury prevention and local public health officials. CDC also seeks information from people whose lives have been affected by injuries. This networking helps state and local public health departments have easier access to the best information available to help keep their citizens safer.

## Injury Research in Action

Here are just two examples of how CDC's work in injury prevention makes American lives safer.

### Protecting Children from Abuse and Neglect

**Fact:** Each year, more than 800,000 American children are abused or neglected. About 1,100 of these children die as a result.

**Action:** CDC is unique in studying child maltreatment in relationship with other forms of violence: youth violence, suicide, intimate partner violence and sexual assault.

In confronting child maltreatment CDC is:

- Improving systems to acquire and track information about child maltreatment and child fatalities. States differ widely in how they define causes of death. In its injury prevention work, CDC is developing and testing common definitions so that states can accurately record information about child deaths. This is the first step in assessing the true magnitude of this problem in the United States.
- Conducting research to better understand the causes and consequences of child neglect. Neglect comprises more than half of known child maltreatment cases, and the full extent of the child maltreatment problem in this country is not known.
- Working to shift the burden for preventing child maltreatment from the child to the perpetrator. CDC believes that intervening with individuals, families, and the communities in which they live is the key to preventing violence. Programs and policies that provide counseling for batterers or improve parenting skills, for example, intervene with perpetrators and potential perpetrators *before* the violence occurs.
- Working with different cultural groups to identify social norms and beliefs that support violence and then finding ways to alter or replace them with ones that prevent violence. Even when such behaviors are not considered "acceptable," cultural attitudes and beliefs may continue the cycle by blaming victims or by creating social atmospheres that tolerate child maltreatment and other forms of violence.

### Eliminating Death from Residential Fires

**Fact:** Almost half of residential fires – and three-fifths of fire deaths – occur in homes with no working smoke alarms. And the direct property damage from these fires amounts to some \$5 billion annually.

**Action:** Looking to quell this terrible human and economic toll, CDC is teaming with the U.S. Fire Administration and the U.S. Consumer Product Safety Commission to issue a national challenge to eliminate deaths from residential fires by 2020.

CDC:

- Funded a program in 30 high-risk communities in 14 states to install smoke alarms and conduct fire safety education. From 1998 to 2001, program staff installed more than 116,000 smoke alarms – saving approximately 340 lives.
- Found even when smoke alarms were present, they often didn't work. CDC funded a small business research project that developed a smoke alarm with a long-lasting lithium-powered battery and hush button so that homes are adequately protected for a longer period by a functional alarm.
- Partnered with the National Fire Protection Association to create "Remembering When" to prevent death and injury from fires and falls among the fastest-growing segment of Americans, older adults.

## CDC's Injury Research Agenda Charts Future Directions

CDC scientists, working in injury prevention and control, are making a real difference in the real world. And in the next five years, these scientists will make an even greater difference as CDC implements the Injury Research Agenda. The Research Agenda – developed with the help of academic research centers, state and local health departments and other federal agencies – provides a blueprint for confronting and reducing injuries in America.

The research agenda focuses on answering questions that will have a relatively rapid impact on preventing injuries and reducing their consequences. Thus, many of the research issues of highest priority for this agenda relate to evaluating interventions and understanding how to ensure that effective interventions are widely used.

The Research Agenda pinpoints seven areas where the fundamental threat posed by injury can be most effectively controlled:

- At home and in the community;
- Sports, recreation, and exercise;
- Transportation;
- Intimate partner violence, sexual violence, and child maltreatment;
- Suicidal behavior;
- Youth violence; and
- Acute care, disability and rehabilitation – because progress in controlling injuries is inextricably linked to the nation's ability to treat the injured and help them recover.

### **Suicide: Research in Action**

Recent work on suicide at CDC shows how research can lay the groundwork for intervention.

CDC's violence prevention researchers developed an innovative study design to find out about non-mental health risk factors for suicide. Most studies of suicides have interviewed surrogates — friends or family of the victim — but CDC researchers interviewed people who tried to kill themselves and would have died without medical care, thus revealing significant factors that motivated the victims.

- **Impulse:** Nearly one in four of those who made nearly lethal suicide attempts reported that less than five minutes passed between their decisions to attempt suicide and their actual attempts.
- **Alcohol:** Drinking within three hours of the attempt was the most important alcohol-related risk factor, more important than alcoholism and binge drinking.
- **Changes of residence:** Moving in the past 12 months is an increased risk. Frequency of moving, distance moved, recency of move, and difficulty staying in touch were all significant factors.

These findings may be the keys to more effective services to reduce suicide attempts. The Injury Research Agenda promises to yield many more such keys in the coming years.

### **From Research Into the Community Through Partnership**

In the field of public health, research is only the prelude. The body of work occurs when the research is translated into programs to help keep people safe from harm.

Backed by CDC funding, state and local health agencies:

- Collect data on traumatic brain injuries, domestic violence and emergency department visits;
- Develop and implement programs to prevent violent behavior such as child abuse and neglect;
- Conduct programs to prevent unintentional injuries such as distributing smoke alarms and educating families about fire safety;
- Evaluate public health programs – for example, the effectiveness of those that give away bike helmets and child safety restraints.

To maintain continuous lines of communication in communities nationwide, CDC also regularly consults with organizations of public health professionals, with not-for-profit organizations aligned to prevent different types of injuries and with other injury professionals in communities throughout America.

### **A New Century, a Clear Focus**

At the beginning of the 20<sup>th</sup> century, accidents occupied seventh position on the list of top 10 causes of death in America. One hundred years later, accidents had moved to fifth place. In large part, the upward shift for injury resulted from public health measures that were so effective in curbing such communicable diseases as pneumonia, influenza, tuberculosis and diarrhea.

CDC and its partners across the United States believe that the injury research now occurring across the country has the potential to eliminate injuries from the list of leading causes of death in America. Research, used as the underpinning for effective, broad-based programs reaching throughout our nation, can move America toward a future where its people will understand the steps they can take to protect themselves from the burden of injury.