

# Guide to Applying for Injury Research Grants



U.S. DEPARTMENT OF HEALTH & HUMAN SERVICES  
Public Health Service  
Centers for Disease Control and Prevention  
National Center for Injury Prevention and Control

**CDC**  
CENTERS FOR DISEASE CONTROL  
AND PREVENTION





# Guide to Applying for Injury Research Grants

**Centers for Disease Control and Prevention**

*David Satcher, MD, PhD, Director*

**National Center for Injury Prevention and Control**

*Mark L. Rosenberg, MD, MPP, Director*

*Public Health Service  
U.S. Department of Health and Human Services*

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# Preface

The Centers for Disease Control and Prevention's (CDC) national program to reduce injury and its consequences began in the early 1970s with research on home and recreational injuries. Work in violence prevention was added in 1983. In June 1992, CDC established the National Center for Injury Prevention and Control (NCIPC). As the lead federal agency for injury prevention, NCIPC conducts and supports research into the causes, risks, and preventive measures for injuries.

A fundamental part of NCIPC's contribution to injury prevention is its extramural research grants program, which has been in operation since 1987. The program offers three types of research opportunities: grants to support injury control research centers, grants for research program projects, and individual research grants. Since its inception, the program has channeled \$100 million into this work. In fiscal year 1995, \$15 million were committed to extramural research.

This booklet is intended for members of the scientific community who are interested in applying to NCIPC for research grants. Along with background on the extramural research grants program and the injury research areas of interest to CDC, this guide describes the application and review process and offers advice on the preparation of research grant applications.



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## Introduction

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By nearly every measure, injury ranks as one of the nation's most pressing health problems. More than 150,000 people die each year as a result of injuries from such causes as motor-vehicle crashes, fires, falls, drowning, poisoning, suicide, and homicide. Annually, more than 30 million people visit emergency departments for treatment of nonfatal injuries, and more than 72,000 people are disabled by injuries. Injuries are the leading cause of death and disability for our country's children and young adults. Minorities and the elderly are also at special risk. Injury imposes exceptional costs, both in health care dollars and in losses to society. For example, the overall lifetime cost of injuries that took place in 1988 alone, including medical care, rehabilitation, and loss of earnings for the individual as well as loss of productivity for the nation, is estimated at \$180 billion.

Only within the past decade has this problem begun to receive the attention needed to make a lasting difference. In 1983, Congress authorized a study to determine what was known about injury, what new research was necessary, and what the federal government could do to further our knowledge of injury. Two years later, the Committee on Trauma Research, established by the National Research Council to conduct the study, released *Injury in America: A Continuing Public Health Problem*. The report discussed the advantages and disadvantages of a number of methods for managing injury research in the federal government and recommended the establishment of a new center within CDC to focus on injury control. The center would carry out a national injury research program that would

- conduct and support research in biomechanics, injury epidemiology and prevention, and acute care and rehabilitation of injured people
- establish injury surveillance systems, collect and analyze data on injury, and conduct injury prevention projects
- promote professional education and training in injury control

- establish centers of excellence in injury biomechanics, epidemiology, prevention, acute care, and rehabilitation
- serve as a clearinghouse, coordinator, and lead agency among federal agencies and private organizations interested in injury research and prevention

Initially, CDC's injury control activities became part of the Center for Environmental Health and Injury Control (CEHIC). A pilot extramural research grants program was created in CEHIC in 1987. In June 1992, CDC established the National Center for Injury Prevention and Control (NCIPC). NCIPC's Office of Research Grants now administers CDC's extramural research program on the prevention and control of injury.

This booklet describes the purpose and breadth of the injury control research funded by CDC, offers guidance in preparing grant applications, describes the procedures for the submission and review of applications, and provides examples of currently funded studies.

## Types of Research Grants Available

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The NCIPC extramural research program funds and monitors research in the three phases of injury control: prevention, acute care, and rehabilitation. The program also funds research in the two major disciplines used in injury control research: biomechanics and epidemiology. Research supported by the program focuses on the broad-based need to control morbidity, disability, death, and costs associated with injury. *The program does not support the provision of direct care.*

For the purposes of the research program, injury is defined as physical damage to an individual that takes place over a short period of time and is caused by physical energy in the environment, by chemical agents, or by the absence of essentials, such as oxygen. The research program classifies injuries as intentional, unintentional, or occupational:

- Intentional injuries result from interpersonal or self-inflicted violence and include homicide, assaults, suicide and suicide attempts, elder and child abuse, domestic violence, and rape.
- Unintentional, or unintended, injuries include those from such causes as motor-vehicle crashes, fires, falls, drowning, and poisoning.
- Occupational injuries occur at the worksite and include unintentional as well as intentional injury.

Not included are cumulative trauma disorders and the effects of repeated exposures to chemical and physical agents.

A description of the three types of research grants available through NCIPC's extramural research program follows.

## **Injury Control Research Centers (ICRCs)**

ICRCs conduct research in all three core phases of injury control (prevention, acute care, and rehabilitation) and serve as training centers as well as information centers for the public. Research design in these centers is interdisciplinary and incorporates the fields of medicine, engineering, epidemiology, law and criminal justice, behavioral and social sciences, biostatistics, public health, and biomechanics. ICRCs are usually established within a college or university and must be positioned at a level high enough in the organization to guarantee strong support for their activities. Centers must also be directed by a principal investigator who has specific authority to carry out the project and who is committed to the center for at least 30% of a full-time equivalent.

Although a comprehensive ICRC conducts research in all three core phases of injury control, studies may be designed around a single theme. For example, an ICRC with a rehabilitation theme can address prevention, acute care, and rehabilitation within the overall theme of rehabilitation. Also, CDC will fund ICRCs to study fewer than three core phases if centers collaborate with other institutions to address the remainder of the research agenda.

Applicants interested in being funded as ICRCs must have previous experience in injury prevention research. They must be equipped to disseminate research findings, translate them into interventions, and evaluate the effectiveness of those interventions. Also required is a working relationship with outside agencies and groups that will allow for implementation of any proposed intervention.

## **Injury Control Research Program Project Grants (RPPGs)**

RPPGs are less comprehensive than ICRCs and consist of two or more interrelated research projects that focus on a particular aspect of injury control. Each project must independently meet the standards for an Injury Prevention and Control Research Project (see page 5). Like ICRCs, RPPGs have an interdisciplinary study design and are usually established within academic institutions, although they are not required to be positioned as prominently as ICRCs within their institution.

Studies might focus on one of the phases of injury control (prevention, acute care, rehabilitation) or on one of the disciplines of injury control (epidemiology and biomechanics). Specific studies could be on a major cause of injury, such as motor-vehicle crashes, fires, falls, drowning, poisoning, or violence or on a major population segment affected by injury, such as rural residents, children, minorities, or people with disabilities from injury.

Applicants must have experience in conducting, evaluating, and publishing injury control research, and the principal investigator must have authority within the parent institution to conduct the project. Applicants must also have a well-defined relationship with outside organizations to ensure implementation of any proposed activities.

### **Injury Prevention and Control Research Projects (RO1s)**

RO1s support individual research projects designed to meet one of the following needs:

- further explain the causes and mechanisms of injury
- identify interventions to prevent injury or minimize disability from injury
- evaluate the effect of known interventions on injury morbidity, disability, mortality, and costs

Applicants must have experience in conducting, evaluating, and publishing injury control research, and the principal investigator must have authority within the parent institution to conduct the project. Applicants must also have a well-defined relationship with outside organizations to ensure that proposed activities can be implemented.



## Research Areas of Interest

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CDC supports research in the three phases of injury control and the two primary disciplines used in injury control research, which are described below.

### Phases of Injury Control

**Prevention.** The development, implementation, and evaluation of promising interventions to prevent violence or unintentional injury are of particular interest. Research might evaluate one or more different approaches to implementing a specific intervention strategy, such as increasing the use of bicycle helmets among children. On the other hand, it might evaluate the effectiveness of applying several different countermeasures simultaneously, such as using a combination of environmental changes, education, and legal restrictions to reduce youth violence. Interventions chosen for evaluation should be significantly likely to reduce morbidity, disability, mortality, or cost associated with injury. Special consideration is given to grant proposals that target populations at high risk for injury and its consequences, including children, minorities, the elderly, rural residents, and farm families.

**Acute Care.** CDC is interested in identifying the best methods for diagnosing and treating patients with major trauma, including central nervous system injuries, burns, and multiple organ system injuries. Research is needed in all phases of trauma care, from triage decisions during prehospital care to management of postoperative complications, such as multiple organ failure syndrome. There is also special interest in the design and evaluation of trauma registries and regional trauma care systems.

**Rehabilitation.** Research is needed in minimizing the secondary complications of injury, including pressure sores, contractures, muscular atrophy, skeletal deformity, and other definable conditions. Rehabilitation methods

and practices need to be evaluated to determine which ones hold the most promise both for minimizing the long-term adverse effects of injury and for maximizing functional recovery. CDC is also interested in the evaluation of integrated systems for rehabilitation and in the development of regional and statewide rehabilitation systems.

## Disciplines of Injury Control Research

**Biomechanics.** The biomechanics of brain and spinal cord injury are of particular interest, although consideration is also given to proposals to study the biomechanics of thoracic and abdominal viscera, joints, and musculature.

Research is needed in

- the biomechanical evaluation of intervention concepts and strategies
- the development of models to increase our understanding of the physiology of injury and of pharmacologic, surgical, and other interventions
- the definition of human tolerance limits for injury among children, women, the chronically ill, and older persons
- improvements in injury assessment technology
- the mechanisms of injuries caused by impact and the quantification of the biomechanical responses to impact of critical areas of the human body

**Epidemiology.** Analytic research on the causes and risks of injury that might lead to new or more effective interventions is needed. Improvements in epidemiologic methods are of interest, and injury surveillance systems need to be improved and evaluated. Also, a more accurate understanding is needed of the cost of injury and the cost effectiveness of interventions.

# Applying for an Injury Control Research Grant —————

CDC announces upcoming Injury Prevention and Control Research Grants in the *Federal Register*, which should be available through your local or university library. You may also obtain copies by calling the Superintendent of Documents at the U.S. Government Printing Office, (202) 512-1800. Grant announcements summarize the agency's formal request for applications (RFA), providing an overview of the proposed grant, program requirements, specific research topics being funded, and evaluation criteria. Awards are made for project periods of up to three years.

Announcements of grants for ICRCs and RPPGs are usually published in the spring, with a deadline for receipt of applications in October and a probable award date of September. RO1s are usually announced during the fall, with a due date for applications in January or February and a probable award date sometime between June and September. The information in this section is meant to supplement the instructions in published announcements. *Applications should be submitted only in response to a specific published announcement.* Unsolicited applications are not accepted.

## Preparing a Grant Application

Grant Application Kits for responding to a specific announcement may be obtained by contacting

Centers for Disease Control and Prevention  
Procurement and Grants Office  
255 East Paces Ferry Road, N.E., Mail Stop E-14  
Atlanta, GA 30305  
(404) 842-6630  
Automated Response System (404) 332-4561

Please include the announcement number in your request. Application kits contain a copy of the full RFA, application form PHS-398 (Rev. 9/91), and other related material. Applicants should adhere to any Errata Instruction Sheet for Form PHS-398 that may be included in the kit. States and local governments may use PHS-5161-1, which is also available through the Procurement and Grants Office; however, PHS-398 is preferred.

Applications must adequately address the following areas:

**Significance.** Describe the focus of your project and explain in detail how it will meet the particular research need or needs defined in the announcement. Explain the scientific basis for the research, the expected outcome, and the relevance of the findings to reducing morbidity, disability, mortality, and economic losses from injury. Projects should seek creative approaches to the prevention and control of injury, and research findings should lead to the development of injury control interventions within 3–5 years after a project begins. The publications below offer a discussion of the problem of injury in the United States and describe the areas that are considered priorities for research. They are recommended reading for all applicants:

- *Injury Control in the 1990s: A National Plan for Action* (published by Centers for Disease Control and Prevention, 1993)
- *A Framework for Assessing the Effectiveness of Disease and Injury Prevention* (published in *Morbidity and Mortality Weekly Report*, March 27, 1992, Volume 41, Number RR-3)
- *Injury in America: A Continuing Public Health Problem* (published by National Academy Press, 1985)
- *Injury Prevention: Meeting the Challenge* (published by Oxford University Press as a supplement to the *American Journal of Preventive Medicine*, Volume 5, Number 3, 1989)
- *Cost of Injury in the United States* (by Dorothy P. Rice, Ellen J. MacKenzie and Associates, published by Institute for Health & Aging, University of California, and Injury Prevention Center, The Johns Hopkins University, 1989)
- *Healthy People 2000* (published by the U.S. Department of Health and Human Services, 1990)

**Research Design.** Define your specific and measurable objectives and a precise time frame for achieving them. Include a detailed, sequential plan describing the methods to be used in achieving the objectives. A comprehensive evaluation plan is also essential.

**Research Team.** Describe the role and responsibilities of the principal investigator and of the project staff, regardless of their funding source. For each, include position title, qualifications, experience, the percentage of time that will be devoted to the project, and what portion of their salary will be paid by the grant.

**Research Management.** Describe those activities related to, but not supported by, the grant, such as collaborative projects with state and local health departments or other outside groups. Include a description of the people or groups who will be involved and describe what each will do. Include letters of commitment from these participants, specifically defining the roles they expect to play.

**Budget.** Provide a detailed budget for the first year of the grant, with future annual projections if the project will continue for more than one year. You may request the omission of specific salaries and fringe benefits for individuals from the copies to be used by outside reviewing groups. To exercise this option, submit a complete breakdown of cost on the original application but omit confidential salaries and fringe benefits from the six copies that will be used in outside review. Indicate with asterisks those individuals for whom salaries and fringe benefits are not given; the subtotals must still be shown.

**Phase of Injury Control.** Identify the principal phase of injury control (prevention, acute care, rehabilitation), the research discipline (biomechanics, epidemiology), or the type of injury (intentional, unintentional) upon which your project will focus.

## Consultation

Although not a requirement, consultation with NCIPC program staff early in the process of preparing a grant application is recommended. Direct inquires to the attention of the staff member identified as the consultant in the program announcement and send to

Office of Research Grants  
National Center for Injury Prevention and Control  
Centers for Disease Control and Prevention  
4770 Buford Highway, Mail Stop K-58  
Atlanta, GA 30341  
(404) 488-4265

Questions regarding renewal or supplements to existing grants should be sent to the above address and directed to the NCIPC project officer administering the current grant.

## Preapplication Letter of Intent

A nonbinding letter of intent to apply, although not a prerequisite for application, is requested. The letter should be submitted to

Grants Management Office  
Procurement and Grants Office  
Centers for Disease Control and Prevention  
255 East Paces Ferry Road, N.E., Mail Stop E-14  
Atlanta, GA 30305  
(404) 842-6798

The letter must be postmarked no later than one month before the deadline for submission of applications and should identify the specific program announcement number and submission deadline indicated in the *Federal Register* announcement as well as the name of the principal investigator. The letter of intent does not influence the review of applications or funding decisions, but it will enable CDC to plan the review process more efficiently and will ensure that applicants receive information regarding any new developments related to the announcement before submitting their applications.

## Submission of Applications

If you use application form PHS-398, submit an original and six copies, and if you use PHS-5161-1, submit an original and two copies on or before the receipt deadline to

Henry S. Cassell, III  
Grants Management Officer  
Procurement and Grants Office  
Centers for Disease Control and Prevention  
255 East Paces Ferry Road, N.E., Room 300  
Atlanta, GA 30305  
(404) 842-6798

## Review of Grant Applications

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Applications receive several levels of review, beginning with an evaluation by CDC staff and continuing through review by the Injury Research Grants Review Committee (IRGRC) and the Advisory Committee for Injury Prevention and Control (ACIPC). CDC staff review applications for responsiveness to the issues outlined in the section “Preparing a Grant Application” (See page 9). Incomplete applications are returned without further consideration.

The remaining applications are forwarded to the IRGRC for review. Depending on the volume of applications, the IRGRC may conduct an initial peer review for technical and scientific merit. Those applications that are considered noncompetitive are then withdrawn from consideration, and the principal investigator and the official signing for the applicant organization are promptly notified. Applications judged to be competitive are scored by the IRGRC to establish priority and are reviewed for merit by the ACIPC. Final funding decisions are made by the director of NCIPC on the basis of these reviews and the availability of funds.

### **IRGRC Review Criteria**

In its review, the IRGRC considers

- the specific aims of the research project, including broad long-term objectives, the intended accomplishments, and the hypothesis to be tested
- the background of the proposal, including the basis for the project, critical evaluation of existing knowledge, and identification of the knowledge gaps that the project is intended to fill
- the scientific or technical significance and the originality of the specific aims of the proposal, including the adequacy of the project’s theoretical and conceptual framework

- the adequacy of the research design and methodology, including procedures for quality assurance, data management, and statistical analysis
- the adequacy of the evaluation plan
- the qualifications of personnel
- the degree of commitment and cooperation of other interested parties, as evidenced by letters detailing the nature and extent of their involvement
- the adequacy of the budget
- the adequacy of facilities and resources

Applications for renewal or supplemental grants are evaluated on the progress made during the prior project period. For new applications, the progress of preliminary studies pertinent to the application is considered.

### **ACIPC Review Criteria**

In its review, the ACIPC considers

- the results of the IRGRC review
- the degree to which the proposal relates to the objectives stated in the following publications (bibliographic information appears on page 10):
  - ◆ *Injury Control in the 1990's: A National Plan for Action*
  - ◆ *A Framework for Assessing the Effectiveness of Disease and Injury Prevention*
  - ◆ *Injury in America: A Continuing Public Health Problem*
  - ◆ *Injury Prevention: Meeting the Challenge*
  - ◆ *Cost of Injury in the United States*
  - ◆ *Healthy People 2000*
- national needs

- the overall distribution of research projects among
  - ◆ the following research topics: acute care, biomechanics, prevention of intentional injury, motor-vehicle-related injuries, injuries related to home and leisure activities, and rehabilitation
  - ◆ the following populations: minorities, the elderly, children, urban residents, and rural residents
- budgetary considerations (e.g., preference may be given to research projects of one to two year's duration)



## Current Injury Control Research

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To give future applicants a view of the research in progress, examples of studies currently supported by each of the three types of grants available through the extramural research grants program are presented below.

### **Injury Control Research Centers**

**The University of Alabama at Birmingham Injury Control Research Center** addresses all three phases of injury control but has rehabilitation as its primary theme. Study areas of special interest are intentional injury, agricultural injury, sports and recreational injury, and the way in which injury affects racial and ethnic minorities, children, and the elderly. Specific aims of the center include improving the practice and techniques of rehabilitation and stimulating faculty development in the areas of rehabilitation, health promotion and injury prevention, acute care, epidemiology, biomechanics, and training and public service related to injury control.

The center offers training in injury control and technical assistance, with special emphasis on disseminating information on injury control. It also promotes initiatives targeting high-risk populations. Noteworthy studies have looked into the influence of alcohol consumption on motorcycle operation, increasing the use of the Glasgow Coma Score in hospital emergency departments, and the relationship between the outcomes of injury and a person's prospects for employment after rehabilitation.

**The University of California, San Francisco Injury Control Research Center** aids researchers and program specialists in finding new and better ways to prevent injuries and treat and rehabilitate injured persons. The center's theme is "From Injured People to Injury Policy," and the university works in partnership with five other institutions.

The center is based at San Francisco General Hospital, a Level 1 Trauma Center, where much of the acute care research is conducted. The Trauma Foundation, the partner responsible for the center's work in prevention, focuses on making the findings of scientific research accessible and useful to policy makers and advocates. The World Institute on Disability is responsible for rehabilitation research. The Rehabilitation Engineering Technology Program of the San Francisco State University conducts engineering research and is redesigning the wheelchair to prevent injury to riders. The University of California, Davis, provides epidemiology and health services research for the center. Studies have included work in youth violence, the response of emergency departments to domestic violence, and the prevention of fatal fires ignited by cigarettes.

**The Harborview Medical Center/University of Washington Injury Control Research Center** focuses on injury prevention in the Northwest region and on trauma treatment programs. The center concentrates on the populations at greatest risk of injury: children, the elderly, and the economically disadvantaged. The center studies injury risk factors; develops data systems on injury and its consequences; develops, evaluates, and disseminates injury prevention programs; studies hard tissue trauma; evaluates measures to treat injured patients; identifies disability resulting from injury; and trains new investigators in the field of injury research.

Recent work includes an evaluation of Seattle's Gun Buy Back Program, a study of the conditions that put older drivers at risk for motor-vehicle crashes, and a study of homicides committed in the home. The center has also looked at the value of bicycle helmets and of community educational campaigns to increase their use. Future plans include expanding research on intentional and occupational injury, evaluating violence prevention programs in schools, developing training for health providers in dealing with cases of domestic violence, and developing a program to prevent falls among the elderly.

**The University of North Carolina, Chapel Hill Injury Control Research Center** emphasizes research in road safety, occupational injury, and violence. High priority is placed on developing new prevention programs and databases on injury. The center's database of occupational fatalities drew on fifteen years of data from North Carolina's Office of the Chief Medical Examiner. Recent research has focused on occupational homicide, the predictors for motor-vehicle crashes for older drivers, risks to bicyclists and pedestrians, and the precursors to youth violence. Because of its location, the center is uniquely suited to study rural populations.

Core activities include continuing education for professional and community groups, research grants to graduate students, and development of resource materials for local practitioners, policymakers, and the press. The center supports the Advisory Council of the Southeastern Regional Injury Control Network and works with the state health department and other organizations to develop injury control programs for the region.

**The Johns Hopkins University Injury Control Research Center** focuses on research and education and is dedicated to training future leaders in injury control. Some of the center's areas of interest are occupational injuries among construction workers, the relationship between the law and injury prevention, general aviation crashworthiness, injuries among the elderly, firearm fatalities, and injuries that occur during natural disasters. The center has developed a new program to train trauma physicians in injury epidemiology and prevention and an occupational injury prevention and safety program. The center's Summer Institute for Injury Prevention is ongoing, and a working conference on the development of epidemiologic methods in injury control is in the planning stage.

The center provides services to legislatures, health departments, and medical examiners and is furthering development of the injury information system, including a specialized database on childhood injuries. Topics of recent study include weapon carrying among inner city youth, the efficacy of youth violence prevention programs, drinking and bicycling injuries, drinking and boating, home injuries to children, and injuries to women.

## **Research Program Project Grants**

**The Wayne State University Biomechanics Research Program Project** is studying neural trauma and ankle injuries. The grantee is developing a three-dimensional model that will infer brain injury from computed strains and pressure distribution over time. The cerebral meninges will be incorporated into the model to study their mechanical response to injury. Other studies are looking at the response and tolerance of the human ankle to a variety of loads. Each year, the project hosts a symposium on impact biomechanics attended by representatives of industry and government and investigators from the ICRCs and other CDC-sponsored projects in biomechanics.

**The Violence Prevention Research Program Project at the University of California, Davis**, is studying the use of public policy to prevent violence, with a focus on the contribution of firearms to the increased risk for violence among minorities and youth. Two projects address the effect of policy on limiting firearm violence, and two address the potential of firearm design to reduce firearm violence.

**The Hip Fracture Prevention from Falls in the Elderly Research Program Project at Beth Israel Hospital** is an outgrowth of earlier CDC-funded research that found that the mechanics of falls play an important role in the etiology of hip fractures among the elderly. The Beth Israel project will use these concepts to develop a prevention program that integrates biomechanics, engineering, and geriatric medicine.

## **Individual Research Project Grants**

### **Acute Care Systems and Treatment**

**Acute Care of Injured Patients in Rural Trauma Centers** is evaluating acute care in rural Oregon before and after the institution of a statewide trauma system that included categorizing hospital trauma centers. Data are currently lacking in the area of rural trauma care, and results of this study will help evaluate the national problem of care for injured patients in rural settings.

**Cost and Effects of Trauma** is looking at the direct costs of health care for injury, at who pays for this care, and at the disabilities that occur during the 18–24 months after injury. Costs and disability resulting from injury will be evaluated by the type and location of injury, the type of product or material involved in the injury, and the age and sex of the injured person.

### **Prevention: Biomechanics Research**

**Biomechanics of Cervical Spinal Cord Injury** builds on previous research that led to the development of an experimental model using human cadaveric head-neck preparations to study cervical spine injuries under dynamic loading. Additional experiments will correlate forces on the spinal cord with the potential for neurologic damage. Present research will verify the extent of cervical vertebral injuries and correlate spinal cord injury with damage to bone and ligaments.

**Dually Stiff Floors for Injury Prevention of the Elderly** proposes developing a floor that will be firm during normal motion but will provide protection from injury during falls. The proposed intervention could have wide application in living areas for the elderly.

### **Prevention: Intentional Injury**

**A Screening Program for Suicide Risk in Adolescents** seeks to improve the ability to recognize adolescents at risk for suicide and to obtain appropriate preventive care for them. A substantial sample of high school students will be screened to identify those under emotional distress or in need of assistance for emotional or mental health problems. The investigators believe this method is more appropriate than the more commonly used didactic approach.

**Children as Witnesses to Urban Violence** is investigating the relationship between exposure to urban violence and behavior and psychological stress for African-American children. Results will guide the development of an after-school intervention to reduce the risk of violence among these children.

**Preventing Intentional Injury to Women** is studying three ethnically stratified groups of pregnant women who have been abused. The first group will receive routine prenatal care. The second will receive routine care plus counseling, advocacy, and referral to additional services three times during pregnancy. The third will receive the above interventions plus three support group meetings. Continuation of abuse will be measured at specific intervals after delivery.

### **Prevention: Injury from Motor-Vehicle Crashes**

**Driving Restrictions Licensure and Senior Driving Fatalities** is investigating the determinants of licensure rates and traffic fatalities among older drivers. The study will define the extent and variation of risk across states and over time, categorize existing state laws and regulations for the renewal of drivers' licenses, and determine the effects of these provisions on licensure rates for older citizens. Researchers will also determine whether variations in state requirements for license renewal affect the rate of traffic fatalities among older drivers and will propose license renewal policies that promise to reduce risk for older drivers.

**Epidemiology of Injuries in Hispanic Children** compares the incidence and causes of severe injury among Hispanic and non-Hispanic children younger than 15 years of age who are residents of Santa Ana, California. The study will also identify risk factors for pedestrian injury among Hispanic children.

### **Prevention: Occupational Injury**

**Injuries Among Southern African-American Farmworkers** is a two-year prospective study of farmers in eight rural counties in Alabama and Mississippi. Farmers will be interviewed about demographic and farm characteristics and then followed quarterly for two years to determine the incidence and determinants of injury.

### **Rehabilitation**

**Long-Term Renal Function Following Spinal Cord Injury** will investigate the long-term effects of spinal cord injury and neurogenic bladder dysfunction on the renal function of patients ten years or more after a spinal cord injury. This study also addresses the effects of various methods of bladder management on long-term renal function.

**Pediatric Head Injury: A Longitudinal Case-Control Study** will complete a follow-up study of children aged 6–15 who have sustained a closed head injury. Investigators will identify the factors that lead to functional impairment three years after injury and provide a database that will help in developing recommendations for managing the rehabilitation of children with head injuries.

## Information Available by FAX

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Further information on the National Center for Injury Prevention and Control and its research grants is available through CDC's Fax Information Service. You can obtain the documents listed below by calling (404) 332-4564. At the appropriate prompt, enter the six digit document number for each document you would like to receive. You may enter up to five documents per call. Upon request, enter your area code and fax telephone number. The materials will be sent to you the same day.

### **The National Center for Injury Prevention and Control**

900010	National Center for Injury Prevention and Control
900020	Division of Unintentional Injury Prevention
900030	Division of Violence Prevention
900040	Division of Acute Care, Rehabilitation Research, and Disability Prevention

### **Overview of Cooperative Agreements and Grants**

900200	Grants and Funding Information
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### **Extramural Grants**

900204	Acute Care Systems
900205	Acute Care Treatment
900207	Biomechanics
900201	Injury Control Research Center Grants (ICRCs)
900208	Intentional/Violence Injuries
900211	Motor-Vehicle Injuries
900209	Occupational Injury
900206	Rehabilitation
900202	Research Program Project Grants (RPPGs)
900203	Small Business Research Grants
900210	Unintentional Injury

**State Program Cooperative Agreements**

- 900410 Acute Care
- 900409 Alcohol-Related Injury
- 900401 Bicycle Helmets
- 900408 Emergency Department Violence Surveillance
- 900407 Firearms-Related Injury Surveillance
- 900411 Head and Spinal Cord Injury
- 900402 Motor-Vehicle Injury
- 900404 Poison Control
- 900403 Smoke Detectors
- 900406 Violence Against Women
- 900405 Youth Violence

**Violence Prevention**

- 930100 Firearm Injuries and Fatalities
- 930200 Suicide
- 930300 Violence Prevention

**Unintentional Injury**

- 904100 Injury Control Recommendations: Bicycle Helmets
- 904101 Injury Prevention: Fireworks

**Statistics**

- 900100 Leading Causes of Death (matrix format, 5 pages)