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The solid facts on unintentional injuries and violence in the WHO European Region

What is an injury?

The term injury is used to refer to both unintentional and intentional injuries. An injury is the physical damage that results when the human body is suddenly subjected to energy in an amount that exceeds the threshold of physiological tolerance. It can also be the result of a lack of one or more vital elements (such as sufficient air or temperature).

The main causes of unintentional injuries are road traffic accidents, poisoning, drowning, falls and burns.

Intentional injuries are caused by violence. Violence is defined as the intentional use of physical force or power – either threatened or actual – against oneself, another person or a group or community that results in injury, death, psychological harm, maldevelopment or deprivation. Violence can be self-directed (as in suicide or self-harm), collective (as in, for example, war or gangland activity) or interpersonal (involving, for example, a child, partner, elderly person, acquaintance or stranger).

Why do we need to be concerned about unintentional injuries and violence?

- Every year some 800 000 people in the European Region die from injuries (8.3% of all deaths in the Region), an average of nearly 2200 per day or 90 per hour.
- Injuries are the leading cause of death in people under the age of 45 years.
- For every death from injury, an estimated 30 people are admitted to hospital and 300 require outpatient treatment in hospital emergency departments.
- The annual region-wide cost of treating injuries that result in death is an estimated €1–6 billion and that of treating non-fatal injuries €30–290 billion.
- People living in low- and middle-income countries in the Region are nearly four times more likely to die from injury than those living in high-income countries.
- Throughout the Region, regardless of the income level of the country, children, older people and those who are poorer are at increased risk of being injured.
- As demonstrated by the high-income countries, which are among the safest in the world, many cost-effective strategies exist for preventing injuries; these require intersectoral collaboration and community participation.
- High-quality health care is associated with better outcomes after injury, and in some countries has led to reductions of 30% in mortality from injury.

Key data on injuries in the WHO European Region

Unintentional injuries

Based on 2002 estimates for the European Region, violence accounted for about 257 000 deaths and 6.5 million DALYs lost.

- Injuries resulting from road traffic accidents kill an estimated 127 000 people each year (of which 55% are young people aged 15–44 years) and injure or disable 2.4 million people.
- Poisoning causes about 110 000 deaths each year, with alcohol consumption being responsible for up to 70% of these in some countries, especially in the eastern part of the Region.
- Drowning leads to about 38 000 deaths per year and is the third leading cause of death in children aged 5–14 years.
- Falls kill nearly 80 000 people a year. The highest mortality is in people over 80 years of age, who are not only more likely to fall but also have a higher fatality rate because of their frailty. Most falls occur in or around the home.
- Fires cause about 24 000 deaths each year, and burns are an important cause of disfigurement and death in both children and adults.
- Injuries are the leading cause of death among children aged 1–14 years, accounting for 36% of all deaths. Some 28 000 children under 15 years of age die each year as a result of injury, an average of about 76 deaths per day. Childhood injuries may lead to long-term physical and psychological disability. Socioeconomically deprived children are 3–4 times more likely to die from injuries than children from better-off families.

Intentional injuries

Based on 2002 estimates for the European Region, violence is responsible for about 257 000 deaths per year (equivalent to 32% of all deaths following injury).

- Self-inflicted injuries are estimated to cause 164 000 deaths a year, and are the leading cause of death from injury in the Region. People aged between 30 and 59 years account for 54% of all such deaths, and alcohol consumption is involved in a quarter of cases.
- Interpersonal violence kills about 73 000 people a year, and for every death 20–40 people are treated in hospital. Based on these figures, it is estimated that each year around 3 million people in the Region are treated in hospital as a result of injury due to violence. Child abuse and homicide cause some 1500 deaths in children under 15 years of age. In eastern Europe, some 75 000 children are thought to be involved in the child sex trade. The consequences of child abuse, which may manifest themselves in later life, include violent behaviour and a 4–12-fold higher level of mental illness.
- Violence among young people is the third leading cause of death (over 12 000 deaths per year) and the fifth leading cause of disability in males aged 15–29 years. European countries have some of the highest and lowest mortality rates in the world.
- Violence between spouses/partners is estimated to account for some 40–70% of all murders. In women aged 30–45 years, homicide causes some 5200 deaths each year, and is the eighth leading cause of death in this age group. This form of violence can dramatically increase the risk of suicidal behaviour, depression, anxiety and psychosomatic disorders.

- Sexual violence in the form of rape or attempted rape is reported by 1 in 4 women and 1 in 20 men during their lifetime. In some countries up to a third of girls report forced sexual initiation, with a profound impact on their mental and physical health. Trafficking of women for sexual exploitation is a major problem in some countries of the Region.
- It is estimated that some 4–6% of older people living at home are subject to abuse, and this figure may even be higher in institutions.

Witnessing violence in the family, poor parenting, poor educational attainment, inequalities of wealth, concentrations of poverty, availability of firearms, inappropriate alcohol use and substance abuse are the main risk factors for violence. Alcohol consumption is involved in about 40% of homicides.

The 10 top messages to policy-makers

- 1. If all countries in the Region had the same death rate from injuries as the country with the lowest rate, some 500 000 lives could be saved each year. In other words, two out of three such deaths could be prevented.
- 2. There are a number of risk factors, such as alcohol consumption and socioeconomic deprivation, that are common to all injuries and violence. Addressing these would produce the greatest benefits in terms of public health.
- 3. Unintentional injuries and violence should be tackled together, because a joint approach offers an opportunity for creating synergy and thus obtaining the greatest returns for public health action.
- 4. Preventing injuries is society's responsibility, and a paradigm shift away from delegating responsibility to individuals.
- 5. This requires a coordinated effort by society to create hazard-free environments through a multisectoral approach involving the health, education, leisure, justice, housing and transport sectors, as well as civil society.
- 6. Better results are obtained using a combination of environmental, legislative and financial incentives together with mass media campaigns.
- 7. Legislative and fiscal policy is needed to reduce access to alcohol and its unlicensed production, along with other interventions to modify drinking behaviour and address substance abuse.
- 8. Reducing inequalities can lead to greater social cohesiveness, which contributes to lower rates of injuries and better standards of health and well-being.
- 9. The health sector has an important role to play in tackling the worsening inequalities in injury rates in the Region.
- 10. There is much to be gained by utilizing and adapting the experience gained in some of the more successful countries in other parts of the Region.

Some of the interventions that are effective in saving lives and mitigating the effects of injuries are very good value for invested money. Table 1 shows the estimated savings to society of various interventions.

Table 1. Value for money of selected interventions to prevent injury

€1 spent on smoke alarms	saves €69
€1 spent on child safety seats	saves €32
€1 spent on bicycle helmets	saves €29
€1 spent on road safety improvements	saves €3
€1 spent on prevention counselling by paediatricians	saves €10
€1 spent on poison control services	saves €7
€1 spent on universal licensing of handguns	saves €79
€1 spent on home visits and education of parents about child abuse	saves €19

What can the health sector do to reduce the burden of injury?

World Health Assembly resolutions emphasize that the health sector should play a leading role in coordinating a multisectoral approach to injury prevention, and not limit its activities to health care. This means adopting a comprehensive public health approach to prevention, based on evidence: data collection, research into risk factors and interventions, and implementation of what works. Collecting data on the size, nature and causes of injuries will help define the magnitude of the problem. Primary prevention programmes will need to be integrated into existing health systems.

WHO has developed the following public health framework to highlight some of the key actions that can be undertaken to reduce the burden from unintentional injury and violence.

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- Develop national plans for preventing unintentional injury and violence. This may require legislation, safety standards and regulations and their enforcement.
- Integrate prevention into different departmental policies so as to capitalize on working in different institutional settings.
- Improve national surveillance and the capacity to better understand the burden of injuries.
- Strengthen national capacity to respond to the burden of injuries, both for primary prevention and for care.
- Facilitate exchange of knowledge and experience across the Region by identifying and promoting good practice.
- Recognize gaps in knowledge and give priority to research and development in primary prevention and trauma care and to studies on costs.

In late 2004, the WHO Regional Office for Europe launched a new programme on violence and injury prevention (VIP) in response to the growing need for a contribution by the health sector to this multifaceted problem. Through this programme, WHO advocates reducing injuries by promoting a public health approach to prevention in Europe.

WHO supports its Member States by:

- providing data on the burden of injuries and evidence of what works in terms of prevention;
- helping them improve their capacity to strengthen prevention; and
- facilitating the sharing of knowledge about prevention strategies that have proved effective.

For further information contact:

TECHNICAL INFORMATION

Ms Francesca Racioppi
Technical Officer, Violence and Injury Prevention
WHO Regional Office for Europe
Via Francesco Crispi 10, I-00187 Rome, Italy
Tel.: +39 06 4877545. Fax: +39 06 4877599
E-mail: frr@ecr.euro.who.int

Dr Dinesh Sethi
Technical Officer, Injury Prevention
WHO Regional Office for Europe
Via Francesco Crispi 10, I-00187 Rome, Italy
Tel.: +39 06 4877526. Fax: +39 06 4877599
E-mail: din@ecr.euro.who.int

Dr Inge Baumgarten
Technical Officer, Violence Prevention
WHO Regional Office for Europe
Scherfigsvej 8, DK-2100 Copenhagen Ø, Denmark
Tel.: +45 3917 1502. Fax: +45 3917 1892
E-mail: iba@euro.who.int

PRESS INFORMATION

Ms Liuba Negru
Press and Media Relations Officer
WHO Regional Office for Europe
Scherfigsvej 8, DK-2100 Copenhagen Ø, Denmark
Tel.: +45 3917 1344. Fax: +45 3917 1880
E-mail: lne@euro.who.int

Ms Cristiana Salvi
Technical Officer, Communication and Advocacy
WHO Regional Office for Europe
Via Francesco Crispi 10, I-00187 Rome, Italy
Tel.: +39 06 4877543. Mobile: +39 348 0192305
Fax: +39 06 4877599. E-mail: csa@ecr.euro.who.int

Press materials can be found on the Regional Office web site (http://www.euro.who.int).