

# **Target Programme for the** PREVENTION OF HOME AND LEISURE ACCIDENT INJURIES 2014–2020



Target Programme for the Prevention of Home and Leisure  
Accident Injuries 2014–2020  
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# SUMMARY

## TARGET PROGRAMME FOR THE PREVENTION OF HOME AND LEISURE ACCIDENT INJURIES 2014–2020

■ The coordination group for the prevention of home and leisure accident injuries has drawn up a proposal for a national target and action programme for the prevention of home and leisure accident injuries 2014–2020. The programme encompasses 92 actions, for each of which the coordination group has designated bodies responsible for them. In this programme, by home and leisure accident injuries is meant accident injuries other than those occurred at work or in traffic.

Accident injuries are a major public health and safety problem. The treatment of injuries and poisonings causes the second most inpatient periods in specialised medical care and fourth most in institutional care within primary health care. Accident injuries are the fourth most common cause of death. Annually about 2,800 Finns die accidentally. Almost 90 per cent of the deaths caused by accidents and more than 70 per cent of the accidents causing an injury occur at home and in leisure time. The most common type of accident is falling and tumbling. One third of the fatal accidents occur under the influence of alcohol.

As a result of the effective prevention work the number of traffic and occupational accident injuries has decreased in the long term. Favourable signs of the improved security level in society are for instance the reduced number of accident injuries to children and fires in residential houses. This favourable trend is also reflected in citizens' increased security awareness. Intensifying the prevention of home and leisure accident injuries also contributes to furthering this trend.

According to the strategy of the Ministry of Social Affairs and Health the problems caused by home and leisure accidents should be prevented more efficiently. Reduction of accident injuries has also been defined as the joint objective in the Government's Internal Security Programme (2004, 2008 and 2012), which is drawn up for each government term in office, as well as in the relevant conclusions of the European Union and the World Health Organization.

The vision of the present national programme to prevent home and leisure accident injuries is that no one needs to die or be injured as a result of an accident. The objectives of the programme include reaching a good safety level in all environments, 25 % reduction in the number of serious accident injuries by 2025 and allocation of more substantial and permanent resources for accident injury prevention.

A successful prevention of accident injuries is based on long-term planning and implementation, where the combined effect of various measures is vital. The precondition for a more efficient prevention of home and leisure accident injuries is to increase the resources and to intensify the cooperation across sectors.

The coordination group has defined the most important measures for the following sets of actions: improved safety culture and strengthened safety work, prevention of accident injuries related to the use of medicines, alcohol and drugs, increased equality and in particular improving the safety of vulnerable groups, improved environmental and product safety, and prevention of falling accidents. Specific objectives have been defined for each set of actions.

The coordination group for the prevention of home and leisure accident injuries is responsible for the implementation of the programme and its monitoring. It will assess the achievement of the objectives on a yearly basis and draw up a progress report in 2017. It is proposed that a Government Resolution on the matter be prepared on the basis of the programme.

Reports on the accident injury situation, costs, structures of prevention, relevant legislation and other national programmes related to the field have been attached to the programme.

Key words:

environmental and product safety, falling and tumbling, home and leisure accident injuries, poisonings, prevention of accident injuries, safety

# TIIVISTELMÄ

## KOTI- JA VAPAA-AJAN TAPATURMIEN EHKÄISYN TAVOITEOHJELMA VUOSILLE 2014–2020

■ Sosiaali- ja terveysministeriön asettama koti- ja vapaa-ajan tapaturmien ehkäisyn koordinaatioryhmä on laatinut ehdotuksen kansalliseksi koti- ja vapaa-ajan tapaturmien ehkäisyn tavoite- ja toimenpideohjelmaksi vuosille 2014–2020. Ohjelma sisältää 92 toimenpidettä, jolle kullekin koordinaatioryhmä on osoittanut vastuutahot. Koti- ja vapaa-ajan tapaturmilla tarkoitetaan tässä ohjelmassa muita kuin työssä ja liikenteessä sattuneita tapaturmia.

Tapaturmat ovat merkittävä kansanterveys- ja turvallisuusongelma. Vammojen ja myrkytysten hoidosta aiheutuu toiseksi eniten hoitojaksoja erikoissairaanhoidossa ja neljänneksi eniten perusterveydenhuollon laitoshoidossa. Tapaturmat ovat neljänneksi yleisin kuolinsyy. Vuosittain noin 2 800 suomalaista kuolee tapaturmaisesti. Tapaturmakuolemista lähes 90 prosenttia ja vammaan johtavista tapaturmista yli 70 prosenttia sattuu kotona ja vapaa-ajalla. Yleisin tapaturmatyyppi ovat kaatumiset ja putoamiset. Kolmannes kuolemaan johtaneista tapaturmista sattuu alkoholin vaikutuksen alaisena.

Liikenne- ja työtapaturmien määrä on vähentynyt pitkällä aikavälillä tehokkaan ennaltaehkäisyn ansiosta. Myönteisinä merkkeinä yhteiskunnan turvallisuustason paranemisesta ovat esimerkiksi lasten tapaturmien ja asuinrakennusten tulipalojen määrien vähentymiset. Myönteinen kehitys heijastaa osaltaan kansalaisten turvallisuustietoisuuden lisääntymistä. Koti- ja vapaa-ajan tapaturmien ehkäisytyön vahvistaminen edesauttaa ja laajentaa tämän kehityksen etenemistä.

Sosiaali- ja terveysministeriön strategian mukaan koti- ja vapaa-ajan tapaturmien aiheuttamia ongelmia on ehkäistävä nykyistä tehokkaammin. Tapaturmien vähentäminen on asetettu yhteiseksi tavoitteeksi myös valtioneuvoston hallituskausittain laadittavissa sisäisen turvallisuuden ohjelmissa (2004, 2008, 2012) kuten myös Euroopan Unionin (EU) ja Maailman terveysjärjestön (WHO) päätöslauselmissa.

Tämän kansallisen koti- ja vapaa-ajan tapaturmien ehkäisyn ohjelman turvallisuusvisio on se, että kenenkään ei tarvitse kuolla tai loukkaantua tapaturman seurauksena. Ohjelman tavoitteita ovat hyvän turvallisuustason toteutuminen kaikissa ympäristöissä, vakavien tapaturmien väheneminen 25 prosentilla vuoteen 2025 mennessä ja tapaturmien ehkäisyn voimavarojen vahvistuminen ja pysyvyys.

Onnistunut tapaturmien ehkäisytyö perustuu pitkäjänteiseen suunnitteluun ja toimeenpanoon, jossa keskeistä on erilaisten toimenpiteiden yhteisvaikutus. Koti- ja vapaa-ajan tapaturmien ehkäisyn tehostamisen

edellytyksenä on voimavarojen lisääminen ja yhteistyön tiivistäminen yli sektorirajojen.

Koordinaatioryhmä on määrittänyt keskeiset toimenpiteet seuraaviin toiminta-kokonaisuuksiin: turvallisuuskulttuurin parantaminen ja turvallisuustyön vahvistaminen, päihteiden ja lääkkeiden käyttöön liittyvien tapaturmien ehkäisy, yhdenvertaisuuden vahvistaminen ja erityisesti haavoittuvien ryhmien turvallisuuden parantaminen, ympäristön ja tuotteiden turvallisuuden parantaminen sekä kaatumis- ja putoamistapaturmien ehkäisy. Kullekin toimintakokonaisuudelle on määriteltä omat toiminnalliset tavoitteet.

Ohjelman toimeenpanon koordinoinnista ja seurannasta vastaa koti- ja vapaa-ajan tapaturmien ehkäisyn koordinaatioryhmä, joka arvioi ohjelmassa esitettyjen tavoitteiden toteutumista vuosittain ja tekee väliarvion raportin muodossa vuonna 2017. Ohjelman pohjalta esitetään laadittavaksi valtioneuvoston periaatepäätös.

Ohjelman liitteinä ovat selvitykset tapaturmatilanteesta, kustannuksista, ehkäisyn rakenteesta, lainsäädännöstä ja muista alaan liittyvistä valtakunnallisista ohjelmista.

Asiasanat:

Kaatumiset ja putoamiset, koti- ja vapaa-ajan tapaturmat, myrkytykset, tapaturmien ehkäisy, turvallisuus, ympäristön ja tuotteiden turvallisuus

# SAMMANDRAG

## MÅLPROGRAM FÖR FÖREBYGGANDE AV OLYCKSFALL I HEMMEN OCH PÅ FRITIDEN FÖR ÅREN 2014–2020

■ Koordineringsgruppen för förebyggande av olycksfall i hemmen och på fritiden, som tillsatts av social- och hälsovårdsministeriet, har utarbetat ett förslag till ett nationellt mål- och åtgärdsprogram för förebyggande av olycksfall i hemmen och på fritiden för åren 2014–2020. Programmet består av 92 åtgärder och för var och en av dessa har koordineringsgruppen utsett en ansvarig aktör. Med olycksfall i hemmen och på fritiden avses i detta program andra olycksfall än de som ägt rum på arbetsplatsen eller i trafiken.

Olycksfallen är ett betydande folkhälso- och säkerhetsproblem. Behandlingen av skador och förgiftningar medför näst flest vårdperioder inom den specialiserade sjukvården och fjärde flest i institutionsvården inom primärvården. Olycksfallen är den fjärde vanligaste dödsorsaken. Cirka 2 800 finländare förolyckas årligen. Av dödsfallen genom olycksfall inträffar närmare 90 % och av olycksfallen som leder till skada över 70 procent i hemmet och på fritiden. De vanligaste typerna av olycksfall är fall och störtningar. En tredjedel av olycksfallen som lett till döden inträffar under alkoholfpåverkan.

Antalet trafik- och arbetsplatsolyckor har minskat på lång sikt tack vare effektivt förebyggande. Positiva tecken på att säkerhetsnivån i samhället har förbättrats är till exempel minskningen av olycksfall bland barn och antalet bränder i bostadshus. Den positiva utvecklingen å sin sida avspeglar ett ökat säkerhetsmedvetande bland medborgarna. Att stärka det förebyggande arbetet i fråga om olycksfall i hemmen och på fritiden främjar och bidrar till att denna utveckling framskrider.

Enligt social- och hälsovårdsministeriets strategi ska problem som olycksfall i hemmen och på fritiden orsakar förebyggas effektivare. En minskning av antalet olycksfall har satts upp som ett gemensamt mål också i statsrådets program för den inre säkerheten (2004, 2008, 2012), som utarbetas för varje regeringsperiod, liksom även i Europeiska unionens (EU) och Världshälsoorganisationens (WHO) resolutioner.

Säkerhetsvisionen för detta nationella program för förebyggande av olycksfallen i hemmen och på fritiden är att ingen ska behöva dö eller skadas till följd av olycksfall. Målen för programmet är att åstadkomma en god säkerhetsnivå i alla typer av miljöer, minska antalet allvarliga olycksfall med 25 procent fram till år 2025 och stärka och permanenta resurserna för förebyggande av olycksfall.

Ett lyckat förebyggande arbete baserar sig på långsiktig planering och genomförande där samverkan av olika åtgärder är centralt. Förutsättningen

för att effektivisera förebyggandet av olycksfall i hemmen och på fritiden är att öka resurserna och intensifiera samarbetet över sektorsgränserna.

Koordineringsgruppen har fastställt viktiga åtgärder för följande verksamhetsområden: förbättring av säkerhetskulturen och stärkande av säkerhetsarbetet, förebyggande av olycksfall som hänförs till användning av alkohol, narkotika och läkemedel, stärkande av jämlikheten och särskilt förbättring av säkerheten för sårbara grupper, förbättring av miljö- och produktsäkerheten samt förebyggande av fall- och störtningsolyckor. För varje verksamhetsområde har egna mål för verksamheten fastställts.

För verkställigheten och uppföljningen av programmet ansvarar koordineringsgruppen för förebyggande av olycksfall i hemmen och på fritiden, som årligen utvärderar hur målen för programmet har förverkligats och gör en lägesbedömning i form av en rapport år 2017. Det föreslås att ett principbeslut av statsrådet utarbetas utgående från programmet.

Som bilagor till programmet finns redogörelser om olycksfallsläget, kostnaderna, förebyggandets struktur, lagstiftningen och andra riksomfattande program med anknytning till området.

Nyckelord:

Fall och störningar, förebyggande av olycksfall, förgiftningar, olycksfall i hemmen och på fritiden, miljö- och produktsäkerhet, säkerhet

# CONTENTS

Summary .....	3
Tiivistelmä .....	5
Sammandrag.....	7
<b>I INTRODUCTION .....</b>	<b>10</b>
<b>2 VISION AND TARGETS.....</b>	<b>13</b>
<b>3 PACKAGES OF MEASURES AND ACTIONS .....</b>	<b>14</b>
3.1 Improving the safety culture and strengthening safety work.....	15
3.1.1 Improving the safety culture.....	15
3.1.1.1 Strengthening competence .....	16
3.1.1.2 More effective communication.....	18
3.1.2 Stepping up efforts to prevent accidentsn .....	19
3.1.2.1 Stepping up national prevention effort.....	19
3.1.2.2 Developing legislation and guidelines .....	21
3.1.2.3 Stepping up regional and local prevention efforts.....	22
3.1.2.4 Developing statistical monitoring.....	24
3.1.2.5 Reinforcing research.....	26
3.2 Preventing accident injuries caused by the use of medicines, alcohol and drugs.....	26
3.3 Promoting equality and improving the safety of vulnerable groups in particular .....	28
3.4 Improving the safety of the environment and products .....	31
3.4.1 Improving the safety of the built environment and housing.....	31
3.4.2 Improving the safety of products and increasing the use of safety products and technologies.....	32
3.5 Preventing injuries caused by falling and tumbling.....	33
<b>APPENDICES</b>	
Appendix 1. Composition of the coordination group for home and leisure accident injury prevention .....	36
Appendix 2. The accident injuries situation.....	37
Appendix 3. Costs.....	57
Appendix 4. Structure of home and leisure accident injury prevention.....	64
Appendix 5. Legislation relevant to home and leisure accident injuries .....	68
Appendix 6. Programmes to prevent home and leisure accident injuries.....	70

# I INTRODUCTION

The coordination group for the prevention of home and leisure accident injuries appointed by the Ministry of Social Affairs and Health has drawn up a target and action programme for the prevention of home and accident injuries 2014–2020.

In addition to the Ministry of Social Affairs and Health, the coordination group comprised the representatives of the Ministry of the Interior, the Ministry of Transport and Communications, the Ministry of the Environment, the Finnish Chemicals and Safety Agency Tukes, the National Institute for Health and Welfare, the Finnish Institute of Occupational Health, the Safety Investigation Authority, the Association of Finnish Local and Regional Authorities, the Federation of Finnish Financial Services, the Finnish Association of People with Physical Disabilities, the Finnish National Rescue Association, Finnish Red Cross, the Finnish Association for Substance Abuse Prevention, the Finnish Society for Social and Health, the Finnish Swimming Teaching and Lifesaving Federation and the UKK Institute (names of the members are listed in the Appendix).

Before this document, five national target programmes were published in 1988, 1991, 1996, 2000 and 2007, as well as a study describing the accident injury situation in 2003. The policies and measures described in these programmes have contributed to directing the practical work and helped to develop cooperation in this field. The previous programmes have repeatedly pointed out that compared to other areas of accident injuries, resources allocated to the prevention of home and leisure accident injuries have been meagre, and no permanent organisation and funding mechanism have been established. There is also little legislation on this area, and local efforts have not become established.

The majority of the 44 measures contained in the last target programme for the years 2007–2012 have been implemented. The most important measure encompassed in that programme that was not implemented was strengthening the prevention of home and leisure accident injuries and securing the permanence of these efforts. The resources of the Ministry of Social Affairs and Health have not been increased, and the permanence of the activities conducted by the Injury Prevention Unit of the National Institute for Health and Welfare has not been secured. Efforts to expand the funding base of preventive work into the insurance sector, for example, in accordance with other fields of accident injuries have not been successful.

Specific programmes have been prepared for road and occupational safety (as part of the programme for well-being at work), and this target programme

is the third such programme aiming to prevent accident injuries. In addition, three Government resolutions have been adopted on the Internal Security Programme, all of which have included accident prevention as one priority area. Some of the key objectives of the most recent programme are reducing the number of alcohol-related safety problems, guaranteeing a safe environment for young people to grow up in, improving the safety of older people, reducing serious violence and developing the services for victims of crime.

The various sectors of accident injuries have seen different trends in the development of preventive work. Methodical and long-term efforts have been made to prevent road and occupational accidents, and the two systems by which this has been achieved contain similar elements. Both sectors boast strong legislation and extensive research, as well as a statistics and funding mechanism based on the insurance system. So far, we have not managed to adopt or implement corresponding systems in the field of preventing home and leisure accident injuries.

Challenges to the prevention of home and leisure accident injuries are posed by the fact that they are relevant to many different types of accidents, resulting in a large scope and the fragmentation of efforts between the different fields. Preventing injuries is related to promoting health and welfare on one hand and safety on the other, and cooperation is thus needed both within and between these fields. So far, the prevention of home and leisure accident injuries has been overlooked in both fields. The home and leisure time are private areas, and activities in them are to a great extent self-directed compared to other environments.

Key aspects of preventing home and leisure accidents are stressing the citizens' personal responsibility and increasing awareness, building safe housing and living environments and supervising product safety. The shared efforts of all professionals and the voluntary sector will be needed to increase the awareness and inclusion of citizens. We can only be personally responsible for our safety when we have the required knowledge and skills. Various organisations must also assume responsibility for their own safety. When improving the safety of environments and products, it is important to ensure that the possibility of human errors is reduced, or that errors do not result in serious injuries. Legislation plays an essential role in promoting the safety of environments and products.

Safety is the total impact of many factors. The cause of serious injuries and accidents rarely is a single error or failure, either human or technical. Instead of highlighting individual factors, the concept of safety culture has become more widespread. Safety culture refers to a safety-oriented operating method in the entire system. In order to create a positive, all-inclusive safety culture, cooperation between various accident injury sectors is needed. At the moment, different environments have different safety cultures. Howev-

er, the consequences of all injuries have impacts on different environments. Leisure and road accidents result in significant absences from work, while occupational accidents affect the victims' life in their leisure time.

The prevention of accidents can be examined at various levels of prevention. Primary prevention refers to foresight activities. Accidents can be prevented by identifying their underlying causes and by removing or reducing accident risks. Factors causing accident risks can be eliminated or modified to reduce the risk level. Secondary prevention refers to rescuing victims of accidents, first aid and good treatment and care indicated by their needs. Tertiary prevention includes preventing the recurrence of the accident, good rehabilitation of the injured person and adjustment to the existing situation. It has been established that once a person has been injured, their risk of sustaining new injuries is greater. A musculoskeletal injury suffered by a young person, for example, may cause problems years later. Having fallen once, an older person has a greater risk of falling again. The particular focus of this programme is on primary prevention.

When preparing the new target programme, the coordination group examined the following background factors that may influence the trend in the numbers of home and leisure accident injuries and set challenges to targeting the preventive efforts:

- High level of alcohol consumption and binge drinking
- Increased alcohol consumption by older persons
- Increasing health inequalities
- Meagre resources available for preventive work
- Increased workloads and rushing at work
- Higher number of older persons
- Scaling down of institutional care and living in one's own home for as long as possible
- Growing number of people who live alone
- More technology in homes
- Engaging in DIY activities and reuse more often
- Growing number of people who lack everyday skills
- Rising trend of risk-taking and thrill-seeking
- Taking less exercise
- Increasing multiculturalism
- Increasing tourism and independent travel in particular
- Different level of safety awareness of foreign tourists in Finland
- Working less and having more free time

## 2 VISION AND TARGETS

The coordination group defined the vision of home and leisure accident injury prevention as follows:

*No one needs to die or be injured as a result of an accident.*

The targets of preventing home and leisure accident injuries were further defined as follows:

- *A good safety level is reached in all environments.*
- *There will be a 25 % reduction in the number of serious accident injuries at home and in leisure time by 2025.*
- *More substantial and permanent resources will be allocated for accident injury prevention.*

The target programme for the prevention of home and leisure accident injuries promotes the general goal of the Internal Security Programme of making Finland the safest country in Europe, one in which people feel that they live in a fair and equal society, regardless of how they identify themselves.

### 3 PACKAGES OF MEASURES AND ACTIONS

Home and leisure accident injuries are a significant national health and safety problem. They include many types of accident injuries and risks that concern all age groups. The coordination group has put together specific packages of measures through which the accident injury figures can be reduced. These packages of measures include improving safety culture and strengthening safety work, preventing accidents related to the use of medicines, alcohol and drugs, promoting equality and improving the safety of vulnerable groups in particular, improving environmental and product safety and preventing injuries caused by falling or tumbling. The packages of measures and the related actions cover all age groups.



The coordination group specified actions by which the targets set for each package of measures can be achieved. These actions are described below.

### 3.1 IMPROVING SAFETY CULTURE AND STRENGTHENING SAFETY WORK

#### 3.1.1 Improving safety culture

**Current situation:** The safety culture in working life and traffic has improved. The safety of young children has improved. However, there is plenty of room for improvement in the safety culture. For example, young and middle-aged men are over-represented in the statistics on home and leisure accident injuries. The growing number of elderly people and independent living pose further challenges to developing the safety culture. The high levels of alcohol consumption and binge drinking considerably increase the accident risk. Home and leisure accident injuries cause considerably more absences from work than occupational accidents.

**Target:** Extending a good safety culture to all environments, including homes and leisure time. Making the prevention of accidents a shared concern for everybody

**Measures:**

- Making safety assessments a part of the structures, planning, management systems, decision-making and activities of organisations (schools, day-care centres, housing companies, sheltered housing units, hospitals etc.)

**Responsibility:** Municipalities, National Board of Education, National Institute for Health and Welfare, Finnish National Rescue Association, social and health care service providers, housing companies

- Making home and leisure accident prevention a permanent part of safety work at workplaces

**Responsibility:** Ministry of Social Affairs and Health, Finnish Institute of Occupational Health, Centre for Occupational Safety, employer organisations and trade unions, workplaces and institutions educating professionals

- Continuing the efforts to develop cooperation across the accident prevention sector

**Responsibility:** Ministry of Social Affairs and Health, Ministry of the Interior, Ministry of Transport and Communications, National Cooperation Group for Accident Prevention, organisations

- Taking the higher accident risk of young and middle-aged men in various environments and activities into account in the preventive efforts

**Responsibility:** Parties engaged in the work to prevent accidents and substance abuse work, Finnish Defence Forces, Finnish Road Safety Council, sports clubs and leisure time organisations

### *3.1.1.1 Strengthening competence*

**Current situation:** Learning material for basic education include content related to accidents to a variable degree, depending on the subject and the textbook. The role of prevention is inadequate in this material. The basic and continuing education of teachers does not as yet include enough safety training. In the education and training for professionals who work in the care and services for older people, material on the prevention of accidents contained in curricula and learning content is variable and usually inadequate. Online studies in patient safety training are available. The Health Care Act (1326/2010) contains provisions on the obligation to undertake supplementary training.

**Target:** Including information on accident injuries in the education, training and induction training of citizens and professionals

#### **Measures:**

- Including methods of accident prevention in the fundamentals of the early childhood education and care plan and safety plans for day care  
**Responsibility:** Ministry of Education and Culture, National Board of Education, municipalities, Ministry of Social Affairs and Health, National Institute for Health and Welfare

- Ensuring that content related to accident prevention is included in the core curricula for basic education and secondary education and when reforming the core curricula and learning materials  
**Responsibility:** National Board of Education, educational institutions, National Institute for Health and Welfare

- Including accident prevention in the degree programmes and competence requirements of various fields of education at universities of applied sciences  
**Responsibility:** National Board of Education, National Institute for Health and Welfare, universities of applied sciences

- Preparing online courses, information bulletins and training videos, utilising existing learning platforms (e.g. virtual university of applied sciences) Including teaching about assistive devices and safety equipment in the basic and continuing education and training of care and rehabilitation staff. Developing the Safety Card training in the social welfare and health care sector. Building up professional and voluntary sector competence by organising versatile continuing education and cooperation forums  
**Responsibility: National Board of Education, universities of applied sciences, National Institute for Health and Welfare, municipalities, Finnish Association of Fire Chiefs, Finnish National Rescue Association and other organisations**
  
- Including more training in accident prevention in the basic and continuing education of teachers in various fields  
**Responsibility: National Board of Education, universities of applied sciences, universities, municipalities**
  
- Ensuring that accident prevention is included in the university curricula (medicine, health and nursing science, educational science, programmes for architects and the construction sector, environmental programmes etc.)
  
- Strengthening the position of modules on product and service safety in various educational programmes that train professionals for the manufacturing, imports and sales of products and for service business  
**Responsibility: National Board of Education, Ministry of Education and Culture, universities, universities of applied sciences, Finnish Chemicals and Safety Agency Tukes**
  
- In addition to basic education, extending education that promotes safe exercise all-inclusively to the national federations for various sports (Healthy Athlete programme), districts of the Finnish Sports Federation, Sports Academies and organisations offering sports activities  
**Responsibility: UKK Institute, National Board of Education, different sport federations, municipalities, organisations**
  
- Increasing the citizens' safety awareness by reinforcing the instruction of safety and first aid skills and independent preparedness. Promoting water safety and swimming skills so that everyone can swim and rescue a person in an emergency  
**Responsibility: Finnish Red Cross, Finnish Swimming Teaching and Life Saving Federation, Finnish National Rescue Association and other organisations, municipalities**

### 3.1.1.2 More effective communication

**Current situation:** Not enough information on accident injuries is available at the level of citizens, professionals and decision-makers. Despite the extent of the problem, home and leisure accident injuries attract little media attention. Funding for information campaigns that target citizens has been reduced considerably.

**Target:** Better assessment of risks and hazardous situations, better recognition of risk-seeking activities. Giving visibility to the role of alcohol and drugs as background factors for accidents. Higher awareness will encourage citizens to act more responsibly, enhance communal spirit and reduce the trend of unnecessary risk-taking.

#### **Measures:**

- Various actors will step up their cooperation in the area of communications to achieve synergy benefits. More safety information is offered to different communication channels.

**Responsibility:** National Institute for Health and Welfare, Finnish Institute of Occupational Health, Finnish Transport Safety Agency Trafi, Finnish Chemicals and Safety Agency Tukes, Federation of Finnish Financial Services, Finnish National Rescue Association, Finnish Society for Social and Health SOSTE, other organisations and the campaign to prevent home accident injuries

- Intensifying organisations' communication efforts and enhancing citizens' inclusion. Paying particular attention to reaching the residents of sparsely populated areas

**Responsibility:** Finnish Association for Substance Abuse Prevention, Finnish Society for Social and Health SOSTE, Finnish National Rescue Association, Finnish Red Cross, Federation of Finnish Financial Services, other organisations and village and residents' associations

- Intensifying communication that provides guidance in the safe use of technology (e.g. electrical appliances, fireworks)

**Responsibility:** Finnish Chemicals and Safety Agency Tukes, Sähköturvallisuuden edistämiskeskus (STEK, Association for promotion of electrical safety), TTS Work Efficiency Association

- Increasing awareness of accident injuries, their background factors and their prevention among communication professionals

**Responsibility:** National Institute for Health and Welfare, campaign to prevent home accident injuries, organisations in the substance abuse sector, Finnish Red Cross, Federation of Finnish Financial Services, Finnish National Rescue Association, Finnish Swimming Teaching and Lifesaving Federation

- Introducing new methods that make communication about safety more effective and interesting

**Responsibility:** Finnish Chemical and Safety Agency Tukes, parties working to prevent accidents

### 3.1.2 Stepping up efforts to prevent accidents

**Current situation:** The efforts to prevent home and leisure accident injuries have depended on temporary project funding. No special legislation exists on preventing home and leisure accidents. Permanent structures for the prevention are lacking. At local level, the work is divided between various sectors and there is no coordination.

**Target:** Work to prevent home and leisure accidents will be stepped up and made more permanent at all levels.

#### 3.1.2.1 Stepping up national efforts to prevent accidents

**Current situation:** The number of those engaged in preventing accidents full time is low. There is no permanent funding. Political decision-makers are not adequately aware of the problem. Regardless of the obligations laid down in the Health Care Act, work to prevent accident injuries in municipalities is inadequate.

**Target:** Increasing decision-makers' awareness of the negative effects and costs of accident injuries to society. Allocating more resources to accident prevention and securing their permanence.

#### **Measures:**

- The Government will adopt a resolution on preventing home and leisure accident injuries.

**Responsibility:** Ministry of Social Affairs and Health

- Incorporating accident prevention in the Government Programme and in relevant national strategies and programmes  
**Responsibility: Ministry of Social Affairs and Health, Ministry of the Interior**
  
- Securing the continuity of and resources for the National Institute for Health and Welfare's Injury Prevention Unit  
**Responsibility: Ministry of Social Affairs and Health, Ministry of the Interior, Ministry of Finance, National Institute for Health and Welfare**
  
- Examining the chances to expand various organisations' activities to preventing home and leisure accidents  
**Responsibility: Finnish Society for Social and Health SOSTE, Finnish Road Safety Council, Finnish National Rescue Association, Finnish Red Cross and other organisations working to prevent accidents, Finnish Association of People with Physical Disabilities, Finnish Association for Substance Abuse Prevention and other substance abuse organisations, Finland's Slot Machine Association RAY**
  
- Examining the chances to increase the funding available for accident prevention by legislative or other means, for example by directing a certain share of insurance premiums to preventing accidents as is the case in other sectors  
**Responsibility: Ministry of Social Affairs and Health, Federation of Finnish Financial Services**
  
- Examining whether it is possible to draft a statute on work to prevent home and leisure accidents following the example of statutes on occupational and road accidents  
**Responsibility: Ministry of Social Affairs and Health**
  
- Strengthening the role of the coordination group appointed by the Ministry of Social Affairs and Health as a body that coordinates the preventive work carried out by different parties and the implementation of the national target programme  
**Responsibility: Ministry of Social Affairs and Health**
  
- Encouraging the participation of medicolegal officers in the preventive work  
**Responsibility: National Institute for Health and Welfare, Hjelt Institute**

- Improving the use and usability of cause of death data in preventing accidents

**Responsibility:** National Institute for Health and Welfare, Hjelt Institute, Finnish Chemicals and Safety Agency Tukes

- Examining the chances to develop effective and extensive efforts to prevent deaths by drowning

**Responsibility:** Ministry of Transport and Communications, Ministry of Social Affairs and Health, Ministry of the Interior, Finnish Transport Safety Agency Trafi, Finnish Chemicals and Safety Agency Tukes, Finnish Swimming Teaching and Lifesaving Federation

### 3.1.2.2 *Developing legislation and guidelines*

**Current situation:** There is no special legislation on preventing home and leisure accidents. The prevention of home and leisure accidents is, among others, relevant to the Health Care Act, the Rescue Act, the Ministry of Social Affairs and Health Decree on a plan for quality management and implementation of patient safety (341/2011), the Act on Supporting the Functional Capacity of the Older Population and on Social and Health Services for Older Persons, the Consumer Safety Act (, and the Land Use and Building Act. A programme for preventing accident injuries to children and young people is on-going in Finland and it also contains proposals for legislative amendments.

**Target:** Taking the objectives of accident prevention into account in legislation and guidelines. Assessing safety impacts when passing new legislation

#### **Measures:**

(In this programme, sections 4.1.2.1, 4.2 and 4.4 also contain proposals related to legislation and guidelines).

- Examining the chances to adopt more stringent legislation on the obligation to wear a cycling helmet, use lights on bicycles and wear reflectors, and the chances to introduce an obligation to wear a downhill skiing helmet.

**Responsibility:** Ministry of Transport and Communications, Finnish Road Safety Council

- Reviewing water safety legislation and including a statutory obligation to also wear life jackets in rowing boats

**Responsibility: Ministry of Justice, Ministry of Transport and Communications**

- Incorporating children's right to safety and accident injury prevention in the preparation of legislation on early childhood education and care (A basic right to education, equality, health and safety is enshrined in the UN Convention on the Rights of the Child of 1989).

**Responsibility: Ministry of Education and Culture**

- Examining the chances to include in the legislation a requirement to equip medicine and vitamin supplement bottles with a child safety cap and the obligation to use blister packs. A review of adding sugar to medicines should also be included in this report.

**Responsibility: Ministry of Social Affairs and Health, Finnish Medicines Agency Fimea**

- Examining if the current legislation ensures the equal availability of well-being and safety technologies and assistive devices in all parts of the country

**Responsibility: Ministry of Social Affairs and Health, National Institute for Health and Welfare**

- Drawing up safety promotion guidelines for social service units and home services

**Responsibility: Ministry of Social Affairs and Health, Ministry of the Environment, Ministry of the Interior, National Institute for Health and Welfare, National Supervisory Authority for Welfare and Health (Valvira), Association of Finnish Local and Regional Authorities**

- Reviewing national guidelines and standards applicable to supervised natural swimming areas and swimming pools, e.g. regarding regular re-training and the number of lifeguards

**Responsibility: Finnish Swimming Teaching and Lifesaving Federation, Finnish Chemicals and Safety Agency Tukes**

### *3.1.2.3 Stepping up regional and local preventive efforts*

**Current situation:** Almost all municipalities have drawn up local safety plans. Municipalities also have numerous plans for promoting health and well-being, but so far, preventing accident injuries has not been a priority in these plans. Neither is adequate attention paid to accidents in the statutory

well-being reports as yet. Practical efforts to prevent accidents are inadequate, and they rely on short-term project funding. The work is obstructed by a silo vision.

**Target:** Establishing permanent structures, cooperation and long-term activities for accident prevention at local level. Also guaranteeing safety in sparsely populated areas. Including accident prevention in the electronic well-being reports and translating it into action

**Measures:**

- Reinforcing the position of home and leisure accident prevention in the planning and implementation of work to promote internal safety and health by Regional State Administrative Agencies

**Responsibility: Regional State Administrative Agencies**

- Promoting and supporting work to prevent home and leisure accidents in municipalities. Encouraging municipalities to join the WHO's Safe Community network

**Responsibility: Municipalities, Association of Finnish Local and Regional Authorities, National Institute for Health and Welfare, campaign to prevent home accidents**

- Making sure that accident injury monitoring data and measures to prevent accidents are included in municipal safety plans, well-being reports and various programmes (for example age policy programmes and strategies for older people). Ensuring that the plans and programmes are consistent and that key priority areas are included in municipal strategies

**Responsibility: Association of Finnish Local and Regional Authorities, municipalities**

- Ensuring the implementation of the Health Care Act (sections 2 and 3) and making the prevention of accidents a permanent part of basic work to promote health and well-being in municipalities

**Responsibility: Municipalities, Association of Finnish Local and Regional Authorities, Ministry of Social Affairs and Health, National Institute for Health and Welfare**

- Developing more practices and new customer-oriented operating models and materials that support independent preparedness and inclusion and provide information about background factors to accidents

**Responsibility:** Organisations, Finnish National Rescue Association, rescue services, Ministry of the Interior, campaign to prevent home accident injuries, Village Action Association of Finland, municipalities

- Associating the treatment of injuries with prevention of accidents in health care services, especially if injuries reoccur

**Responsibility:** Municipal health care services, hospital districts, occupational health care services, private health care, Current care recommendations, National Institute for Health and Welfare

- Promoting efficient and adequate supervision of consumer services at regional and local level

**Responsibility:** Ministry of Employment and the Economy, Finnish Chemicals and Safety Agency Tukes, Regional State Administrative Agencies, municipalities

- Integrating sports injury prevention in sports activities at workplaces

**Responsibility:** Finnish Institute of Occupational Health, UKK Institute, workplaces

- In addition to sports sector actors, extending the work to prevent sports injuries to health care services, Finnish Defence Forces, parishes, and club and leisure activities. Focusing particular attention on operating methods and safety equipment that prevent brain injuries

**Responsibility:** UKK Institute, municipalities, sports sector actors, Finnish Defence Forces, Finnish Association of People with Physical Disabilities, Traumatic Brain Injury Association (Aivovammaliitto)

### *3.1.2.4 Developing statistical monitoring*

**Current situation:** The National Institute for Health and Welfare has built a database for monitoring fatalities and hospitalisations. The Institute publishes accident injury reviews and administers a statistical service. These activities are as yet not part of the Official Statistics of Finland. Data that is suitable for monitoring the trends in injuries and causal factors are being collected by several different organisations, but currently these data are underused. Key national indicators have not been specified, there is no comprehensive data on costs, and the methods used to assess the long-term negative impacts of injuries and to monitor trends are underdeveloped. Statistics on injuries are not used adequately at local level to promote health and safety.

**Target:** More versatile statistical data on injuries will be made available for the promotion of health and safety. Key indicators will be specified at national level, and EU level statistical cooperation will be developed.

**Measures:**

- Defining key statistical indicators for monitoring home and leisure accident injuries at national level  
**Responsibility:** Ministry of Social Affairs and Health, National Institute for Health and Welfare and other bodies keeping statistics
- Developing the monitoring of costs caused by injuries and putting these activities on a more permanent basis  
**Responsibility:** National Institute for Health and Welfare
- Developing data collection systems to produce not only quantitative data but also data on the circumstances of accidents and the consequences of personal injuries. Conducting regular victim interview studies, putting the funding for these studies on a permanent basis  
**Responsibility:** National Institute for Health and Welfare, Ministry of Social Affairs and Health, Ministry of Transport and Communications, Ministry of the Interior, Hjelt Institute, the insurance sector, Finnish Chemicals and Safety Agency Tukes
- Improving the preconditions for monitoring accidents at local level  
**Responsibility:** National Institute for Health and Welfare, Association of Finnish Local and Regional Authorities, other bodies keeping statistics
- Preparing a report on introducing an Official Statistics of Finland on home and leisure accident injuries  
**Responsibility:** National Institute for Health and Welfare, other authorities keeping statistics
- Making a decision on Finland's participation in EU level statistics cooperation and on funding for the possible participation  
**Responsibility:** Ministry of Social Affairs and Health, Ministry of Employment and the Economy, National Institute for Health and Welfare

### 3.1.2.5 Reinforcing research

**Current situation:** The resources available for research in accident injuries are meagre. Research is conducted in many disciplines, and no uniform tradition of research has evolved.

**Target:** Reinforcing the position of accident injury research

#### **Measures:**

- Continuing various thematic studies on injury-related topics that are vital for safety  
**Responsibility:** Safety Investigation Authority, Finnish Road Safety Council, research institutes
- Establishing a professorship of home and leisure accident injury prevention to promote academic research in the subject. Guaranteeing research funding and increasing the number of senior researchers  
**Responsibility:** Universities, Ministry of Education and Culture and private finance providers (e.g. the insurance sector), National Institute for Health and Welfare, Finnish Institute of Occupational Health
- Supporting the professional networking of researchers and professionals in this field and promoting international researcher exchanges with leading universities.  
**Responsibility:** Universities, Ministry of Education and Culture, Ministry of Social Affairs and Health, National Institute for Health and Welfare, Finnish Institute of Occupational Health
- Setting up a safety research programme in the Academy of Finland.  
**Responsibility:** Academy of Finland

## 3.2 PREVENTING ACCIDENT INJURIES CAUSED BY THE USE OF MEDICINES, ALCOHOL AND DRUGS

**Current situation:** Alcohol and drugs, and especially binge drinking are the most significant single factor behind accidents. As the alcohol content in the blood rises, the accident risk increases exponentially. More accidents are associated with alcohol use in Finland than in Europe on average. The use of drugs and alcohol by older people is increasing, and intoxicants are

also a significant risk factor in injuries caused by falling and other accidents among older persons. Treating injuries associated with alcohol and drugs use increases the workload of the health care system.

The duty of care laid down in the consumer safety legislation requires an operator to be familiar with the conditions for a consumer taking part in the service safely, which includes not offering services to persons who are intoxicated.

**Target:** Reducing the total consumption of alcohol, and especially the number of servings taken on a single occasion, thus reducing the incidence of binge drinking and the associated accident risk. Increasing awareness of the high accident risk associated with the use of medicines, alcohol and drugs and stepping up cooperation between the substance abuse and accident injury sectors

**Measures:**

- Reducing the harmful effects of alcohol by reforming the alcohol legislation. Reforming the act on temperance work (828/1982) to make preventive substance abuse work by municipalities more effective, including the prevention of alcohol-related accidents in these efforts. Reforming the Assembly Act and the Public Order Act to restrict the availability of alcohol and drinking in public places

**Responsibility: Ministry of Social Affairs and Health, Ministry of the Interior**

- Developing cooperation between the accident injury and substance abuse sectors and disseminating more information about drugs and alcohol as factors behind accidents.

**Responsibility: Finnish Association for Substance Abuse Prevention, organisations, municipalities, National Institute for Health and Welfare, the Alcohol Programme, Regional State Administrative Agencies, Ministry of Social Affairs and Health**

- Decreasing the limit of drunken driving in waterborne traffic to correspond with the limit applied in road traffic

**Responsibility: Ministry of Justice, Ministry of Transport and Communications**

- Finding out if patients who arrive at an emergency clinic because of an accident are intoxicated (all patients aged 15 and over and, when necessary, patients aged under 15) by means of a breathalyser and/or drug tests

- If necessary, a risk test is carried out to identify risk use of intoxicants. The results are recorded in the patient information system, and a plan for further measures is drawn up.
- If necessary, possible risk behaviours that might have been a background factor to the accident are discussed with a patient having arrived at an emergency clinic with injuries, aiming for a change in behaviour and better life control in the future (for example by a motivational interview).

**Responsibility:** Hospital districts, municipal health care services and social and substance abuse services

- Organising a psychiatric consultation in case of poisonings. In all alcohol and drugs related social and health care interventions, including occupational health care services, addressing the impacts of parents' substance use and mental health problems on children and the safety of the home pursuant to the Child Welfare Act (section 10, 417/2007 and the Health Care Act (section 70).

**Responsibility:** Hospital districts, municipal substance abuse and social welfare services, Finnish Institute of Occupational Health, National Institute for Health and Welfare

- Paying attention to accident risk caused by medicines and the risk posed by medicine interactions, especially in older persons

**Responsibility:** Municipalities, private health care services

- Reinforcing the role of Alko Inc. in preventing alcohol-related accidents

**Responsibility:** Ministry of Social Affairs and Health, Alko

### 3.3 PROMOTING EQUALITY AND IMPROVING THE SAFETY OF VULNERABLE GROUPS IN PARTICULAR

**Current situation:** People in a lower socio-economic position sustain relatively more accident injuries than others. If the situation of accident injuries for those in a more vulnerable position were the same as for those with higher education, the number of injuries would be reduced by 20–45 per cent. Other groups in a vulnerable position include persons with a developing, deteriorating or restricted physical and cognitive functional capacity (e.g. children, older persons and persons with disabilities).

**Target:** Improving the safety situation of groups in a vulnerable position, thus promoting equality.

**Measures:**

- Examining the injury and accident situation of groups in a vulnerable position (e.g. substance abuse and mental health rehabilitees, self-destructive persons) and developing targeted operating models for promoting their safety.

**Responsibility:** National Institute for Health and Welfare, Ministry of Social Affairs and Health, municipalities, Association of Finnish Local and Regional Authorities, organisations

- Stepping up cooperation between social and health care and the safety sector by introducing operating models for early intervention and promoting inclusion.

**Responsibility:** Municipal social and health care, rescue services, police, National Institute for Health and Welfare, Finnish National Rescue Association

- Developing the activities of various authorities (e.g. home visits) in order to identify accident risks and stepping up cooperation with the aim of achieving synergy benefits.

**Responsibility:** Municipal social and welfare services, rescue services

- Applying operating models that support the prevention of accident injuries to older persons more effectively.

**Responsibility:** National Institute for Health and Welfare, municipalities

- In the planning of risk-based supervision, the authorities will consider the needs of particularly vulnerable groups also in the future.

**Responsibility:** Finnish Chemicals and Safety Agency Tukes, other supervisory authorities

- Providing more preventive rehabilitation.

**Responsibility:** Municipalities, UKK Institute, rehabilitation sector actors

- Ensuring that infrastructures for cycling and walking are designed to an equally high standard as roads for motor traffic.

**Responsibility:** Ministry of Transport and Communications, Finnish Transport Agency, Centres for Economic Development, Transport and the Environment, municipalities

- Addressing the safety of pedestrians (slipping, falling) in a wide sense in the reform of road traffic legislation.

**Responsibility: Ministry of Transport and Communications**

## Preventing accident injuries to children and young people

**Current situation:** Accidents are the most common cause of death in children and young people. The safety of young children has improved in recent decades, but young men aged 15–24 are a particular risk group. A programme for preventing accident injuries to children and young people coordinated by the National Institute for Health and Welfare has been launched.

**Targets:** Reducing accidents sustained by children and young people further and achieving a dramatic decrease in accidental deaths of young men in particular.

### **Measures:**

- Ensuring the long-term implementation of the national programme for preventing accident injuries to children and young people by turning proposed actions into permanent practices, especially in key environments in which children and young people grow up (day-care, schools and educational institutions, youth and leisure services and the Finnish Defence Forces) The programme encompasses 216 actions, the coordination and monitoring of which will continue.

**Responsibility: National Institute for Health and Welfare**

- Key accident prevention contents related to each age are incorporated in national guidelines, legislation, education of professionals and practical work in the relevant fields. Particular attention will be focused on young people.

**Responsibility: National Institute for Health and Welfare, UKK Institute, Ministry of Social Affairs and Health, Ministry of Education and Culture, organisations**

## 3.4 IMPROVING ENVIRONMENTAL AND PRODUCT SAFETY

### 3.4.1 Improving the safety of environments and housing

**Current situation:** Both positive and negative developments have been recorded in the safety of the built environment and housing. Various actors and parties have developed and implemented better and more accessible solutions to promote safety. At the same time, however, built environments with little consideration for safety have been designed and constructed. Information on designing and building safe and accessible environments and housing is available at such websites as [www.turvallinen-kaupunki.fi](http://www.turvallinen-kaupunki.fi). A reform of building regulations associated with accessibility and user safety will be launched in 2014. Institutional living for special groups will be scaled down, and more people will continue to live in their own homes. Under the Act on Supporting the Functional Capacity of the Older Population and on Social and Health Services for Older Persons, prevention of accidents is part of advisory and home visit services that promote well-being. Both the Rescue Act and the Act on Supporting the Functional Capacity of the Older Population and on Social and Health Services for Older Persons encourage cooperation between various authorities, health care, municipal social services, the Emergency Response Centre and the police.

**Target:** Improving the safety of environments and products. Ensuring the implementation and development of legislation relevant to safe housing (including the Rescue Act and legislation in the administrative branch of the Ministry of the Environment) from the perspective of accident prevention

#### **Measures:**

- Giving visibility to factors related to improving the safety and accessibility of built environments and the roles and responsibilities of various actors. Developing the provisions on accessibility and user safety of buildings

**Responsibility:** Ministry of the Environment

- Incorporating a review of the safety situation and elimination of risks in all work involving home visits. Providing actors in sectors relevant to housing (including home service staff, informal carers, support persons, housing services) with training in safety promotion

**Responsibility:** Municipalities, National Institute for Health and Welfare, rescue services, organisations, residents' associations

- Considering safety factors in the design and supervision of service units  
**Responsibility: Regional State Administrative Agencies, National Supervisory Authority for Welfare and Health (Valvira), rescue services, municipalities**
  
- Continuing independent preparedness by operators in institutions and sheltered and supported housing units  
**Responsibility: Municipalities, service providers**
  
- Promoting and supervising the safety of various sports facilities  
**Responsibility: Municipalities, Finnish Chemicals and Safety Agency Tukes**
  
- Promoting the timely and high-quality maintenance of pedestrian paths and developing measures to counteract slippery surfaces  
**Responsibility: Finnish Transport Agency, municipalities, Finnish Real Estate Federation, Finnish Real Estate Management Federation, housing companies, property management companies**

### 3.4.2 Improving product safety and encouraging the use of safety products and technologies

**Current situation:** Hazardous products are still being discovered on the market in many different product groups.

Safety technology products are continuously developed. It is important for the older population that safety technology products, including various safety phone and alarm systems, are compliant with requirements and function faultlessly, and that service contracts deliver on their promises. Older persons are more willing to start using new technologies. Information is fragmented and not easily available. Professionals are still in need of better support for introducing new technologies. Many products and technological solutions are only being developed, and they are as yet not easy for older persons or professionals to use.

**Target:** Only safe products will be available in the market. The use of safety products and technologies will become more widespread. Provision of information for citizens and professionals will be organised.

### **Measures:**

#### **Safe products**

- Directing manufacturers and importers to bring safe products into market, removing hazardous products by means of market supervision  
**Responsibility: Product manufacturers, importers and resellers, Finnish Chemicals and Safety Agency Tukes, National Supervisory Authority for Welfare and Health and other supervisory authorities**

#### **Safety products and technologies**

- Promoting the development of various safety equipment by submitting proposals to standardisation bodies
- Creating innovation, testing and development environments for safety technologies in which end users, researchers and product developers meet. Providing more information for older persons and other special groups, their friends and families and the professionals caring for them about products and technologies that improve safety (e.g. the Functional Home exhibition). Providing opportunities for trying out technologies and disseminating information in places that people visit frequently, including pharmacies, shops and libraries  
**Responsibility: Municipalities, organisations, companies in the field, universities of applied sciences, universities, National Supervisory Authority for Welfare and Health, Finnish Chemicals and Safety Agency Tukes, councils for older people**
- Companies manufacturing safety products and technologies will provide more support for customers who are starting to use the products  
**Responsibility: Companies in the sector**

## **3.5 PREVENTING INJURIES CAUSED BY FALLING OR TUMBLING**

**Current situation:** The most common type of injuries are those caused by falling or tumbling. They also are the most common cause for hospital stays and brain injuries and the most important cause of accidental deaths in older persons.

The Act on Supporting the Functional Capacity of the Older Population and on Social and Health Services for Older Persons lays down an obligation to promote older persons' independent living by timely interventions in deteriorating functional capacity and its risk factors.

**Target:** Reducing the number of injuries caused by falling and tumbling.

**Measures:**

- Examining the need and chances for a national programme for preventing brain injuries

**Responsibility:** Ministry of Social Affairs and Health, National Institute for Health and Welfare, organisations

- Making building regulations clearer, in particular to prevent accidents in stairs Providing more information to housing companies about repairs to common areas that improve accessibility and safety

**Responsibility:** Ministry of the Environment, Finnish Real Estate Federation, Finnish Real Estate Management Federation, Finnish House Owners' Association

- Developing a structural and a process model of safety management in services for the elderly that is a permanent part of the care, rehabilitation and advisory services

**Responsibility:** National Institute for Health and Welfare, Finnish Institute of Occupational Health, providers of services for older persons

- Introducing a systematic operating model and practices for preventing falls in organisations that provide services for older persons (e.g. the IKINÄ model) and for recording falls and their consequences

**Responsibility:** Municipalities, National Institute for Health and Welfare, providers of services for older persons

- Ensuring that an assessment of risks of falling is always carried out in connection with a home visit and that the required measures are taken to prevent an older person's risk of falling

**Responsibility:** Municipalities, Association of Finnish Local and Regional Authorities, National Institute for Health and Welfare

- Stepping up cooperation between care for the elderly and sports services. Improving older persons' chances to take exercise and the accessibility of facilities (for example, local exercise facilities, transport services and "services on wheels").

**Responsibility:** Municipalities, Age Institute, organisations

- Providing more information for older persons and their family and friends about the benefits, use and availability of assistive devices that promote the safety of exercise, anti-slip soles and hip protectors

**Responsibility:** Municipalities, service providers, organisations, companies manufacturing products

- Stepping up efforts to warn pedestrians about slippery road conditions. Providing more information about using non-slip devices and wearing safe footwear

**Responsibility:** Municipalities, Finnish Meteorological Institute, Finnish Road Safety Council, campaign to prevent home accident injuries

- Working in closer cooperation with importers, manufacturers and resellers of footwear and preparing a footwear safety standard that takes slippery conditions in consideration

**Responsibility:** Campaign to prevent home accidents, Finnish Institute of Occupational Health, Finnish Road Safety Council, footwear manufacturers, importers and resellers

Appendix I. Composition of the coordination group  
for home and leisure accident injury prevention  
1 March 2013–31 December 2015

**CHAIR:**

Kari Paaso, Director, Ministry of Social Affairs and Health

**VICE CHAIR:**

Senior Officer Maija Peltokangas, Ministry of the Interior

**MEMBERS:**

Ministerial Adviser Merja Vahva, Ministry of Transport and Communications

Senior Architect Timo Saarinen, Ministry of the Environment

Senior Adviser Anna Pukander, Finnish Chemicals and Safety Agency Tukes  
Personal deputy: Chief Engineer Harri Roudasmaa, Finnish Chemicals and Safety Agency Tukes

Team Leader Markku Aaltonen, Finnish Institute of Occupational Health  
Personal deputy: Research Engineer Pia Perttula, Finnish Institute of Occupational Health Chief Safety

Investigator Kai Valonen, Safety Investigation Authority

Senior Expert Hannele Häkkinen, Association of Finnish Local and Regional Authorities

Director Risto Karhunen, Federation of Finnish Financial Services

Neurologist Hannu Virtanen, Finnish Association of People with Physical Disabilities

Communications Manager Juha Hassila, Finnish National Rescue Association

First aid expert Kristiina Myllyrinne, Finnish Red Cross Coordination

Manager Leena Sipinen, Finnish Association for Substance Abuse Prevention  
Personal deputy: Senior Expert Kaarina Tamminiemi, Finnish Society for Social and Health SOSTE

Planning Officer for life saving training Anne Hiltunen, Finnish Swimming Teaching and Lifesaving Federation

Chief Physician Pekka Kannus, UKK Institute

**SECRETARIES:**

Ministerial Adviser Merja Söderholm, Ministry of Social Affairs and Health  
Research Manager Pirjo Lillsunde, National Institute for Health and Welfare

## Appendix 2. The accident injuries situation

- *Almost 90 % of injury deaths take place in home and leisure*
- *Almost 80 % of accidents leading to injury take place in home and leisure*
- *Unintentional injuries are the fourth most common cause of death in Finland*
- *Unintentional injuries cause the second most hospitalisations in secondary care compared to other main categories of diseases*
- *Unintentional injury mortality in Finland is the fourth highest in EU region*

During the past twenty years Finland has become a much safer place in several measures. Deaths caused by traffic accidents and occupational accidents have been steadily decreasing. The number of children's injury deaths is now the all-time record low. Such development is a consequence of long-term systematic work for improving safety in these sectors. Despite these successes the number of deaths caused by unintentional injuries has been increasing due to the growth of deaths from injuries in home and leisure. Currently injury deaths in home and leisure are decreasing slightly. However, their proportion of all injury deaths has increased while other sectors have become safer. Unintentional injuries are the most significant or one of the most significant causes of death in several age groups and are also one of the biggest reasons for hospitalisations. Considering how common unintentional injuries are and what is the magnitude their treatment demands they should be considered one of the major public health problems, comparable to cardiovascular diseases, cancers or musculoskeletal disorders.

### COMPILING INJURY STATISTICS – RECENT SITUATION

- *The incidence of less serious unintentional injuries is multiple compared to unintentional injury fatalities and hospitalisations.*
- *Statistics on serious unintentional injuries are reliable in Finland.*
- *The most important statistical sources for injury monitoring are the cause of death statistics and hospitals' care registers*

In Finland, statistics on serious unintentional injuries is accurate and comprehensive. In general, the statistics are the most reliable on the most serious injuries. Especially the law on reporting the cause of death guarantees the high quality of Cause-of-Death Statistics on fatal injuries. Hospital inpatient registers are in most cases also accurate even though some unintentional injuries are not necessarily documented. Records on outpatient visits in secondary care are also compiled; however the information contained in the database has not yet been systematically reviewed and can be rather incomplete.

According to the official statistics unintentional injuries are the fourth most common cause of death in Finland. In addition, unintentional injuries and poisonings are the second most common cause of hospitalisations in secondary care and the fourth most common cause of hospitalisation in primary health care when compared to the other disease groups.

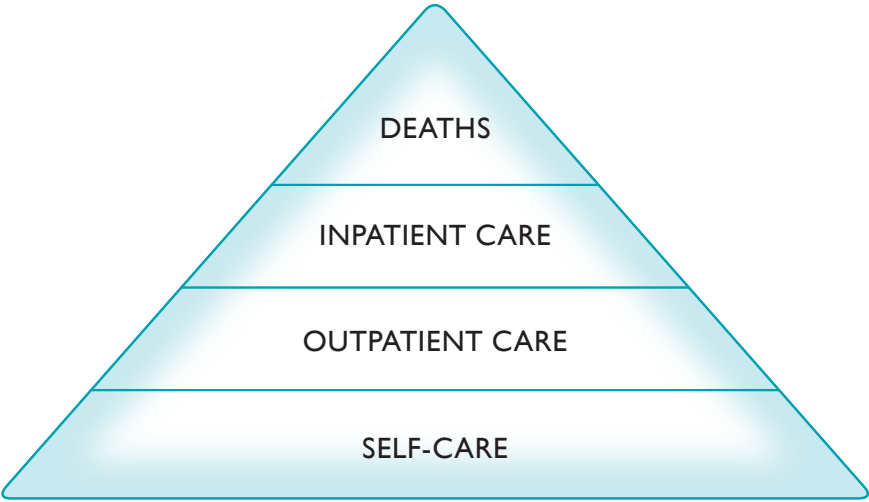


Figure 1. Numbers of accident injuries by seriousness

For each serious accident injury there is in general a multiple number of milder injuries. This can also be expressed so that a certain proportion of all accidents results in mild injuries, a smaller proportion in serious injuries, and a very small proportion in death. Only the part of accidents that results in serious physical or material injuries or damages are recorded in statistics. The majority of the cases that only have mild consequences are not included in any statistics and investigation of them is left to other research. Often we indeed speak about “the tip of the iceberg” when dealing with the reasons for accidental deaths and hospitalisation.

## FINLAND IN THE INTERNATIONAL INJURY STATISTICS

- According to Eurostat, injury mortality in Finland is the fourth highest in the EU
- Baltic countries have the highest injury mortality in the EU
- Other Nordic countries have significantly lower injury mortality than Finland
- International comparisons on mortality might not be completely accurate

Eurostat (<http://ec.europa.eu/eurostat>) is the statistical office of the European Union (EU). Its tasks include collecting data on the causes of death and occupational accidents produced by different national agencies within the Member States. Even though compiling statistics should be consistent in principle, it is based on the national statistics which may be affected by many different local practices (e.g. the procedures of collecting data on the causes of death or resources available for investigations). Accordingly, the comparison between different member states might not be completely accurate.

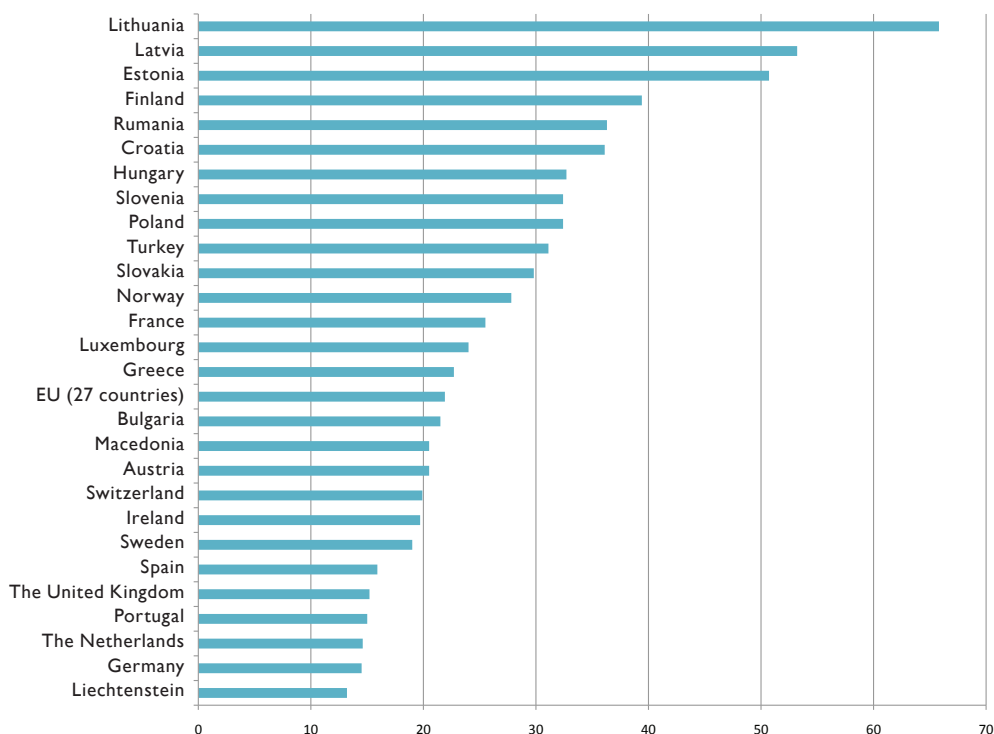


Figure 2. Standardized injury mortality rate per 100,000 inhabitants in 2010.

The burden of fatal injuries differs in EU between the East and the West. Western European countries tend to have the lowest burden of fatal injuries whereas the highest burden of fatal injuries is in the Eastern European countries. Baltic countries have the highest mortality caused by injuries, followed by Finland which has the fourth highest injury mortality rate in EU. In Finland, the mortality by unintentional injuries is almost double in comparison to the average in EU. Finland's situation can be explained by differences in the rate of fatal home and leisure injuries which are responsible for the majority of injury deaths in the country. Differences in fatal road traffic injuries are smaller among the EU-28.

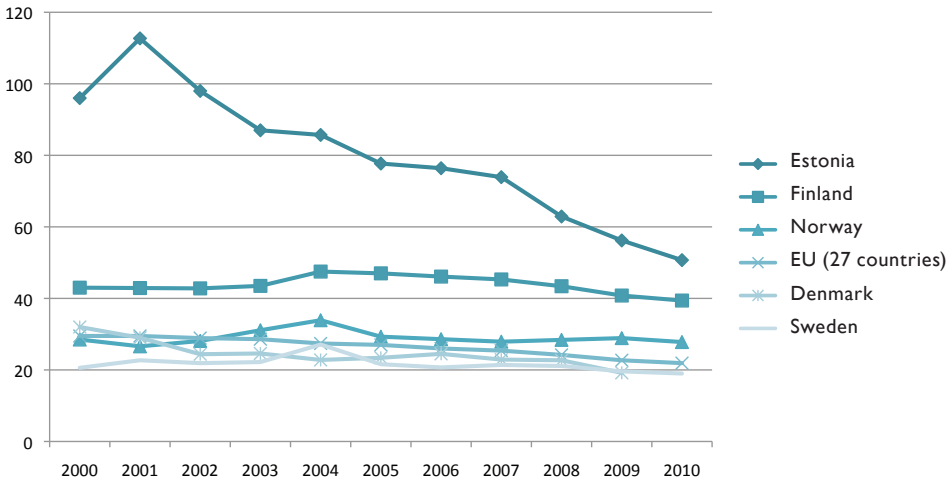


Figure 3. Standardized injury mortality rate per 100,000 inhabitants in 2000-2010.

Injury mortality is significantly higher in Finland than in other Nordic countries; however it is clearly lower than in Estonia. During the first decade of the 21st century, injury mortality has remained relatively steady in Finland and other Nordic countries (Figure 3). In Estonia the positive development has been notable, as the number of fatal injuries was cut down to half during the past ten years (for instance, fatal traffic injuries have fallen to one third since the year 2000).

## FATAL INJURIES IN FINLAND

- *The majority of unintentional fatal injuries occurs at home and in leisure time, in health care facilities and other places excluding occupational and traffic environment*
- *The burden of fatal injuries increased at the beginning of the 2000s, but started to decrease at the turn of 2010*
- *Falls are the most common type of unintentional injuries causing deaths*
- *Unintentional injuries are currently the fourth most common cause of death in Finland*

Altogether 2766 people (1846 men and 920 women) died as a result of injuries in 2011. The most common types of unintentional injuries causing death among women and men were falling or tumbling, which accounted for the death of 1212 people. 292 people died as a result of road traffic accidents during 2011, the proportion of men being three fourths. 26 people died in occupational accidents.

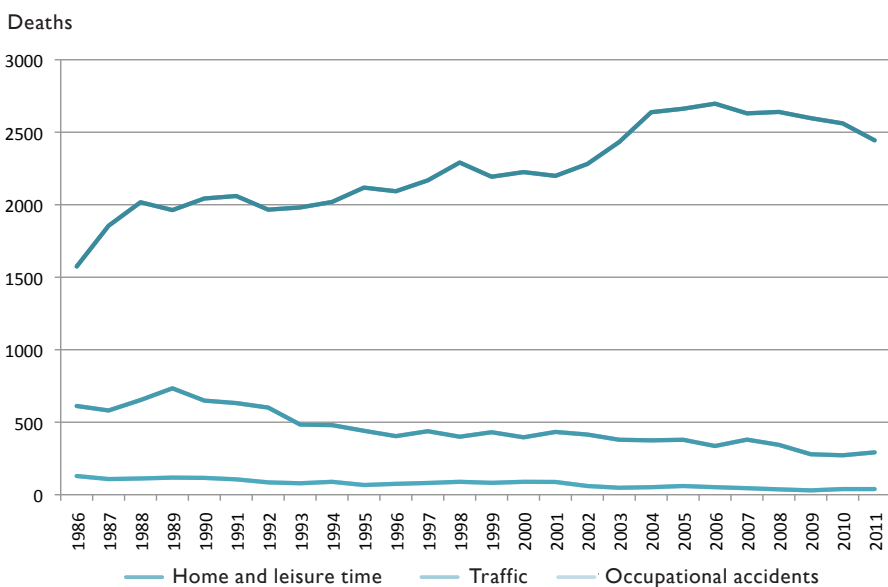


Figure 4. Fatal injuries in the three main categories in 1986-2011.

When fatal injuries are classified under three main categories, i.e. traffic accidents, home and leisure accident injuries and occupational accidents, the large number of fatal home and leisure injuries can be clearly seen compa-

red to the other types of injuries leading to death (Figure 4). The number of traffic accidents and occupational accidents has been decreasing during the past twenty years whereas the number of home and leisure injuries has increased during the same time. Especially in 2003 and 2004 deaths due to alcohol poisonings and other alcohol-related injury increased clearly.

Traffic accidents include all light traffic (i.e. cyclists and pedestrians) and road traffic accidents in which at least one of the involved parties has been a moving vehicle (Statistics Finland, road traffic accidents). Occupational accidents include those injuries which have occurred to employees or farmers (Statistics Finland, occupational accidents). The number of fatal home and leisure accident injuries has been counted by reducing the number of fatal traffic accidents and fatal occupational accidents from all fatal unintentional injuries in the cause of death statistics.

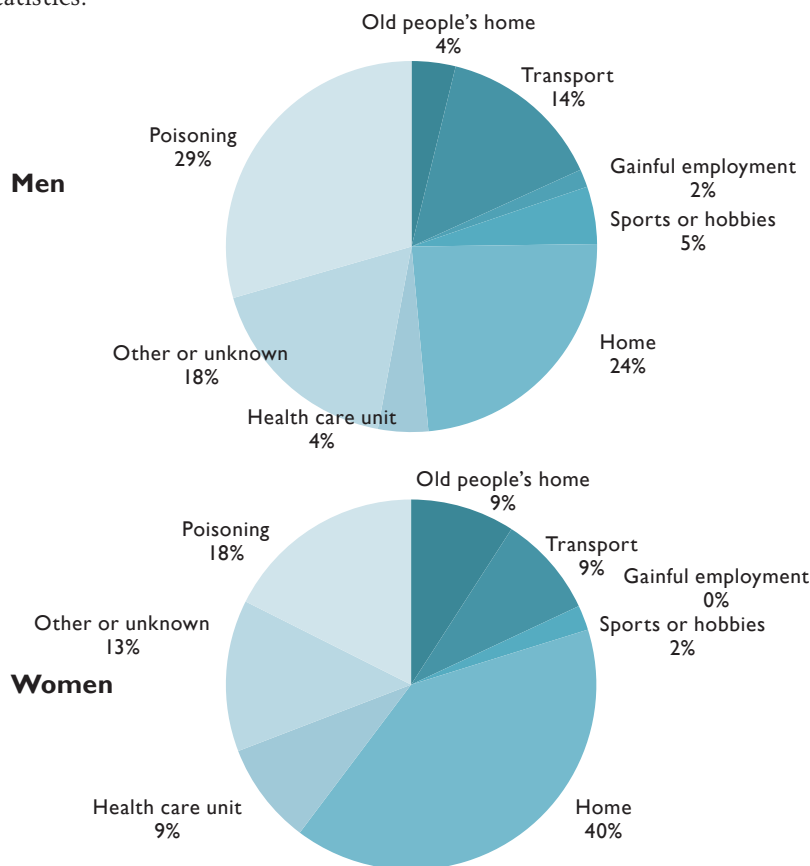


Figure 5. Fatal injuries by sex and injury type in 2010

Injuries that are neither related to occupational accidents nor road traffic accidents are defined as home and leisure injuries (HLI). A significant proportion of these injuries occurs at home. Every fourth fatal injury among men

and almost half of the fatal injuries among women occur at home. Poisonings and traffic accidents are also leading causes of injury deaths among men, whereas injuries in health care facilities and poisonings are leading causes of injury death among women. Approximately every sixth fatal injury has not been categorized into any of the above-mentioned main category type.

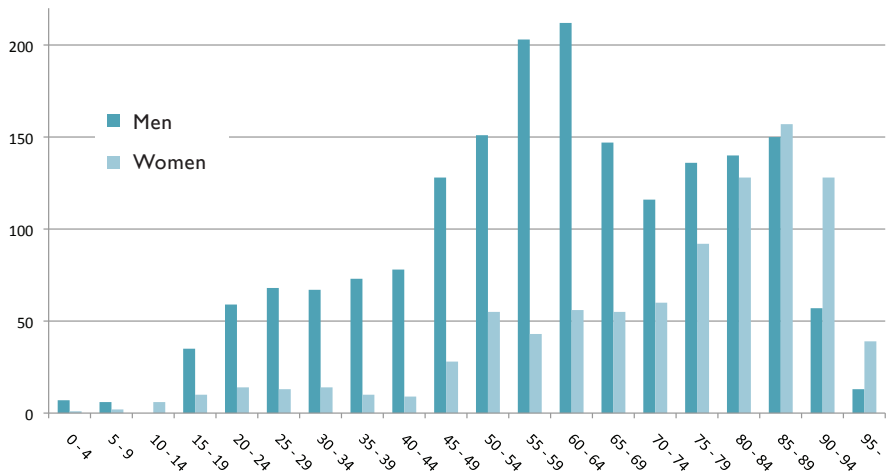


Figure 6. Fatal injuries according to age and sex in 2011

Fatal injuries are rare among children aged less than 15 years, but their number increases rapidly with age. The greatest number of fatal injuries occurs to men between the ages of 50 and 70 years, whereas the peak of fatal injuries among women is reached between the ages of 80 and 94 years (Figure 6). The mortality rate is higher among men than women in all age groups, being constantly around 1.5–5 times higher compared to women.

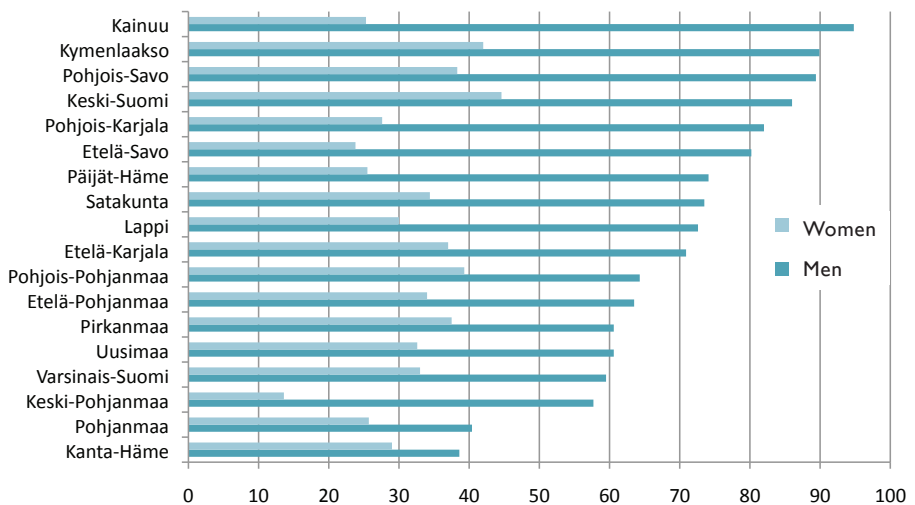


Figure 7. Standardized injury mortality rate per 100,000 inhabitants by province in 2011 (excluding the Åland Islands)

There are significant regional differences in injury mortality. Specifically, differences can be seen in men’s mortality: high mortality rates are mostly observed in Eastern and Northern Finland whereas lower mortality rates appear in Western and Southern Finland.

## HOSPITALISATIONS CAUSED BY UNINTENTIONAL INJURIES IN FINLAND

- *Injuries and poisonings cause more than 100,000 hospital treatment episodes and almost one million days in treatment annually.*
- *Injuries are the second most common cause of hospitalisation in treatment episodes in secondary care and the fourth most common cause of treatment episodes in primary health care compared to other disease groups.*
- *The number of hospitalisations is especially high in older women*
- *Estimating the number of unintentional injuries is dependent on whether injuries are documented at hospitals*

The biggest proportion of unintentional injuries demanding hospital inpatient treatment occur in everyday environments: home, sports or other leisure activities. More than half of the injuries demanding hospitalisation are due to falls. Ageing, intoxication and poor functional capacity are factors increasing the risk of injury. Men suffer somewhat higher numbers of injuries leading to hospitalisation than women.

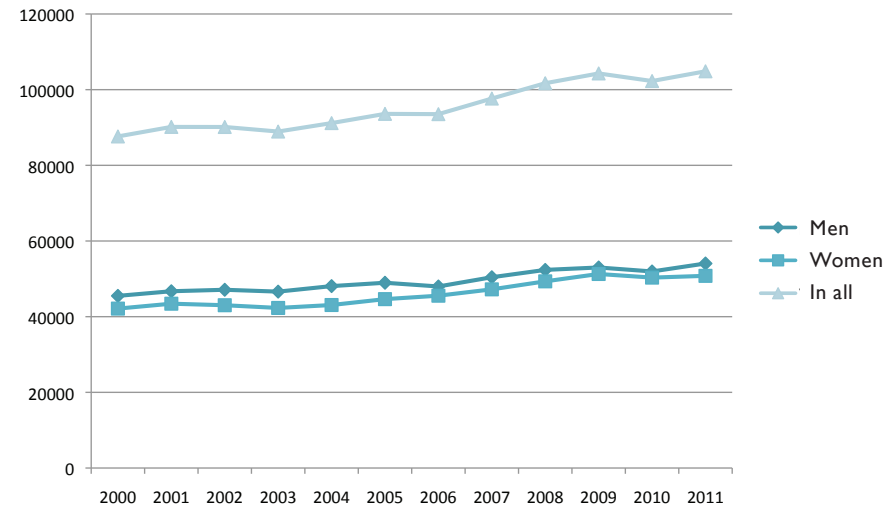


Figure 8. The number of individuals treated in hospitals as a result of an injury in 2000-2011

Approximately 80,000 people per year are hospitalised for unintentional injuries and treated in more than 100,000 hospital treatment episodes (Figure 8). The number of hospital treatment episodes increased continuously from 2003 to 2009, during which time the amount of treatment increased by 10,000 episodes. The number of hospital treatment episodes started to decrease in 2010. Even though the hospital treatment episodes have become shorter and the total number of days spent in the hospital has declined, injuries still cause almost one million hospital treatment days annually.

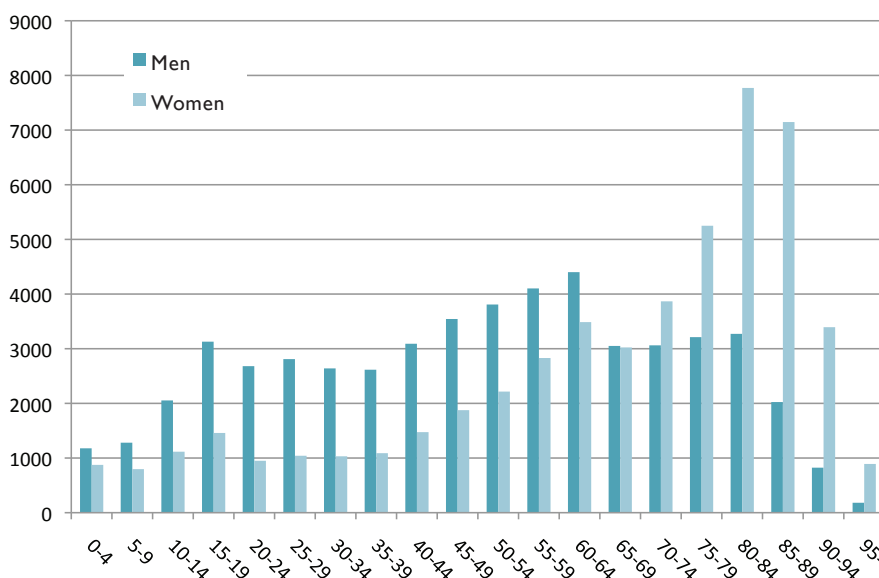


Figure 9. Injury hospitalisations according to the patients' age and sex in 2011

The number of serious injuries is almost the same among men and women. However, the stage of life when unintentional injuries occur differs among men and women, and the injury rates vary across age groups. More serious injuries occur to men than women until the age of 70 (Figure 9). The numbers of injuries increase in males aged 15 to 19 and again towards the age of 60 years. The number of serious injuries experienced by women in the older age groups is bigger than among men, which is mostly due to the larger number of women in these age groups. However, the risk of injuries increases steeply in older age groups among both sexes.

There are significant regional differences when examining the number of unintentional injuries demanding hospitalisation. However, there is need to be cautious when analysing the results. While the external cause leading to injury is always reported in regard to injury deaths, in regard to injuries

demanding hospitalisation the external cause is not always recorded in the patient data registers. In that case it is impossible to identify the event which caused the injury. It is, however, possible to compare reliably the numbers of injuries demanding hospitalisations according to their actual medical diagnosis which is recorded nearly always. As most of the injuries are due to accidents, the number of injuries also represents the number of accidents. In 2010, the highest incidence of injuries demanding inpatient treatment (approximately 3000 treatment episodes per 100,000 inhabitants) occurred in Lapland and Northern Ostrobothnia. The Uusimaa province and Åland Islands had the lowest incidence of injuries demanding inpatient hospitalisation (approximately 2200 treatment episodes per 100,000 inhabitants). In 2010, there was least missing data on external causes leading to hospitalisation (less than 5 %) in Southern and Middle Ostrobothnia and Central Finland.

Regions reporting least data on external causes leading to injuries included Northern Karelia, Åland and the Satakunta province, where the missing data accounted for 46%, 30% and 23%. Accordingly, it is difficult to estimate the exact number of unintentional injuries in these provinces.

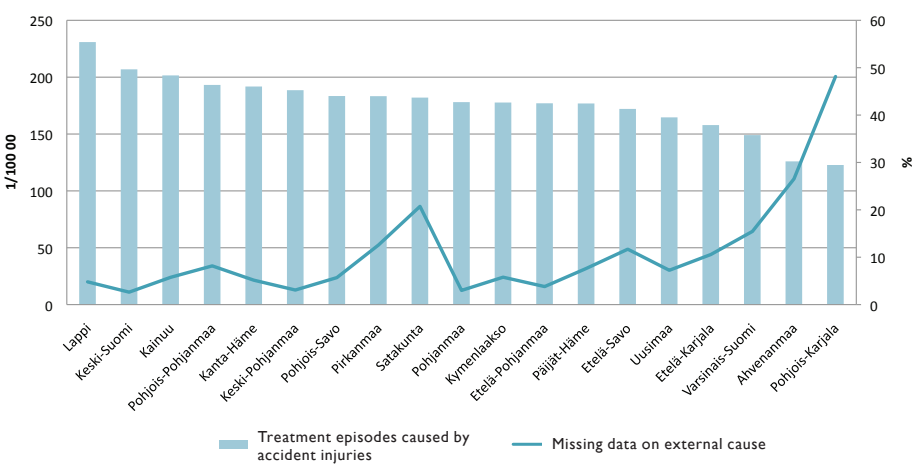


Figure 10. Accidents leading to inpatient treatment in different provinces and proportion (%) of missing data on the external causes of hospitalisation in 2011

## UNINTENTIONAL INJURIES LEADING TO MILD INJURIES

- *Finns experience more than one million unintentional injuries annually when including mild injuries*
- *72 % of unintentional injuries occur in home and leisure*
- *Injuries at home and in sports are the leading causes of unintentional injuries*
- *Mild unintentional injuries treated at home and individual hospital admissions are not necessarily registered in the statistics. Information on such injuries is collected by surveys.*

The cause of death statistics and hospitals' care registers encompass only the most serious injuries. The National Victimization Survey, conducted altogether seven times between the years 1980-2009, has gathered data on mild injuries and injuries that are not included in the registers. Unlike statistics on serious injuries, the National Victimization Survey provides a different kind of picture of the injury problem because mild unintentional injuries due to bruises, cuts or sprains occur to different population in different environments compared to serious injuries.

Finns experienced approximately 1,100,000 unintentional injuries in 2009. Home and leisure time injuries accounted for 72 % of all unintentional injuries. Traffic accidents accounted for 7% and occupational accidents for 21 % of all unintentional injuries. 53 % of the injuries occurred to men and 47 % to women.

Table 1: Accident events which have led to physical disability

Accident type	Accidents
Sports injuries	348 000
Home injuries	321 000
Occupational accidents	230 000
Other accidents	123 000
Traffic accidents	74 000
All	1 096 000

A closer examination of the types of injuries indicates the occurrence of different types of injuries among the sexes. Occupational accidents and sports injuries are more common among men (62 % and 61 %), whereas the majority of home and other leisure injuries (55 % and 66 %) occurred to women.

There were also differences in injuries among different age groups, for example, younger age groups experienced the highest levels of sports injuries and traffic accidents. Annually, over 400,000 visits to doctors were due to unintentional injuries. The total number of unintentional injuries has remained high all through the 2000s.

According to the survey conducted in 2009, 321,000 unintentional injuries in home occurred during the year for population aged 15 years and older. This accounts for 29 % of all the unintentional injuries. 270,000 people were victims of home injuries which accounts for approximately 6.4 % of the population aged 15 years or older. The number of home injuries has almost doubled during the past 25 years, since the first Victimization Survey. Activities most commonly leading to injuries included preparing food, different maintenance and repair works and other moving around at home.

Table 2: Activities leading to home injuries

Activity leading to injury	Injuries
Cooking	65 000
Maintenance, repair and construction work outdoors	50 000
Heating, maintenance and repair work indoors	29 000
Cleaning, laundry, clothing maintenance	23 000
Hobbies	19 000
Sauna and personal hygiene	18 000
Other moving around at home	63 000
Other past time activities	54 000

Sports injuries are evidently the most common type of unintentional injuries. Finns aged 15 years and older experienced almost 350,000 sports injuries, which accounted for 32 % of all the unintentional injuries. Males experienced 62 % of the sports injuries. The total number of sports injuries has increased by approximately 1.5 times since the first Victimization Surveys during the 1980s.

During 2009, the population aged 15 years and older experienced approximately 230,000 occupational accidents (i.e. injuries at work, injuries on the way to work or injuries during employment at home). Males experienced 62 % of the occupational accidents, whereas 38 % of this type of accidents occurred to females. Since the year 2000, the number of women’s occupational accidents has been 10 %-points higher than in the previous surveys.

## ALCOHOL AND INJURIES

- *A little less than every third fatal injury occurs under the influence of alcohol*
- *Half of the alcohol-related fatal injuries are due to poisonings and half are due to other injuries*
- *Approximately half of the patients admitted to emergency departments during the weekend nights are under the influence of alcohol*
- *Alcohol-related fatal injuries increased directly after cutting the tax on alcohol, following a decrease in deaths after a few years due to tax increases*

Almost every third fatal injury occurs under the influence of alcohol. Approximately half of these injuries are alcohol poisonings and the other half are due to other kind of alcohol-related injuries. The incidence of alcohol-related injuries is substantially higher among men than among women. The number of alcohol-related fatal injuries increased in particular after cutting the alcohol tax in 2004, which resulted in an increase in alcohol poisonings by 100 to 150 cases per year. The fatal injuries due to other injuries also increased by 50 cases annually but decreased shortly after. Between the years 2008 and 2011, the situation has however improved and the number of fatal injuries due to poisonings has decreased. The changes in numbers have been more pronounced among men: approximately 300 deaths less occurred during 2011 in comparison to 2006. The relative changes among women have also been considerable as the number of alcohol poisonings among women was almost halved during this period.

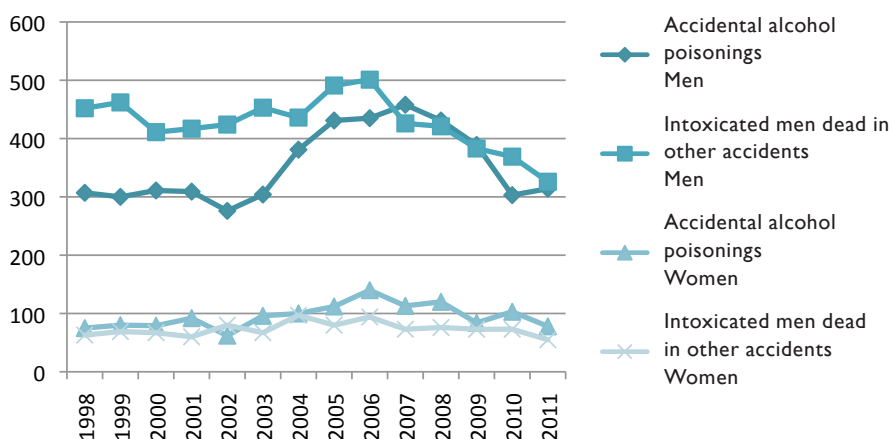


Figure II. Alcohol-related fatal injuries among men and women in 1998 to 2011.



Figure 12. Alcohol consumption per capita and alcohol related injury deaths between 1998 and 2011.

The incidence of alcohol-related deaths tends to vary between different age-groups. Alcohol-related injury deaths are rare among children under the age of 15 but as the consumption of alcohol increases with the age so do deaths. The highest number of alcohol-related injury deaths occurs around the ages from 45 to 64 years. -The incidence of all other alcohol-related injuries than poisonings remains quite stable across the age groups. Fatal alcohol poisonings occur rarely to population under the age of thirty years. The majority of fatal alcohol poisonings occur to population aged 45 to 64 years, and more than half of their accidental deaths are alcohol-related.

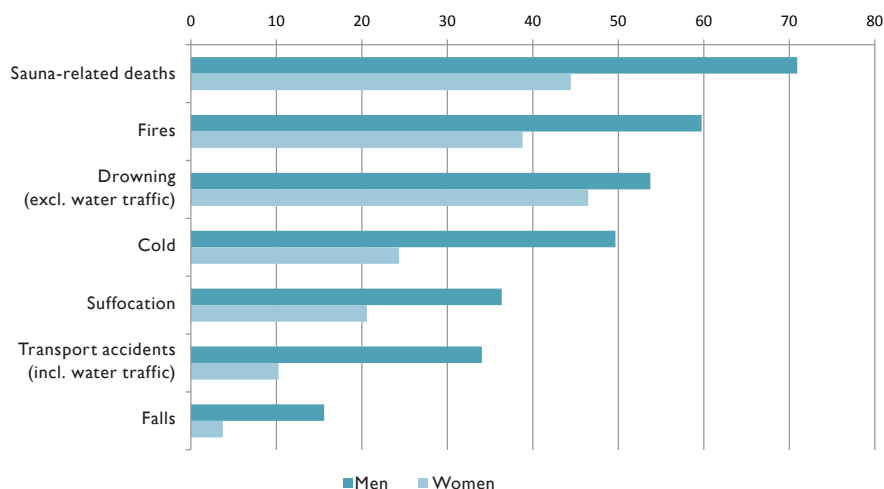


Figure 13. Percentage of intoxicated persons in fatalities from some types of accidents in 2009-2011.

## FALLS

- *Falling and tumbling cause one third of unintentional injury deaths and almost half of the injuries resulting in hospitalisation*
- *The risk of falling increases and its consequences are more serious in older people*
- *Fall-related deaths of women above 75 years of age account for more than half of all unintentional injury deaths among women*

Falls are the leading cause of unintentional injury deaths and hospitalisations. In statistics falls on the level are difficult to separate from the falls from high levels. Most of these cases however refer to falls on the same level (i.e. floor, street) or falling down from low level, less than one meter high, to another (e.g. bed). The proportion of falls from high level is relatively low compared to the proportion of falls on the same level. From now on all these cases will be referred to as falls.

Even more than every third unintentional injury death and half of the injuries resulting in inpatient treatment are due falls. Annually, falls are responsible for between 600 and 700 deaths among men and between 500 and 600 deaths among women. Older age groups experience the highest numbers of fall-related injury deaths. The number of fall-related fatal injuries increases among men from the age of 40 years onwards, whereas women's fall-related fatal injuries mostly occur in older age groups. Among women, 93 % of all fall-related deaths occur after the age of 75, while in men 65 % of fall-related deaths occur after this age.

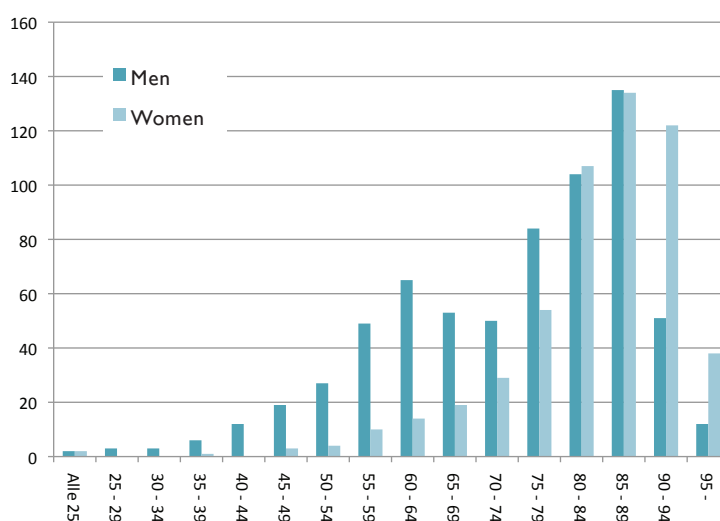


Figure 14. Deaths due to falls by age and sex in 2011

In 2010, 67,000 hospitalisations were caused by falls. More than half of these occurred to women. Hospitalisations have increased by 10 % since the year 2000, which is mainly due to the greater number of hospitalisations among women. Approximately half of the treatment episodes due to falls occur to people over 70 years. Half of the treatment episodes occur to population aged over 55 years for men and 75 years and older for women.

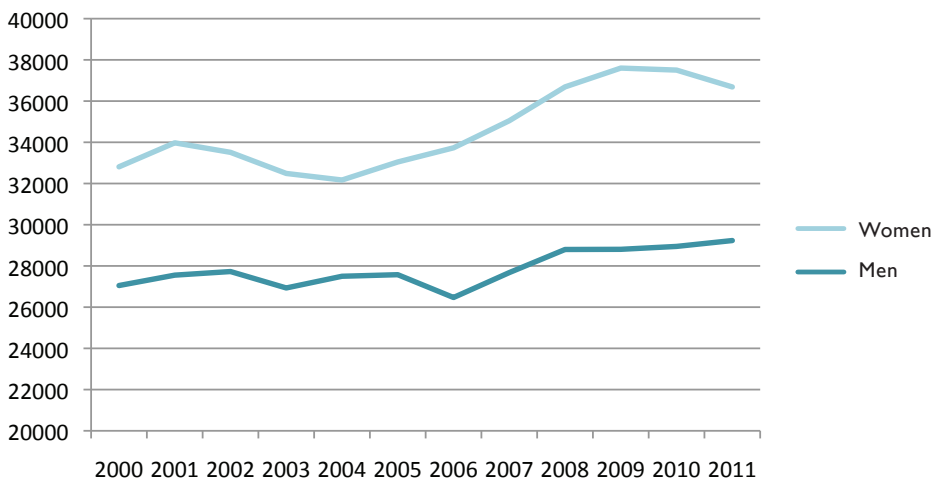


Figure 15.Treatment periods due to falls by sex in 2000–2011

## UNINTENTIONAL INJURIES AMONG CHILDREN AND YOUTH

- *In recent decades, unintentional injury deaths among children under 15 have decreased substantially*
- *Unintentional injuries are the leading cause of death among children and adolescents*
- *Especially traffic accidents and poisonings cause many deaths among adolescents*

Accidents and other external causes (e.g. intentional self-harm, homicides and events of undetermined intent) are the leading causes of death among children and youth after the first year after birth (Figure 14). Among children and adolescents the proportion of fatal injuries of all deaths is bigger than in other age groups since the overall mortality among children and adolescents

is low. The highest rates of unintentional injury deaths occur in both sexes at the age of 15–19 years; at that age 47 % of all deaths among males and 35 % among females are due to unintentional injuries.

While injuries are the cause of one third of all mortality, the proportion of suicides increases rapidly among adolescent at the age of 15–24. More than 75 % of all deaths are caused by external causes among youths aged 15–24 years.

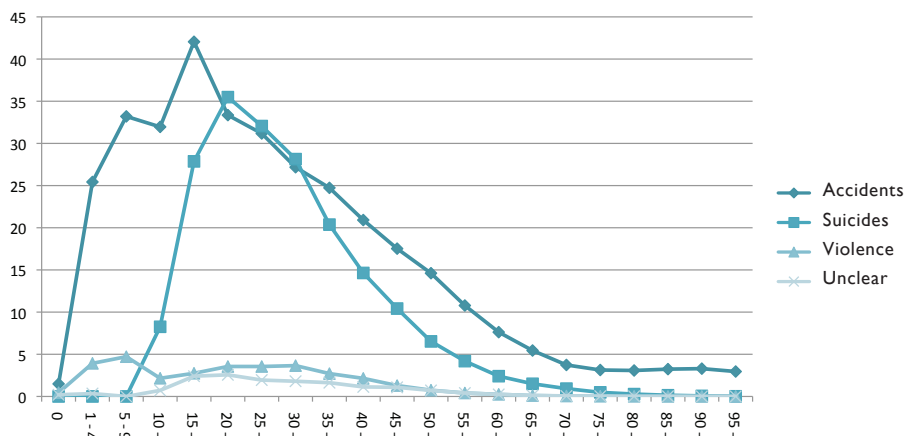


Figure 16. Proportion (%) of external causes of death by 5 years age groups

The most common types of accidents leading to death among children aged less than 15 years are traffic accidents, drownings and other suffocations and strangulations. Among 15–24-year-old adolescents the most common types of fatal injuries are traffic accidents and poisonings. The major proportion (87 %) of fatal injuries before the age of 25 years occurs among adolescents aged 15–24 years. Nevertheless, unintentional injury deaths among children under the age of 15 have decreased clearly during the first decade of the 2000s.

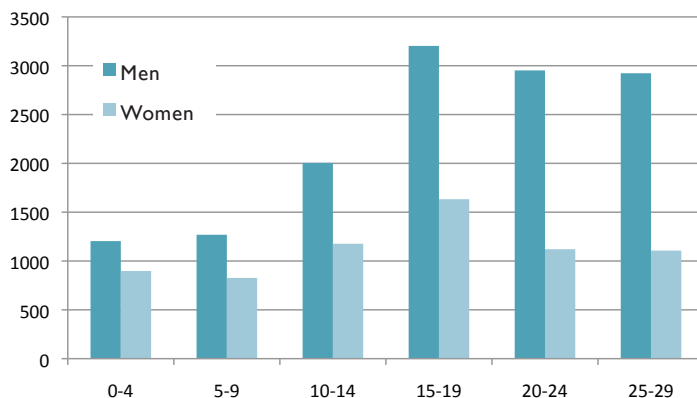


Figure 17. Injuries and poisonings leading to hospitalisation among under 35-year-olds by sex in 2011

There has not been any significant change during the last 10 years among children and adolescents considering the number of hospitalisations due to unintentional injuries. Injuries leading to hospitalisation are most often caused by falls. Traffic accidents are the second most common reason for hospitalisation among children and adolescents above seven years. The second most common cause of hospitalisation among children under seven years is injuries due to inanimate mechanical energy (such as colliding), injuries due to scalding and contact with hot objects. Half of the injuries that are treated in inpatient care occur to children under school age in the home environment, and even 70% of the injuries occurring to children under the age of three. As children grow up they start to spend more time in different kind of environments. The highest number of injuries requiring inpatient treatment among primary school aged children and older adolescents are experienced in leisure time, outside home.

## SUICIDES AND VIOLENCE

- *Almost one thousand people die as a result of suicides annually even though the number of suicides has been decreasing over the past 20 years*
- *Alcohol and drugs are often involved in suicides, homicides and deaths of undetermined causes*

In addition to unintentional injuries, more than one thousand people die annually as a result of other external causes. Suicides are the leading cause of these deaths, due to which almost one thousand persons die every year. The number has decreased significantly for the last ten years while suicide deaths have decreased by almost 200 cases annually. Around one hundred people die every year as a victim of homicide. In around one hundred deaths every year it is not possible to reliably determine whether the death was unintentional or intentional. The number of cases of undetermined intent has remained roughly the same during the last years. In homicides the victim was intoxicated in half of the cases. In suicides the victim was intoxicated in every fourth case.

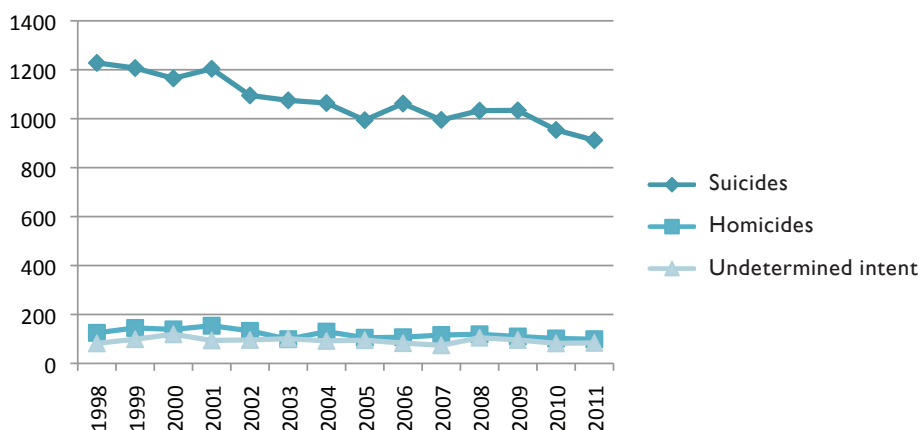


Figure 18. Suicides, homicides and undetermined intent deaths in 1998–2010.

Suicides are three times as common among men as among women, and the number of suicides is higher for men than women in all 5 years age groups.

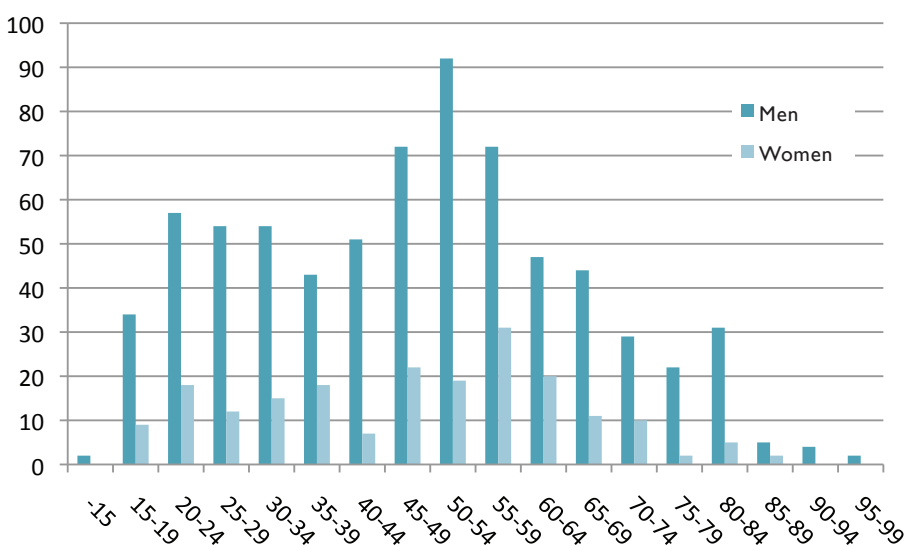


Figure 19. Suicides by age and sex in 2011

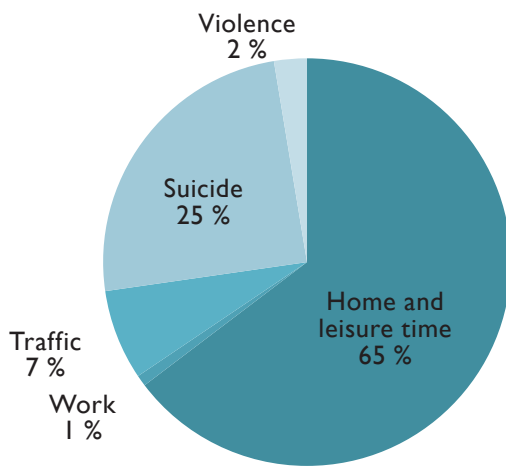


Figure 20. Accidental and violence-related deaths in 2009–2011 by cause.

## APPENDIX 3. Costs

The costs of accidents, both direct and indirect ones, amount to millions of euros. The direct costs of accidents refer to the costs that add to the workload of or cause a financial loss to some party. They include the medical treatment of injuries, the work of the police and rescue services, compensation paid out because of injuries and funds spent on work to prevent accidents. Indirect costs of accidents, on the other hand, refer to potential financial losses caused by the accident that do not at the time require money or a work input. For example, a death caused by an injury results in indirect costs in that the person's work input is no longer available, which translates as a loss of production.

### Inpatient treatment and outpatient surgery

In 2011, injuries and poisonings requiring overnight hospitalisation or outpatient surgery were diagnosed in connection with 146,000 hospital treatment episodes. Of these episodes, 97,000 were in consequence of home and leisure accident injuries. In another 18,000 episodes, the diagnosis was an injury or a poisoning in which the origin or cause had not been recorded. Consequently, home and leisure accident injuries resulted in at minimum 97,000 and at maximum 115,000 treatment episodes in 2011. The total share of home and leisure accident injuries in all injuries and poisonings has been estimated at 64.1–75.5 % of all hospital treatment episodes, and this figure will be used as the basis for estimating the costs of home and leisure accident injuries below.

In 2011, the total cost of injuries and poisonings requiring hospitalisation was EUR 691 million. Home and leisure accident injuries accounted for EUR 453–532 million of this sum.

### Outpatient treatment

The cost of somatic outpatient treatment in specialised medical care was EUR 1,754 million in 2011. No accurate data on the costs of outpatient care by a certain diagnosis is available, and the cost calculation is based on the type and specialist field of the visit. Of the over six million specialised

care outpatient visits in 2010, 334,000 were the result of injuries and poisonings. If we further estimate the number of home and leisure accidents at 215,000–253,000, they would account for 3.4–4.0 % of all visits. The cost of home and leisure accidents based on their proportionate share would thus account for EUR 60–71 million in the costs of specialised care outpatient visits.

The costs of somatic outpatient treatment in primary health care (excl. dental care) totalled EUR 1,914 million in 2011. The causes of outpatient visits were recorded in a fraction of the cases only, which also means that the division of costs cannot be reliably estimated. Visits to health centres recorded at outpatient clinics in 2011 amounted to over 11 million, while the reason for the visit was only recorded for 3 million visits. Of these 3 million visits, the reason for 287,000 visits was an injury or a poisoning, representing some 2.6 % of all visits and 10 % of all recorded visits. The share of home and leisure accident injuries would thus be 184,000–217,000 visits, or at minimum 1.6 % and at maximum 7.4% of the visits. Consequently, the share of home and leisure accident injuries would thus be EUR 31–142 million of the costs of outpatient primary care.

The costs of home and leisure accident injuries treated in outpatient care totalled EUR 91–213 million in 2011.

## Sickness allowance

The Social Insurance Institution (KELA) pays out sickness allowance to compensate for the lack of earnings caused by a disability lasting for less than a year. The reasons for the disability are recorded at the level of main diagnosis, allowing for periods of disability caused by injuries and poisoning to be singled out. Every year, some 50,000 –55,000 people receive sickness allowance due to injuries and poisonings. The number of lost working days is approx. 2,000,000 annually, corresponding to some 5,500 person-years. The cost of these working days is increasing each year; in 2012, the figure was EUR 134 million.

The Social Insurance Institution's reports specify the medical diagnosis that caused the disability, for example an injury or a poisoning, but not the external causes of the injuries and poisonings. If we assume that the division of causes is the same as for hospitalisations, home and leisure accident injuries account for 64–76 % of sickness allowances paid out. Consequently, the cost of sickness allowances paid out due to home and leisure accidents was EUR 86–101 million in 2011.

## Disability pensions and benefits

If an illness results in a short-term disability of less than 300 working days, the compensation is paid as sickness allowance. After the period for sickness allowance expires, the person may apply for a disability pension for the subsequent period. Similarly to sickness allowance, disability pensions are also recorded in the statistics by the main diagnosis that caused the retirement. Every year, a disability pension due to an injury or a poisoning is paid to some 5,500 – 5,600 persons. The cost of these pensions is some EUR 21–22 million a year, representing approx. 3 % of all disability pensions. The most common reason for receiving a disability pension is a head injury.

In addition to the disability pension, the Social Insurance Institution pays disability benefits to persons with long-term illnesses or disabilities to support independent life and rehabilitation. These include disability allowances for children and adults and a care allowance for pensioners. Disability allowance for an adult or a child is paid to some 300 people in total, whereas over 6,000 persons are receiving a care allowance for pensioners. Slightly less than one million euros of disability allowance, and some EUR 11 million of care allowance for pensioners are paid out each year, and these allowance forms account for almost 3 % of all disability benefits. The most common injury-related reasons for receiving a care allowance for a pensioner are a fractured hip and a head injury.

Disability pensions and benefits paid out in 2012 totalled EUR 33 million. The estimated share of home and leisure accidents in this figure is approx. EUR 21–25 million.

## Rescue services

The duties of the rescue services include not only putting out fires but also many tasks related to accidents, rescuing and executive assistance. Operative activities that can be categorised as home and leisure accidents may include putting out fires in buildings and elsewhere, preventing fire risks in buildings, and rescue and emergency response missions. The operative activities of the rescue services only account for a part of the costs, however, as maintaining preparedness is a major cost item. Every year, the rescue services complete some 100,000 operative missions. Estimated by accident type, approx. 11% of these are believed to involve home and leisure accidents.

In 2011, the rescue services' budget for the item 'Rescue, accident prevention and preparedness' was EUR 384 million. A share of 11% of these costs would be EUR 42 million, if we assume that this share accounts for home and leisure accidents and their prevention.

## Material losses

Varying criteria are applied to assessing the material losses caused by accidents. In case of a fire, the director of the rescue services subjectively estimates the extent of losses caused by the fire. In 2011, the material losses caused by fires categorised as home and leisure accidents were estimated at EUR 57.1 million for fires in buildings and EUR 1.6 million for other fires.

## Police activities

In their mission statement, the police say they stress *"...preventing and reducing the number of crimes, public order offences and accidents and safeguarding and improving our service capability. In addition, the police contribute to promoting positive attitudes towards safety and security and a safe living environment for the citizens."*

Even if the major part of police work related to accidents and injuries is in the field of traffic surveillance, it also includes preventing and investigating accidents. In case of serious accidents, the police may carry out an investigation to establish whether the incident was an accident or a deliberate act, and in case of an accident, questions of liability may also have to be addressed.

The police do not keep statistics on the share of accidents in their tasks, which makes it difficult to estimate the share of home and leisure accidents in their total workload and costs. In a study of the costs of accidents from 2003, it was estimated that 5–10 % of the costs related to public order, safety and security and emergency response duties in police activities were relevant to home and leisure accidents or their prevention, equalling EUR 11.6–23.1 million. Similarly, the cost of surveillance and emergency response activities carried out by the police in 2011 was EUR 320.6 million. If we assume that the share of home and leisure accidents is 5–10 %, the police incurred costs amounting to EUR 16.0–32.1 million as a result of these accidents.

## Costs of fatalities

When a person dies, his or her current and potential future work input are no longer available. If we limit the examination of the work input to one year, the impact of accidental deaths is not particularly great. We must remember, however, that the impact on future years is cumulative, as the person's entire future work input is unavailable. Accident injuries are a significant cause of death in young age groups in particular, and these injuries thus result in great losses of future working years.

This calculation treats persons aged 15–64 as potential labour force and assumes that the loss of person-years concerns this age range. Any period of study or unemployment, retirement or disability are taken into account by using the employment rate of the age group in question as a coefficient for the person-years. The share of the employed in the age group 15–64 years in Finland is some 70 %. The lost person-years are calculated by taking the losses caused by deaths of persons aged 15–64 during the year and multiplying this figure by the employment rate of the relevant age group. The loss of production figure is obtained by multiplying the person-years calculated above by the labour costs of a single employee incurred by the employer.

In 2011, a total of 2,447 persons lost their lives in home and leisure accidents. The number of potential person-years lost was 17,587. Estimated by the average deflated labour costs, the financial losses were EUR 442 million. Even if these costs are only incurred by the year 2076, we must take into account the fact that in 2011, the loss of work input caused by accidental deaths in previous years will already have materialised.

## Summary: total costs

In total, the direct costs of home and leisure accident injuries were estimated at EUR 769–1,004 million a year. The greatest costs are incurred for hospital treatment episodes, i.e. hospitalisation and outpatient surgery. In indirect costs was included the loss of work input caused by deaths, which was estimated at EUR 442 million a year. No other monetary value was imputed to fatalities. The total costs were estimated to be EUR 1.2–1.4 billion.

	Estimated costs, EUR million	
	Minimum	Maximum
<b>Total</b>	1211,0	1446,1
<b>Total of direct costs</b>	<b>769,1</b>	<b>1004,2</b>
Treatment in an inpatient ward	453,3	532,0
Outpatient treatment		
- specialised medical care	60,2	70,8
- primary health care	31,3	142,0
Sickness allowance	85,9	101,2
Pensions and benefits	21,3	25,1
Rescue services	42,2	42,2
- material losses	58,8	58,8
Police activities	16,0	32,1
<b>Total of indirect costs</b>	<b>441,9</b>	<b>441,9</b>
Loss of production due to death	441,9	441,9

We should note that different formula for calculating the value of a lost life (other than the concrete loss of production) have also been developed. Calculations of this kind are problematic, however, as the values are not based on actual financial losses. A few different examinations are discussed below where the value of a lost life per se is taken into account.

## Funds spent on accident prevention

It is difficult to set down a clear-cut definition of work aiming to reduce the number of home and leisure accident injuries. In a broad sense, many different parties carry out work to prevent accidents, but the total of funds directly earmarked for preventing home and leisure accidents has been estimated at some EUR 1.0–1.2 million a year.

## Comparison with other studies of costs

### *Costs of accident injuries in 2001*

A previous study looking at the costs of accident injuries in 2001 was drawn up in 2003. The estimated cost structure of injuries was divided into direct and indirect costs similarly to this report. The direct costs in 2001 were estimated at EUR 460–549 million, which was EUR 308–396 million less than in this report. The value of lost production was put at EUR 236–262 million, which was EUR 200 million less than in this report. The greatest differences between the two studies lie in estimating the theoretical value of a lost life; a decision was made to exclude this value in the present study. In 2001, these costs were estimated to be EUR 1.8–3.2 billion, which figure was not included in the present study. If we include these costs, we can theoretically assume that the costs in 2011 were EUR 3.0–5.6 billion.

### *Costs of road accidents*

The Finnish Transport Agency produces an annual estimate of the costs of personal injuries caused by road accidents. The costs of the accidents have been calculated by a method based on amounts paid by society. The costs of a fatality were estimated to be EUR 2.4 million, and those of an accident resulting in injuries EUR 351,000 on average. The costs incurred from road accidents resulting in personal injuries in 2010 totalled some EUR 1.6 billion, of which the share of fatalities was EUR 0.5 billion.

If we apply the same method to deaths caused by home and leisure accident injuries in 2011, the cost of accidental deaths alone is EUR 5.7 billion a year, which cannot be considered a realistic estimate. In this case, the total costs of home and leisure accidents would be EUR 6.9–7.1 billion, which would mainly consist of the value of lost lives.

### *Cost of cancers*

In a study that assessed the costs of cancer diseases, it was calculated that costs totalling EUR 528 million were incurred for cancers in 2004. The cost estimate for 2015 varied from EUR 850 – 1,556 million depending on the assessment. The figures for the costs incurred for cancers did not contain the potential losses of production due to deaths.

### *Costs of harmful effects caused by alcohol and drugs use*

The costs of the harmful effects of alcohol in 2010 were estimated at EUR 1.2–1.4 billion, and those of drugs at EUR 325–380 billion. These figures also include costs of accidents.

The author of the sections on statistics and costs in Appendixes 2 and 3 was Senior Expert Antti Impinen from the National Institute for Health and Welfare.

## APPENDIX 4. Structure of home and leisure accident injury prevention

As home and leisure accident injuries are diverse and their area is extensive, their prevention is also relevant to many sectors. Accident prevention plays a role in promoting both safety and health. Even if the interfaces are multiple, there are few persons working in a full-time and permanent employment relationship in this sector. The problem lies in the fact that there is no permanent organisation to coordinate and implement accident prevention in the sector, nor funding for such an organisation. Other fields of accident prevention, including road safety and occupational safety, have established and permanent organisations and funding mechanisms.

### 1. Central government

***The Ministry of Social Affairs and Health*** bears the main responsibility for developing the prevention of home and leisure accident injuries. The Ministry's Department for Promotion of Welfare and Health coordinates and directs the work to prevent accidents. The Ministry has appointed a coordination group for the prevention of home and leisure accident injuries to coordinate this work.

In 2004, a unit for the prevention of home and leisure accident injuries was set up in the National Public Health Institute in the administrative branch of the Ministry of Social Affairs and Health. This unit currently operates as part of the National Institute for Health and Welfare. Its task is to promote the health and well-being of Finns by preventing accidents and improving safety. For this purpose, the unit produces research-based information on the injury situation and effective methods for preventing accidents, and builds up the accident prevention competence of professionals.

The unit receives the majority of its funding as a yearly grant for health promotion from the Ministry of the Interior and the Ministry of Social Affairs and Health.

***The Ministry of the Interior*** directs and supervises the rescue services. The operations of the rescue services are divided into 22 regions. Voluntary fire brigades and fire brigades set up in plants and other facilities participate in rescue service tasks as stated in an agreement concluded with the regional services. The rescue services work together with other parties to prevent accidents. The Ministry coordinates the Internal Security Programme.

***The Ministry of the Environment*** is in charge of land use planning and developing and directing the construction sector. The Ministry promotes the quality of the living environment by means of legislation, research and development and by directing planning.

***The Ministry of Employment and the Economy*** deals with consumer safety issues. The safety of products and services is part of its remit. ***The Finnish Chemicals and Safety Agency Tukes*** working under the Ministry supervises operators and their compliance with legislation, thus ensuring that goods and services meet statutory requirements and do not pose a risk to the consumers' health and property. Tukes also discharges its tasks by playing an active role in communications and training and by taking part in developing regulations, standards and operating models applicable to its area of activity. Consumer products subject to Tukes' supervision include toys, electrical, pressure and gas devices, fireworks and chemicals.

***The Ministry of Transport and Communications'*** remit includes promoting transport safety. Of all aspects of transport, in particular questions related to pedestrians, cyclists and waterborne transport are the most relevant to home and leisure accident injuries. An advisory board on traffic safety, whose tasks include drawing up the national transport safety plan, operates in the Ministry's administrative branch. Parties in the Ministry's branch of administration working together to prevent accidents include, in particular, ***the Finnish Transport Safety Agency Trafi and the Finnish Meteorological Institute***.

Safety at home and in leisure time is also relevant to ***the Ministry of Education and Culture's*** remit, in particular as regards prevention of accidents at school and safety education and advice imparted by educational institutions (incl. safety culture, teaching, safety of the physical environment, activities of student welfare teams, health advice). The Ministry's area of activity also includes early childhood education and care issues.

***The Safety Investigation Authority*** that works in connection with the Ministry of Justice investigates accidents with the view of improving safety. The accidents investigated by the Authority are individual serious accidents occurring in various modes of transport or elsewhere that pose a threat to public safety. The safety investigations act also enables thematic investigations that, instead of an individual serious accident, focus on a series of separate accidents or injuries. For example, this principle has been applied to the investigation of fires causing fatalities and deaths by drowning. The next thematic investigation to be completed examines child deaths. An investigation report containing recommendations for improving safety is published on all investigations. The Accident Investigation Board monitors the implementation of its recommendations.

The main research area of the Accident and osteoporosis unit at the UKK Institute is accident injuries sustained at home, sports injuries and other leisure

time injuries, in particular falls sustained by older persons and osteoporotic fractures.

The research and expert activities of the *Tampere Research Centre of Sports Medicine* that is part of the UKK Institute focus on promoting the safety of sports. In 2006, the UKK Institute launched a national programme for preventing sports injuries (LiVE), which aims to plan and implement practical measures based on research for preventing sports injuries in Finland.

## Organisations

*The Finnish Society for Social and Health Soste* is the leader of the campaign to prevent home accident injuries. In this campaign, the participants prepare materials and organise training in extensive cooperation. Other organisations taking part in the cooperation are the *Finnish Association for Substance Abuse Prevention, the Finnish Association of People with Physical Disabilities, the Finnish National Rescue Association, Finnish Red Cross, the Finnish Swimming Teaching and Lifesaving Federation and the Federation of Finnish Financial Services. The Finnish Road Safety Council* promotes road safety and the safety of pedestrians.

## Regional and local work

The Regional State Administrative Agencies prepare and carry out internal security implementation plans at regional level. Road safety issues are in the remit of the Centres for Economic Development, Transport and the Environment. The prevention of home and leisure accidents is relevant to several departments of the Regional State Administrative Agencies. The main responsibility rests with the social affairs, health care and rescue departments.

Many sectors and actors are involved in local efforts to prevent home and leisure accident injuries, including the various municipal sectors, the police, NGOs, companies etc.

Preventing accidents is part of local safety and security planning and efforts to promote health and welfare. The Internal Security Programme promotes safety planning. Health promotion work is carried out pursuant to health care legislation.

All sectors, including care services for the elderly, schools, day-care centres and child health clinics, still display defective working methods and operating modes in terms of injury prevention. In a good safety culture, injury prevention is integrated in the organisation's quality and safety management.

The WHO's Safe Community operating model offers one way of organising large-scale local work to prevent accident injuries, promote safety and make sure of the practical implementation of these efforts. So far, Kouvola and Hyvinkää are the only Finnish cities that have adopted the WHO's Safe Community model.

The Finnish Chemicals and Safety Agency Tukes directs the work of the municipal supervisory units (or those in local government joint services areas) in supervising consumer services, including playgrounds, ski resorts, open air swimming areas, swimming pools and spas as part of environmental health care. The need for supervision in the supervisory units' areas is determined by the national supervision criteria of the central agency, which are based on the number of targets, the recommended inspection intervals and the duration of inspections. The extent of the supervision does not currently meet the calculated national needs.

## APPENDIX 5. Legislation relevant to home and leisure accidents

The Health Care Act (1326/2010) refers to preventing accident injuries as part of health promotion. The Act cites as one of its objectives health promotion, which means actions with a view to maintaining and improving health, work ability and functional capacity, influencing determinants of health, preventing illnesses, accident injuries, and other health problems, strengthening mental health, and reducing health inequalities between different population groups, as well as systematic targeting of resources in a manner that promotes better public health. The Act lays down a requirement of including the prevention of accident injuries in advisory services for older persons. The relevant Decree (388/2011) also contains provisions on making accident injury prevention part of advisory services provided for children and young people at child health clinics and in student health care services.

The Act on Supporting the Functional Capacity of the Older Population and on Social and Health Care Services for Older Persons (980/2012) contains the obligation of promoting the independent living of older persons by means of early intervention in deteriorating functional capacity and its risk factors.

The Rescue Act (2011) laid down more detailed requirements applicable to care institutions and service and supported housing in 2011. The Rescue Act was restructured to make the duties of various parties more clear-cut in the text of the act. The Rescue Act contains specific requirements for evacuation safety in care institutions and service and supported housing. A rescue plan must be drawn up for all care institutions and buildings used for service and supported housing.

The need for fire fighting equipment in institutions and service and supported housing is based on risk assessments carried out for individual sites. The authorities and other parties have the duty to engage in close cooperation to reduce the accident risk at particularly high-risk locations. These include supported housing units for substance abusers. The Rescue Act obliges the authorities and, for example, persons making home visits, to inform the rescue authorities of any fire or accident risks present in a building or a residence.

The purpose of legislation on product safety is to guarantee a high standard of technical safety. Specific acts of the relevant sector apply to many

consumer products; for example, the electrical safety act (410/1996) is applicable to electrical products, the safety of toys act (1154/2011) to toys etc. These are complemented by the consumer safety act (920/2011), which is applicable to a number of consumer products. The objective of the consumer safety legislation is to prevent health risks and damage to property caused by consumer goods and services. The legislation states that the primary duty to make sure that products and services are safe rests with the operator, for example the manufacturer and importer or the service provider. Supervisory activities by the authorities are risk-driven and based on random testing.

The objective of the legislative reform was to clarify consumer safety legislation provisions from the perspective of both operators and the authorities. The main principles of the previous act were preserved in the new one: the operator is responsible for the safety of products and services. The consumer safety act remains valid as a complementary and secondary general act.

In the National Building Code of Finland, the Ministry of the Environment issues regulations and guidelines that complement the Land Use Act and the Building Act, for example as regards durability of structures, structural fire safety and user safety of buildings.

## APPENDIX 6. Programmes to prevent home and leisure accident injuries

The Advisory Body on the Prevention of Home and Leisure Accident Injuries appointed by the Ministry of Social Affairs and Health (for 2003–2005 and 2006–2008) drew up the previous target programme for home and leisure accident injury prevention for the years 2007–2012. This programme contained national targets and recommended actions to prevent home and leisure accident injuries.

It complemented the Government's Internal Security Programme by specifying the content-related objectives and recommended actions in the field of home and leisure accident injuries in greater detail. As a general target consistent with the Internal Security Programme for the prevention of home and leisure accidents was set making Finland the safest country in Europe by 2015. The programme also supported the implementation of the Health 2015 public health programme. The coordination group for the prevention of home and leisure injury accidents appointed in 2012 proceeded to monitor and assess the implementation of the target programme.

A Government Resolution on the third Internal Security Programme was issued, and the third Internal Security Programme was adopted on 14 June 2012. The most important objectives of this programme are reducing safety problems caused by alcohol, providing young people a safe environment in which to grow up, improving the safety of older persons and developing services for victims of crime. The programme contains 64 measures.

One key everyday safety challenge that this programme responds to is reducing the number of home and leisure accident injuries, the losses of health and well-being and the great costs incurred by the society for them. Injury prevention is particularly relevant to actions that improve residents' possibilities of taking part in work that improves the safety and comfort of their living area and promotes the safety of built environment.

The Regional State Administrative Agencies have prepared their own Internal Security Programme implementation plans at regional level.

As part of the Internal Security Programme, safety and security programmes for cities and for older people have been prepared, which also contain objectives and actions related to preventing home and leisure accident injuries.

The National Institute for Health and Welfare coordinates the implementation of a national programme to prevent accident injuries to children

and young people (2009), which was prepared in cooperation with the Ministry of Social Affairs and Health. This programme contains long-term targets and recommendations for measures for reducing key types of health losses caused by injuries, for making the work to prevent accidents in various growth environments more effective, as well as recommendations related to monitoring accidents, research and building up the competence of professionals. The programme supports the implementation of the Target programme for the prevention of home and leisure accident injuries.

The National Strategy for Walking and Cycling 2020 also supports the prevention of accidents, as the programme aims to reduce the deaths of cyclists and pedestrians by one half by the year 2020. There also is a specific programme to prevent injuries sustained by older persons in falls. The Alcohol Programme is an umbrella programme for cooperation between the central and local governments and organisations to reduce the harmful effects of alcohol use. The flagship theme of the Alcohol Programme in 2014 is "Alcohol, accidents and everyday safety".