

# Accidents at work in Finland in 2006

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Slightly more than 146,000 accidents at work occurred in Finland in 2006. Around 134,000 of these occurred to wage and salary earners and some 11,800 to self-employed persons (including farmers) (Table 1). The majority of all accidents at work, that is, slightly more than 127,300 of them, occurred at places of work or while in work traffic, whereas around 18,800 accidents at work occurred while commuting. These numbers include also minor accidents at work that led to disability lasting less than four days, and on which insurance companies paid compensation only for medical treatment expenses.

The number of accidents at work went up for the second consecutive year. In 2005 the number of accidents at work was slightly over 141,000, while in 2004 the respective number was slightly under 121,000. The main part of the increase in the number of accidents at work is due to the full-cost responsibility system of patient care which was taken into use in the beginning of 2005. Under this system, medical care facilities must always report the care of a victim of an accident at work to the insurance company. This amendment of legislation has pushed up the number of mild accidents at work resulting in less than four days' absence from work, a part of which previously remained unreported. Due to this change, the data for earlier years are not entirely comparable with the total data for 2005-2006. The effect of the renewal on wage and salary earners' accidents at work resulting in at least four days' absence from work, then again, was smaller.

Statistics Finland's occupational accident statistics have begun to define an accident at work according to the definition used in Eurostat's (the Statistical Office of the European Communities) European Statistics on Accidents at Work (ESAW). According to the definition the statistics contain data on accidents at work which have resulted in disability of at least 4 days. The majority of data included in this online publication are presented using this limit. The time series have been revised retroactively to correspond to the definition.

In 2006 a total of 71 persons died at their place or work or while commuting. Of these fatal accidents at work, 47 occurred to wage and salary earners, 5 to farmers and 2 to other self-employed persons. In addition, 17 fatal accidents occurred while commuting, of which 16 occurred to wage and salary earners and one to other self-employed persons. The number of fatal accidents at work fell clearly from the year before, as in 2005 a total of 99 persons suffered fatal accidents at work or while commuting.

The victims of all fatal accidents at work included 63 wage and salary earners, 5 farmers and 3 other self-employed persons.

**Table 1. Number of accidents at work of wage and salary earners, other self-employed persons and farmers by severity in 2006**

	Total	Accidents at work	Commuting accidents
Total	146 157	127 324	18 833
Less than 4 days	73 018	63 808	9 210
At least 4 days	73 068	63 462	9 606
Fatal accidents	71	54	17
Wage and salary earners	134 333	115 936	18 397
Less than 4 days	69 685	60 636	9 049
At least 4 days	64 585	55 253	9332
Fatal accidents	63	47	16
Self-employed persons	5 858	5 422	436
Less than 4 days	2 391	2 230	161
At least 4 days	3 464	3 190	274
Fatal accidents	3	2	1
Farmers	5 966	5 966	—
Less than 4 days	942	942	—
At least 4 days	5 019	5 019	—
Fatal accidents	5	5	—

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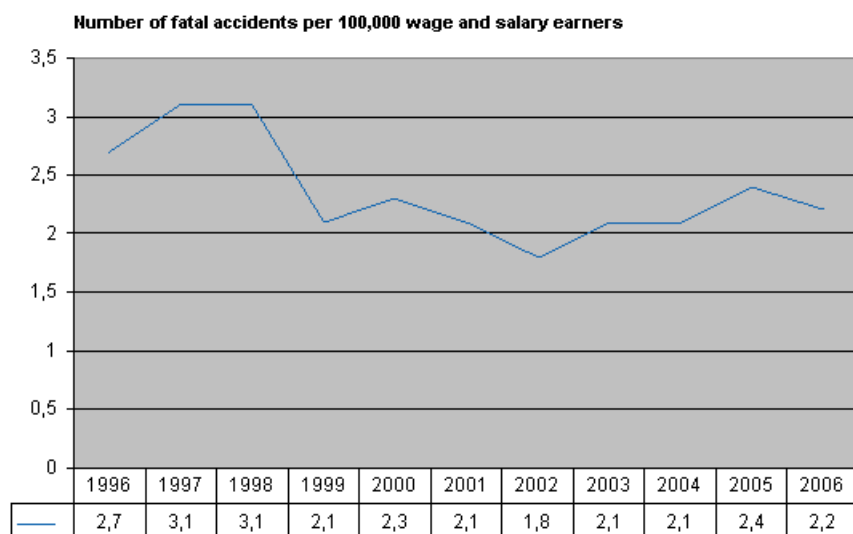
## Wage and salary earners' accidents at work

### The risk of fatal accidents at work fell slightly

A total of 47 fatal accidents at work occurred to wage and salary earners in 2006. The number of fatal accidents at work fell slightly from the year before, as in 2005 accidents at work resulted in the death of 51 wage and salary earners. It should be noted that accidents in work traffic cannot always be separated from commuting accidents when settling claims. Therefore, some of the accidents that occur in work traffic are recorded as commuting accidents. The number of accidents at work in traffic has decreased from the early 1990s. According to insurance data, five wage and salary earners suffered fatal accidents while in work traffic in 2006.

The risk of fatal accidents at work fell slightly. In 2006 an average of 2.2 per 100,000 wage and salary earners died in an accident at work (Figure 1). The respective figure was 2.4 in 2005. The difference between genders with regard to fatal accidents at work is still clear: of the 47 fatal accidents at work 43 occurred to men and only four to women. Fatal accidents at work were concentrated in certain industries: nearly two-thirds occurred either in the industries of manufacturing, construction, or transport, storage and communication (Appendix Table 2). The risk of deaths at work has been particularly high in the construction industry. However, the risk declined from 2005, since in 2006 there were 7.3 fatal accidents per 100,000 wage and salary earners in construction. One year earlier this accident incidence rate was 9.8. The risk of fatal accidents at work also decreased in the industry of transport, storage and communication, where an average of 8.1 fatal accidents occurred per 100,000 wage and salary earners. In 2005 this accident incidence rate was 10.0.

**Figure 1. Wage and salary earners' fatal accidents at work per 100,000 wage and salary earners in 1991-2006**

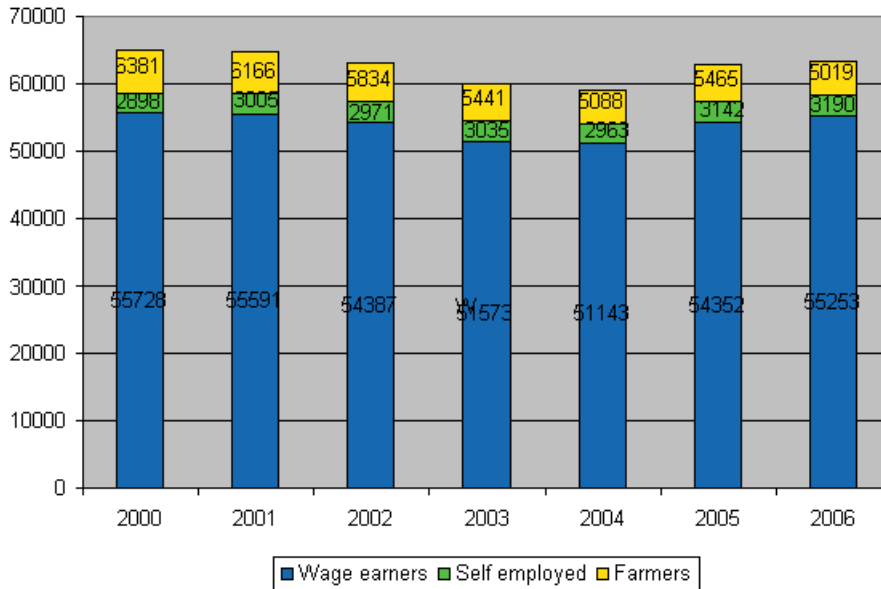


### Number of wage and salary earners' accidents at work grew slightly but the risk remained unchanged

The number of wage and salary earners' accidents at work was slightly higher in 2006 than one year previously. In 2006 wage and salary earners had 55,253 accidents at work causing disability of at least four days. This was 901 accidents more than in 2005. The number of accidents has increased from 2004, when there were 51,143 accidents at work causing disability of at least four days. Some of this may be explained by the aforementioned introduction of the full-cost responsibility system of patient care. Farmers' accidents at work decreased by over 400 from the year before, but the number of accidents suffered by other self-employed people increased slightly (Figure 2). It must, however, be noted that the accident insurance is voluntary for self-employed persons, so

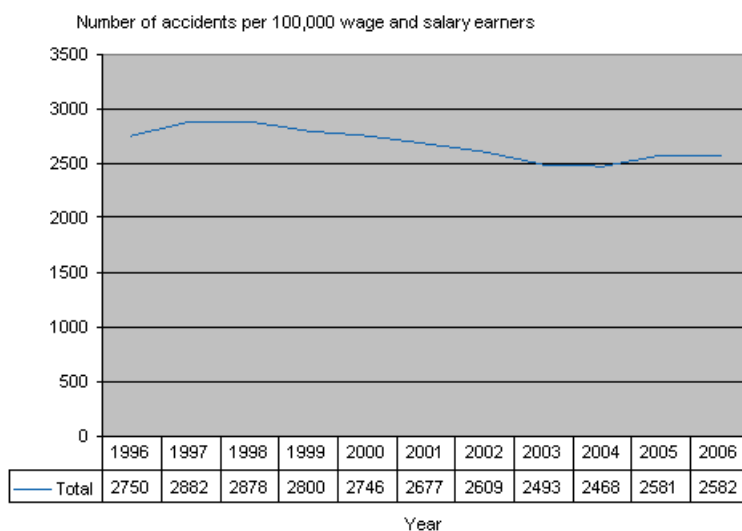
the number of accidents at work may also indicate the popularity of insurance among self-employed persons. Around 40 per cent of self-employed persons are insured against accidents at work.

**Figure 2. Changes in the number of accidents at work by status in employment in 2000-2006**



The risk of accidents at work has been falling among Finnish wage and salary earners since the late 1990s (Figure 3). This becomes evident when the number of accidents is expressed as a proportion of 100,000 wage and salary earners. The accident incidence rate fell by some 14 per cent between 1998 and 2004. The accident incidence rate showed a slight increase in 2005. In 2005 the number of accidents at work was 2,581 accidents per 100,000 wage and salary earners, which is some five per cent (4.6%) more than in the year before. In 2006 a total of 2,582 accidents at work occurred per 100,000 wage and salary earners. This means that in practice the increase in the accident incidence rate stopped (+0.04%).

**Figure 3. Wage and salary earners' accidents at work per 100,000 wage and salary earners in 1996-2006**



Accidents at work continue to be a problem among men: nearly three in four accidents at work (73.3%) occur to men. Men's risk of accidents at work has traditionally been clearly higher than that of women. Measured

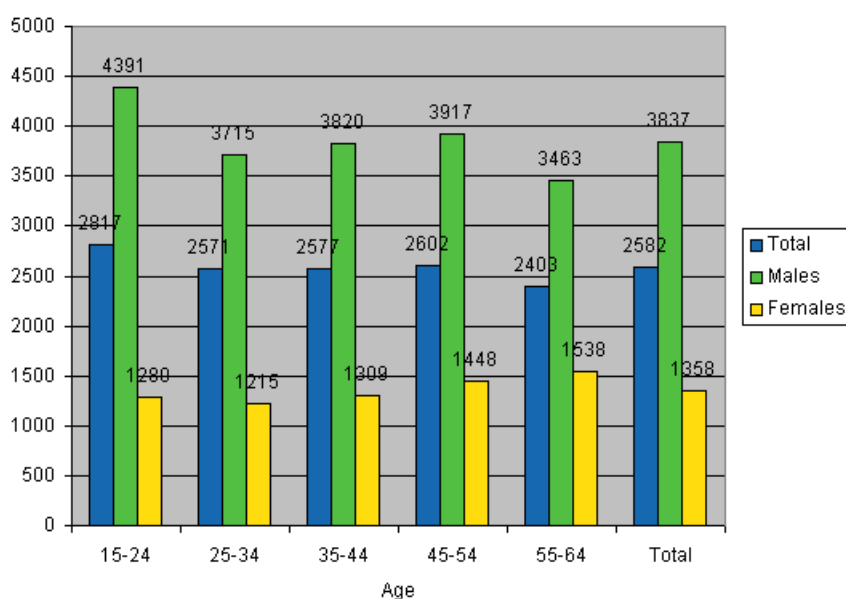
with the accident incidence rate, men’s risk of suffering accidents at work is more than 2.5-fold when compared to women. The key reason for this is that more men than women work in industries and have jobs with a higher than average risk of accidents at work.

**Table 2. Wage and salary earners’ accidents at work by gender and age in 2006**

Age	Total		Males		Females	
	N	%	N	%	N	%
<b>Total</b>	<b>55 253</b>	<b>100</b>	<b>40 479</b>	<b>100</b>	<b>14 774</b>	<b>100</b>
15–24	7 414	13,4	5 671	14,0	1 743	11,8
25–34	12 066	21,8	9 451	23,3	2 615	17,7
35–44	13 676	24,8	10 228	25,3	3 448	23,3
45–54	14 221	25,7	10 002	24,7	4 219	28,6
55–64	7 676	13,9	4 970	12,3	2 706	18,3
Others	200	0,4	157	0,4	43	0,3

Men's risk of accidents at work is highest among the youngest age group (aged 15 to 24). In 2006 young men had 4,391 accidents at work resulting in at least four days’ absence from work per 100,000 wage and salary earners (Figure 4). This meant that the risk measured with the accident incidence rate was 14 per cent higher than the average for wage and salary earner men. The risk lowers steadily with increasing age. Unlike for men, women's risk of accidents is the highest among the oldest age group, that is, the 55 to 64-year-olds. Differences between age groups are, however, fairly small. The picture of the accidents at work situation by gender given by the accident incidence rate has remained nearly stable from one year to the next.

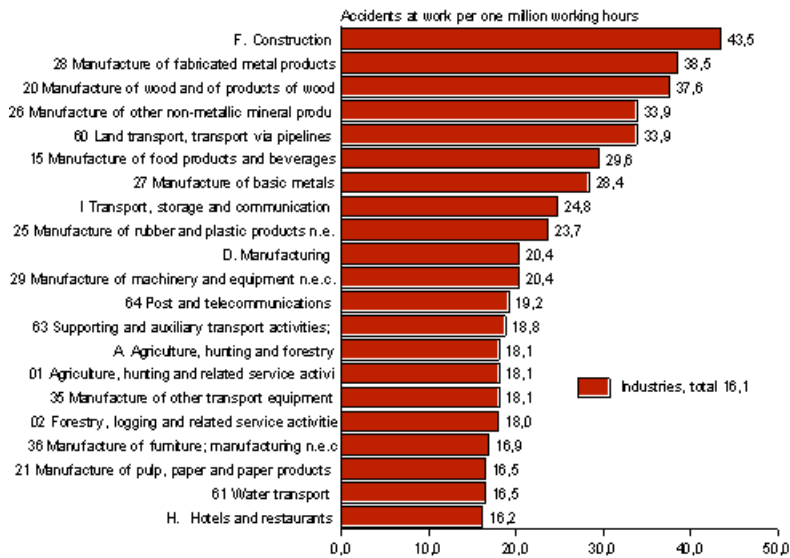
**Figure 4. Wage and salary earners’ accidents at work per 100 000 wage and salary earners by gender and age in 2006**



### *Building construction is still the riskiest*

In 2006 industries with a high risk of accidents at work when measured with accident frequency were construction (43.5), land transport and manufacture of fabricated metal products (38.5) and the manufacture of wood (37.6). Table 6 lists the industries with a higher than average (16.1) accident frequency. The frequencies have been calculated from accidents at work resulting in disability of at least 4 days, fatal accidents excluded. Municipal sector employees have been classified into their own class, as information on their industry is missing from the accidents at work data files. Wage and salary earners in the municipal sector had 10.2 accidents at work per one million hours worked in 2006, while one year previously their accident frequency had been 10.0.

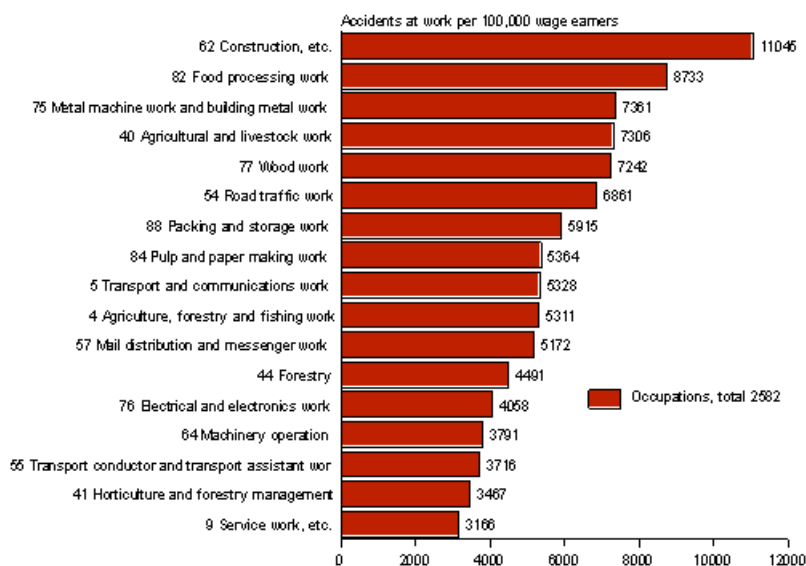
**Figure 5. Wage and salary earners' accidents at work per one million hours worked by industry in 2006, accident frequency higher than average**



An examination by occupation shows that the accident risk continues to be highest in the occupational group of building construction, where it's roughly four times as high as the average. In 2006 building construction workers had 11,045 accidents at work resulting in disability of at least 4 days per 100,000 wage and salary earners. One year earlier this accident incidence rate was 10,717.

Building construction was followed by food industry work (8,733), mechanical engineering and construction metal work (7,361) and farming work (7,306). The accident risk measured with the accident incidence rate decrease by four per cent in the occupational group of mechanical engineering and construction metal work, and grew by roughly 13 per cent in food industry work and by seven per cent in farming work when compared with the year before. Figure 8 lists the occupational groups with a higher than average risk of accidents at work. On average, 2,582 accidents at work resulting in disability of at least 4 days occurred per 100,000 wage and salary earners. As in the year before, the number of accidents at work was highest in different occupational groups in manufacturing.

**Figure 6. Wage and salary earners' accidents at work per 100,000 wage and salary earners by occupation in 2006, accident incidence rate higher than average**



Similarly to that measured with the accident incidence rate, the risk of accidents at work measured with accident frequency decreased by some 12 per cent during 1998-2004. In 1998 a total of 17.2 accidents at work resulting

in at least 4 days' absence from work occurred per one million hours worked. In 2004 the corresponding accident frequency was down to 15.2. In 2005 the accident frequency rose to 16.1 and remained unchanged in 2006.

The accident frequency is a more accurate measure of risk than the accident incidence rate, as it expresses the number of accidents as a proportion of the time (hours worked) during which wage and salary earners were vulnerable to accidents at work. The hours worked, that is, the time of being vulnerable to accidents at work can, however, vary from person to person.

Previously Statistics Finland's occupational accident statistics calculated the accident incidence rate by expressing the accidents at work resulting in at least 3 days' absence from work as a proportion of 1,000 wage and salary earners. The key figures have been harmonised nationally and with the Eurostat practice. The accident incidence rate is now expressed as the number of accidents at work resulting in disability of at least 4 days per 100,000 persons in the reference population. The accident frequency is expressed as the proportion of accidents at work resulting in at least 4 days' absence from work of one million hours worked. The data on the number of wage and salary earners and their hours worked are obtained from Statistics Finland's Labour Force Survey.

### ***ESAW variables describing the circumstances and manner of accidents at work among wage and salary earners***

A revised form on accidents at work was introduced in Finland in 2003 to collect for the first time data on the circumstances and manner of accidents at work according to the European Statistics on Accidents at Work (ESAW). These data are now published for the fourth time in Statistics Finland's occupational accident statistics for 2006. Compared with the previous year's statistics the distributions of variables are similar and thus appear fairly reliable. Eurostat's project is ambitious and the data to be collected are quite detailed at times, which is why the data presented provide a comprehensive picture of the circumstances during the accident at work as well as the causes and consequences.

The Member States are allowed to exercise discretion as to the extent of their data collection. In Finland the data on accidents at work are collected on the key ESAW variables, in some of which only the main category classification is included. The data are given according to the incidence process of the accident at work, so that the prevailing circumstances are described first, then the progress of the event and finally the consequences of the accident. Categories were combined in some of the variables due to presentation reasons. The text section presents mainly distributions by gender and the appended table section distributions by other background variables, such as age, industry and occupation. In addition to this, data are given only on the basis of the national classification. Such data are e.g. the data on the variable describing the direct cause of the accident at work (see Table 10). An indication that they are in line with the joint European statistics on accidents at work is given in tables and figures based on ESAW statistics.

#### ***Most accidents occur when the person is moving***

Data are given first about the general circumstances prior to the accident at work. The first ESAW variable describes the working process the wage and salary earner was involved in when the accident occurred. However, the working process does not refer the person's occupation, because the tasks may vary at different times in the same occupation. Slightly over one third (34.6%) of men's accidents at work occurred in working processes related to production, manufacturing, processing or storing. In relative terms, women had the most (43.8%) accidents in working processes related to public or private services (Table 3).



**Table 3. Wage and salary earners' accidents at work by gender and Working Process in 2006**

Working process	Total		Males		Females	
	N	%	N	%	N	%
<b>Total</b>	<b>55 253</b>	<b>100</b>	<b>40 479</b>	<b>100</b>	<b>14 774</b>	<b>100</b>
10 Production, manufacturing, processing, storing	16 812	30,4	14 011	34,6	2 801	19,0
20 Excavation, construction, repair, demolition	5 535	10,0	5 435	13,4	100	0,7
30 Agricultural type work, forestry, horticulture, fish farming, work with live animals	1 691	3,1	1 047	2,5	644	4,4
40 Services provided to enterprise and/or to the general public; intellectual activity	8 360	15,1	1 899	4,7	6 461	43,8
50 Other work related to tasks coded under 10, 20, 30 and 40	11 392	20,6	9 380	23,2	2 012	13,6
60 Movement, sport, artistic activity	9 303	16,8	7 000	17,3	2 303	15,5
99 Other Working Processes no listed above	666	1,2	476	1,2	190	1,3
00 No information	1 494	2,7	1 231	3,0	263	1,8

The specific physical activity illustrates the person's exact physical activity just before the moment of injury, while the working process variable describes the general nature of work at the time of the accident. The specific physical activity can be intentional or voluntary, but it need not be of long duration. According to the results, more than every third accident occurred when the person was moving. More of women's accidents (43.5%) took place in connection with movement than men's (32.4%) (Table 4). Every fifth (19.9%) accident occurred when the person was carrying a load by hand. Similarly, nearly one fifth (18.1%) of accidents occurred when handling various objects. In relative terms, men had more accidents at work when working with hand-held tools than women did.

**Table 4. Wage and salary earners' accidents at work by gender and Specific Physical Activity in 2006**

Specific physical activity	Total		Males		Females	
	N	%	N	%	N	%
<b>Total</b>	<b>55 253</b>	<b>100</b>	<b>40 479</b>	<b>100</b>	<b>14 774</b>	<b>100</b>
10 Operating machine	2 698	4,9	2 291	5,7	407	2,8
20 Working with hand-held tools	6 938	12,6	5 991	14,8	947	6,4
30 Driving/being on board a means of transport or handling equipment	1 403	2,5	1 094	2,7	309	2,1
4 Handling of objects	10 023	18,1	7 498	18,5	2 525	17,1
50 Carrying by hand	10 974	19,9	7 893	19,5	3 081	20,9
60 Movement	19 566	35,4	13 134	32,4	6 432	43,5
70 Presence	1 347	2,4	858	2,1	489	3,3
99 Other Specific Physical Activities not listed above	1 165	2,1	792	2,0	373	2,5
00 No information	1 139	2,1	928	2,3	211	1,4

### *The cause of accident mostly stumbling, slipping or falling*

Next we will examine the progress of the events leading to the actual accident at work. Among women roughly one third (32.5%) and among men nearly 30 per cent (28.0%) of accidents at work resulted from stumbling, jumping, slipping or falling (Table 5). The proportions nearly the same as one year ago. This appears from the data of the deviation variable which describes the unusual occurrence during the physical activity leading to the accident at work. If several deviating events precede the actual accident, the one occurring last is recorded. The second most common event leading to an accident was a sudden physical stress for both men (20.2%) and women (22.9%).

**Table 5. Wage and salary earners' accidents at work by gender and Deviation leading to the accident in 2006**

Deviation	Total		Males		Females	
	N	%	N	%	N	%
<b>Total</b>	<b>55 253</b>	<b>100</b>	<b>40 479</b>	<b>100</b>	<b>14 774</b>	<b>100</b>
10 Deviation due to electrical problems, explosion, fire	166	0,3	135	0,3	31	0,2
20 Deviation by overflow, overturn, leak, flow, vaporisation, emission	1 348	2,4	1 028	2,5	320	2,2
30 Breakage, bursting, splitting, slipping, fall, collapse of Material Agent	5 831	10,6	4 452	11,0	1 379	9,3
40 Loss of control (total or partial) of machine, means of transport or handling equipment, hand-held tool, object, animal	7 403	13,4	6 002	14,8	1 401	9,5
50 Slipping – Stumbling and falling – Fall of persons	16 142	29,2	11 334	28,0	4 808	32,5
60 Body movement without any physical stress (generally leading to an external injury)	9 194	16,6	7 016	17,3	2 178	14,7
70 Body movement under or with physical stress (generally leading to an external injury)	11 551	20,9	8 169	20,2	3 382	22,9
80 Shock, fright, violence, aggression, threat, presence	1 173	2,1	497	1,2	676	4,6
99 Other Deviations not listed above	1 829	3,3	1 350	3,3	479	3,2
00 No information	616	1,1	496	1,2	120	0,8

Roughly three tenths (28.3%) of the victims of accidents at work were injured due to horizontal or vertical impact with or against a stationary object (Table 6). This is also indicated in the data of the variable expressing the deviating situation leading to the accident, where stumbling, falling or similar was the most common event leading to the accident. With a few exceptions, the data of these two variables on men and women are almost identical. Roughly every fourth (26.0%) was injured as a result of sudden physical or mental stress. The mode of injury describes how the injured body part came into contact with the cause of the injury. Where there are several modes of injury, the one causing the most serious injury is recorded.

**Table 6. Wage and salary earners' accidents at work by gender and Contact - Mode of injury in 2006**

Contact - Mode of injury (ESAW)	Total		Males		Females	
	N	%	N	%	N	%
<b>Total</b>	<b>55 253</b>	<b>100</b>	<b>40 479</b>	<b>100</b>	<b>14 774</b>	<b>100</b>
10 Contact with electrical voltage, temperature, hazardous substances	1 574	20,8	1 094	2,7	480	3,2
20 Drowned, buried, enveloped	14	0,0	12	0,0	2	0,0
30 Horizontal or vertical impact with or against a stationary object (the victim is in motion)	15 612	28,3	10 855	26,8	4 757	32,2
40 Struck by object in motion, collision with	5 397	9,8	4 223	10,4	1 174	7,9
50 Contact with sharp, pointed, rough, coarse Material Agent	9 106	16,5	7 255	17,9	1 851	12,5
60 Trapped, crushed, etc.	5 923	10,7	4 636	11,5	1 287	8,7
70 Physical or mental stress	14 374	26,0	10 345	25,6	4 029	27,3
80 Bite, kick, etc. (animal or human)	1 016	1,8	397	1,0	619	4,2
99 Other Contacts – Modes of Injury not listed in above	1 891	3,4	1 394	3,4	497	3,4
00 No information	346	0,6	268	0,7	78	0,5

In slightly over 30 per cent of wage and salary earners' accidents at work the material agent of the injury was different kinds of scaffolding, surfaces and planes (Table 7). Most of these (74%) belonged to the category "passageways, surfaces, ground, doors, walls, windows and obstacles". Scaffolding, surfaces and planes were the most common modes of injury for both men (29.9%) and women (34.9%). Various materials, objects and supplies injured around one quarter of the victims of accidents at work. Most of them were various materials, objects, products, debris or machine components.

The data on the material agent of contact describes the physical factor with which the injured body part was in contact. When several modes are in question those filling in the accident notification form are asked to report the material agent of the most serious injury.

**Table 7. Wage and salary earners' accidents at work by gender and Material Agent of Contact - Mode of injury in 2006**

<sup>1</sup> Material Agent of Contact-Mode of injury (FAII)	Total		Males		Females	
	N	%	N	%	N	%
<b>Total</b>	<b>55 253</b>	<b>100</b>	<b>40 479</b>	<b>100</b>	<b>14 774</b>	<b>100</b>
1100-1399 Scaffolding, surfaces and planes	17 286	31,3	12 124	29,9	5 162	34,9
2100-2799 Tools, machines and equipment	9 501	17,1	7 951	19,7	1 550	10,4
2801-2899 Conveying, transport and storage equipment	2 984	5,4	2 166	5,3	818	5,5
3100, 3200 Transport equipment	1 797	3,2	1 506	3,7	291	2,0
4100-4400 Materials, objects and supplies	15 280	27,6	11 888	29,4	3 392	23,0
5100 Living organisms and human-beings	2 859	5,2	912	2,3	1 947	13,2
5200 Bulk waste	257	0,5	193	0,5	64	0,4
5300 Physical phenomena and natural elements	632	1,1	430	1,1	202	1,4
9999 Other material agents not listed above	3 340	6,0	2 346	5,8	994	6,7
0000 No information	1 317	2,4	963	2,4	354	2,4

1) The classification of the variable is national (FAII = Federation of Accident Insurance Institutions).

The classification describing the material agent is national for accident data on wage and salary earners. The classification is considerably more detailed than before. Two things should be kept in mind when examining the results. Firstly, the occurrence of an accident at work is usually a sum of many factors and no individual material agent can always be identified unambiguously. However, the variable data show what kind of equipment or tools the victim was using or in what kind of working environment the accident occurred. Secondly, inadequate guidance or inexperience can often play a major role in the occurrence of an accident. It is difficult and often impossible to produce statistics on such factors.

Four out of ten injuries (42.4%) caused by accidents at work are dislocations, sprains or strains. The next most common were wounds and superficial injuries (25.8%) and various concussions and internal injuries (17.0%) (Table 8). Men's accidents caused relatively more often various wounds and superficial injuries, while women's accidents caused dislocations, sprains and strains. This is concordant with the results presented above, which showed that men more often than women injure themselves in accidents at work in connection with sharp objects whereas women more than men injure themselves by stumbling or slipping.

**Table 8. Wage and salary earners' accidents at work by gender and Type of Injury in 2006**

Type of Injury (ESAW)	Total		Males		Females	
	N	%	N	%	N	%
<b>Total</b>	<b>55 253</b>	<b>100</b>	<b>40 479</b>	<b>100</b>	<b>14 774</b>	<b>100</b>
010 Wounds and superficial injuries	14 253	25,8	11 173	27,6	3 080	20,8
020 Bone fractures	5 541	10,0	4 104	10,1	1 437	9,7
030 Dislocations, sprains and strains	23 402	42,4	16 584	41,0	6 818	46,1
040 Traumatic amputations (Loss of body parts)	211	0,4	184	0,5	27	0,2
050 Concussions and internal injuries	9 389	17,0	6 748	16,7	2 641	17,9
060 Burns, scalds and frostbites	1 221	2,2	778	1,9	443	3,0
070 Poisonings and infections	202	0,4	179	0,4	23	0,2
080 Drowning and asphyxiations	0	0,0	0	0,0	0	0,0
090 Effects of sound, vibration and pressure	17	0,0	11	0,0	6	0,0
100 Effects of temperature extremes, light and radiation	20	0,0	16	0,0	4	0,0
110 Shocks	67	0,1	45	0,1	22	0,1
120 Multiple injuries	228	0,4	155	0,4	73	0,5
999 Other specified injuries not included under other headings	354	0,6	250	0,6	104	0,7
000 No information	348	0,6	252	0,6	96	0,6

More than four out of ten accidents at work (43.4%) involved the upper extremities (Table 9). In some three quarters the injured body parts were the palms or fingers. Nearly 30 per cent injure lower extremities, including hips, thighs, knees, shins and ankles.

**Table 9. Wage and salary earners' accidents at work by gender and Part of Body Injured in 2006**

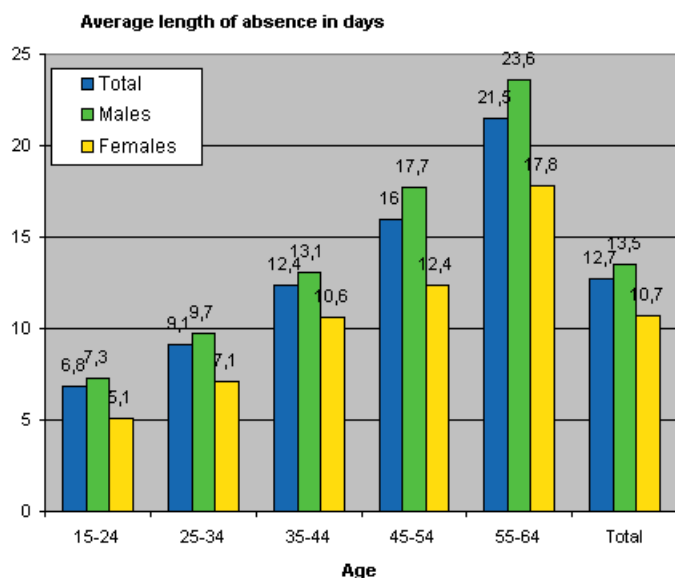
Part of Body Injured (ESAW)	Total		Males		Females	
	N	%	N	%	N	%
<b>Total</b>	<b>55 253</b>	<b>100</b>	<b>40 479</b>	<b>100</b>	<b>14 774</b>	<b>100</b>
10 Head	2 098	3,8	1 627	4,0	471	3,2
20 Neck	641	1,2	426	1,1	215	1,5
30 Back, spine	8 478	15,3	6 082	15,0	2 396	16,2
40 Torso, internal organs	2 771	5,0	2 241	5,5	530	3,6
50 Upper extremities	23 984	43,4	17 747	43,8	6 237	42,2
60 Lower extremities	16 021	29,0	11 591	28,6	4 430	30,0
70 Entire body or several body parts	1 078	2,0	651	1,6	427	2,9
99 Others	95	0,2	62	0,2	33	0,2
00 Data missing	87	0,2	52	0,1	35	0,2

**Absence from work 13 days on average**

The seriousness of accidents at work can be assessed on the basis of the duration of disability resulting from the injury. The figures describing the duration of absence from work before 2002 are not fully comparable with the figures for 2002 to 2006, because previously the cases leading to employment accident pension could not be separated. The cases leading to employment accident pension are always serious, but in some of the cases the recorded number of days absent may have been low before the decision on the pension was granted. Now pension cases are excluded from the examination of the duration of disability.

The average duration of an absence from work due to an accident at work was 13 days (12.7) in 2006. The average duration of disability was 13.5 days for men and 10.7 days for women. The average duration of absence caused by accidents increased with age for both men and women (Figure 7). Included are also accidents at work leading to a disability lasting under four days.

**Figure 7. Average duration of disability resulting from wage and salary earners' accidents at work by gender and age in 2006**



Slightly under one third (29.8%) of all accidents leading to disability lasting at least four days caused disability of four to six days, and around 17 per cent of the accidents – including employment accident pension cases – were serious, causing absences lasting longer than 30 days (Table 10).

**Table 10. Wage and salary earners' accidents at work by gender and duration of disability in 2006**

Duration of disability - days	Total		Males		Females	
	N	%	N	%	N	%
<b>Total</b>	<b>55 253</b>	<b>100</b>	<b>40 479</b>	<b>100</b>	<b>14 774</b>	<b>100</b>
4–6 days	16 453	29,8	11 887	29,4	4 566	30,9
7–14 days	20 319	36,8	14 869	36,7	5 450	36,9
15–30 days	9 325	16,9	6 891	17,0	2 434	16,5
31–90 days	6 523	11,8	4 828	11,9	1 695	11,5
91–182 days	1 437	2,6	1 078	2,7	359	2,4
183–365 days	1 062	1,9	806	2,0	256	1,7
Employment accident pension	134	0,2	120	0,3	14	0,1

### *Risk of commuting accidents remained unchanged*

In 2006 wage and salary earners had a total of 18,397 commuting accidents for which insurance companies paid compensation. Disability of at least four days resulted from 9,332 of these accidents. In the statistics commuting accidents are separated from accidents at work and accidents while in work traffic. A commuting accident means an accident on the journey between home and work. Due to incomplete information in claims forms, some commuting accidents are in practice recorded as accidents at work and vice versa.

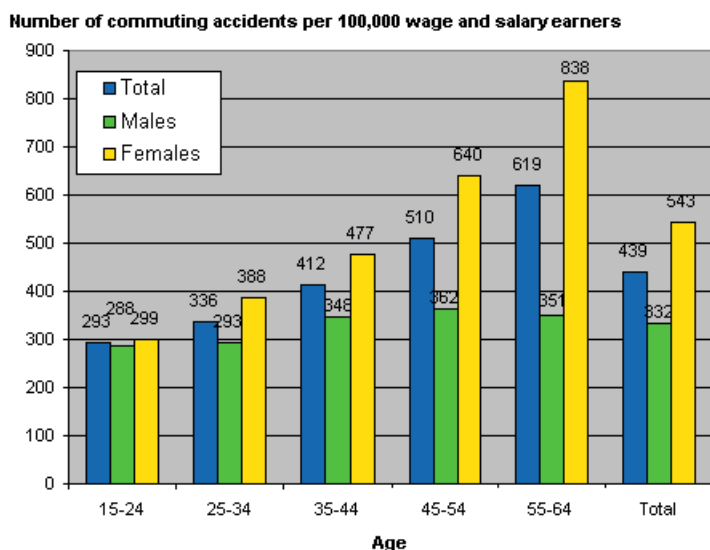
The number of commuting accidents increased slightly from 2005, as there were about 17,948 commuting accidents in 2005, of which 9,194 led to disability of at least four days. By contrast, the number of fatal commuting accidents nearly halved from the year before. In 2006 a total of 16 people died while commuting, whereas in 2005 the corresponding number was 31. The long-term development of the number of commuting accidents is examined in more detail in Appendix Table 44.

Commuting accidents differ from accidents at work in that they are more common among women than men; nearly two out of three (64%) of all commuting accidents occurred to women. In 2002-2004 the proportion was nearly the same, at roughly 63 per cent. By contrast, in 2006 fatal commuting accidents occurred to men nearly twice as often (10) as to women (6).

The incidence rate of commuting accidents remained unchanged. The number of commuting accidents was 439 per 100,000 wage and salary earners both in 2005 and in 2006. Women had 543 (553 in 2005) and men 332 (321 in 2005) commuting accidents per 100,000 wage and salary earners in 2006.

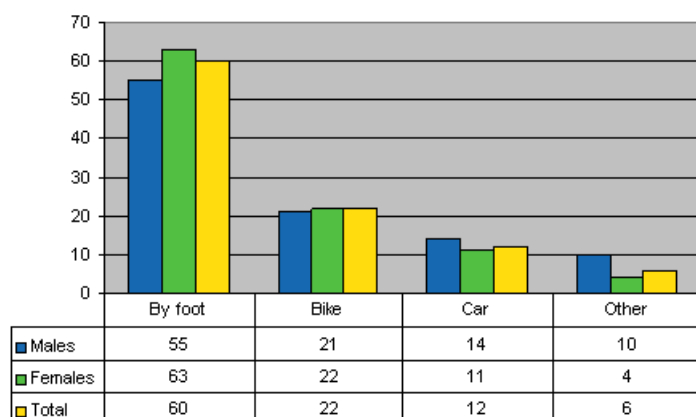
The difference between men and women stays the same when looking at the accident incidence rates in different age groups (Figure 8). Both men's and women's risk of commuting accidents increases with age, but women's risk is still higher than men's in all age groups. The risk of getting injured on the way to or from work is 2.5-fold among women aged 55 to 64 in comparison with the youngest age group. The relative difference between men and women is also biggest in the oldest age group.

**Figure 8. Wage and salary earners' commuting accidents per 100,000 wage and salary earners by gender and age in 2006**



Most commuting accidents occur when walking or cycling: more than every sixth (60%) of those injured in commuting accidents were walking and nearly every fourth (22%) were cycling when injured. The differences between men and women in commuting accidents by mode of travel were not large: women get injured slightly more than men when walking, while men have more passenger car accidents than women (Figure 9). It is not possible to take into account in the statistics the differences between women and men in their frequency of using a bicycle or a car on the journey between home and work.

**Figure 9. Wage and salary earners' commuting accidents by mode of travel and gender in 2006**



When considering the modes of travel it is natural that the most common type of accident is falling, slipping or stumbling. In 2006 three quarters (75%) of all commuting accidents resulted from falling or slipping. The second most common type of accident is 'collision with a car' Some 11 per cent of all commuting accidents resulted from collisions with a car (Table 11).

**Table 11. Wage and salary earners' commuting accidents by gender and type of accident in 2006**

Type of accident	Total		Males		Females	
	N	%	N	%	N	%
<b>Total</b>	<b>9 332</b>	<b>100</b>	<b>3 487</b>	<b>100</b>	<b>5 845</b>	<b>100</b>
Falling, slipping or stumbling	7 023	75,3	2 526	72,4	4 497	76,9
Stepping on objects	40	0,4	19	0,5	21	0,4
Driving off the road or car falling over	608	6,5	297	8,5	311	5,3
Collision with a car	1 043	11,2	415	11,9	628	10,7
Collision with a bicycle, moped, etc.	161	1,7	51	1,5	110	1,9
Collision with a track-going vehicle	7	0,1	3	0,1	4	0,1
Violence	18	0,2	10	0,3	8	0,1
Others	432	4,6	166	4,8	266	4,6

Most of the injuries caused by commuting accidents were minor, often caused by falling. In more than four cases out of ten, the victim's injuries were various dislocations of joints, sprains and strains (Table 12). The injured body parts were often the extremities (Table 13).

**Table 12. Wage and salary earners' commuting accidents by gender and type of injury in 2006**

Type of Injury (ESAW)	Total		Males		Females	
	N	%	N	%	N	%
<b>Total</b>	<b>9 332</b>	<b>100</b>	<b>3 487</b>	<b>100</b>	<b>5 845</b>	<b>100</b>
010 Wounds and superficial injuries	812	8,7	319	9,1	493	8,4
020 Bone fractures	1 929	20,7	713	20,4	1 216	20,8
030 Dislocations, sprains and strains	4 235	45,4	1 619	46,4	2 616	45,0
040 Traumatic amputations (Loss of body parts)	2	0,0	2	0,1	—	—
050 Concussions and internal injuries	2 047	21,9	711	20,4	1 336	22,9
060 Burns, scalds and frostbites	19	0,2	13	0,4	6	0,1
070 Poisonings and infections	1	0,0	1	0,0	—	—
090 Effects of sound, vibration and pressure	—	—	—	—	—	—
110 Shocks	9	0,1	3	0,1	6	0,1
120 Multiple injuries	146	1,6	62	1,8	84	1,4
999 Other specified injuries not included under other headings	37	0,4	12	0,3	25	0,4
000 No information	95	1,0	32	0,9	63	1,1

**Table 13. Wage and salary earners' commuting accidents by gender and Part of Body Injured in 2006**

Part of Body Injured (ESAW)	Total		Males		Females	
	N	%	N	%	N	%
<b>Total</b>	<b>9 332</b>	<b>100</b>	<b>3 487</b>	<b>100</b>	<b>5 845</b>	<b>100</b>
10 Head	353	3,8	119	3,4	234	4,0
20 Neck	528	5,7	185	5,3	343	5,9
30 Back, spine	846	9,1	358	10,3	488	8,3
40 Torso, internal organs	680	7,3	341	9,8	339	5,8
50 Upper extremities	2 805	30,1	1 040	29,8	1 765	30,2
60 Lower extremities	3 272	35,1	1 173	33,6	2 099	35,9
70 Entire body or several body parts	778	8,3	251	7,2	527	9,0
99 Others	22	0,2	8	0,2	14	0,2
00 Data missing	48	0,5	12	0,3	36	0,6

### *Self-employed persons' accidents at work*

This section focuses on the accidents at work of farmers and other self-employed persons. Self-employed persons' (excl. farmers) accidents at work were separated in the occupational accident statistics from wage and salary earners' accidents at work for the first time in 1995. Before that self-employed persons' accidents were included as such in wage and salary earners' accidents at work. When examining the figures on self-employed persons' accidents at work it must be noted that an accident insurance is voluntary for self-employed persons, and not all of them are insured. Therefore the distribution of self-employed persons according to different

background variables (age, occupation, industry) also illustrates in which occupations and sectors self-employed persons are more insured than usual.

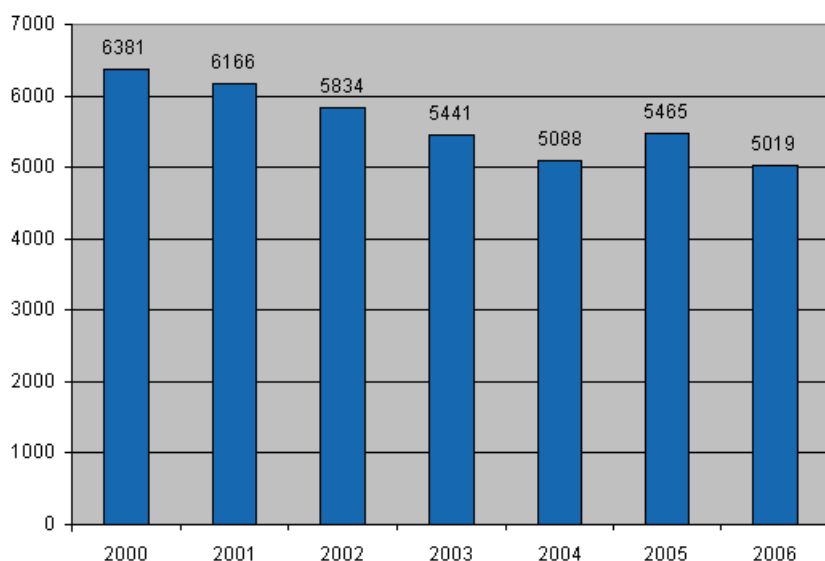
In Finland most farmers live on their farms, which makes it impossible to separate accidents at work and commuting accidents from each other. In this publication all accidents occurring to farmers in their work are called accidents at work. The accidents at work data on farmers are based on the data obtained the Farmers' Social Insurance Institution (MELA).

In addition to a full-time and working age farmer, the insured can be a pensioner, an under 18-year-old family member or a person practising part-time agriculture, game or reindeer husbandry or fishing industry. The number of farmers has decreased steadily during the last few years. At the end of 2006 there were 87,626 farmers insured by the Farmers' Social Insurance Institution, which is about 3,000 fewer than one year previously and over 54,000 fewer than in 1995.

### ***Farmers' accidents at work decreased***

The changes in the numbers of farmers are also visible in the numbers of accidents at work. In the course of 2006 MELA paid to farmers compensation for a total of 5,966 accidents at work. The figure is down by around 700 cases from the previous year. There were a total of 5,019 occupational accidents leading to disability of at least four days, while in the previous year the respective figure was 5,465. The number of farmers' accidents at work has been falling during the past six years, the year 2005 excluded (Figure 10).

**Figure 10. Farmers' non-fatal accidents at work resulting in disability of at least 4 days 2000–2006**



### ***Farmers' risk of death at work decreased***

Of all the accidents at work of farmers for which compensation was paid in 2006 five were fatal, whereas in the previous year nine farmers died as a result of an accident at work. All farmers who died in accidents at work were men. Of all the fatal accidents at work of farmers in 2000–2006 only one occurred to a woman. This accident occurred in 2005. Figure 11 presents the accident incidence rates of farmers, with regard to deaths at work and accidents leading to disability of at least 4 days per 100,000 farmers from 2000 to 2006. The figure shows that the risk of death at work varies strongly in different years. In 2006, 5.6 per 100,000 insured farmers died, while in 2005 the corresponding ratio was 9.8. The year 2000 was the darkest in the near past; a total of 12.9 per 100,000 insured farmers died in accidents at work.



**Figure 11. Farmers' accident rates in 2000–2006**

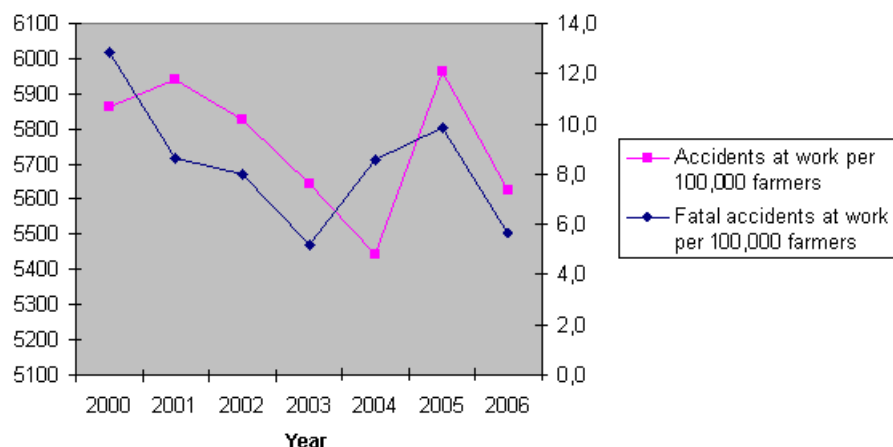


Table 14 compares the incidence rate of accidents leading to the death of the farmer with the riskiest industries among wage and salary earners in 2005 and 2006. Because the majority of persons who die as the result of accidents at work are generally men, their accident incidence rates are given separately. The figures indicate that work was riskiest in the transport, storage and communications industry, where 11.5 men per 100,000 insured wage and salary earners lost their lives in 2006. One year earlier the risk of death at work was highest for men working as farmers. The second most risky industry among wage and salary earners was construction.

In 2006 a total of 7.9 men per 100,000 insured wage and salary earners lost their lives in the construction industry. In 2005 the corresponding figure was 10.5.

**Table 14. Farmers' fatal accidents at work compared with wage and salary earners' fatal accidents in high risk industries per 100,000 farmers or wage and salary earners in 2005–2006**

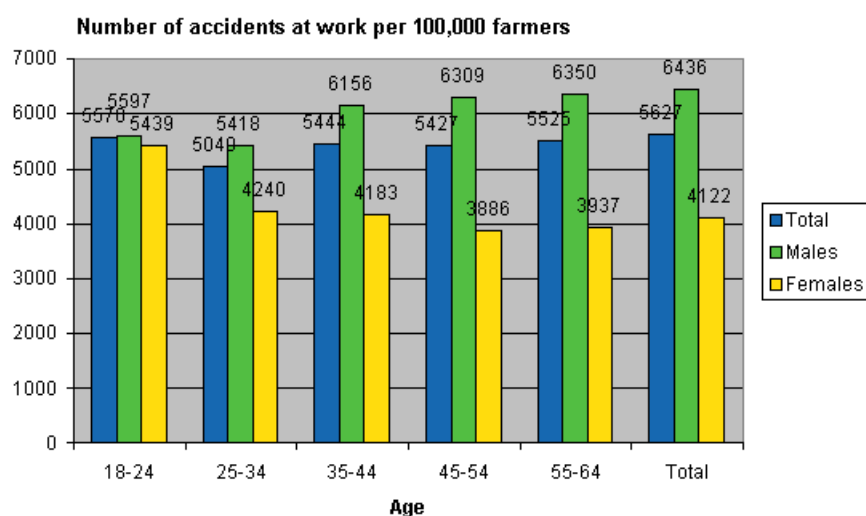
	Year 2005		Year 2006	
	Total	Males	Total	Males
<b>Farmers</b>	9,8	13,5	5,6	8,6
<b>Wage and salary earners</b>	2,4	4,4	2,2	4,1
Industry	1,5	2,1	1,7	2,3
Construction	9,8	10,5	7,3	7,9
Transport, storage and communication	10,0	11,3	8,1	11,5

The proportion of minor accidents at work, resulting in disability of less than four days, has stayed roughly level in the past few years, at about 10 per cent of all compensated accidents. More than every fourth (29%) accident at work was a so-called serious accident, i.e. they caused a disability lasting longer than one month (Appendix Table 5). In the following the focus will be on those accidents at work that resulted in disability of at least four days.

#### *Farmers' risk of accidents at work varies by year*

Farmers' risk of accidents declined in the early 2000s (Figure 11). In 2006 a total of 5,627 accidents at work occurred per 100,000 insured farmers, which was clearly fewer than in 2005 (5,962). The accident peak in 2005 could in part be the result of the introduction of the full-cost responsibility system of patient care. Farmers' risk of accidents is, however, still clearly higher than that of wage and salary earners and distinctly higher for men than for women: men had 6,436 and women 4,122 accidents at work per 100,000 farmers (Figure 12). This difference between the genders is partly explained by the fact that in farmer men conventionally undertake the kind of work in which accidents are common. Such work includes, e.g. construction work and tasks related to the use and maintenance of machinery and equipment.

**Figure 12. Farmers' accidents at work per 100,000 insured by gender and age in 2006**



Nearly two thirds (64%) of farmers' accidents occur to over 45-year-olds. The age distributions of men and women to whom accidents occurred are similar. In 2006 the number of accidents at work was relatively the highest in the age groups of under 25-year-olds (5,439). The annual variation of their accident risk can be quite large, as the number of insured farmers belonging to the youngest age group is rather small.

#### ***Most accidents occur in animal husbandry***

The proportion of accidents occurring in various animal husbandry tasks was similar to their proportion one year previously. Especially women fell victims to accidents at work when tending cattle; more than three fourths (77%) of women's accidents at work took place in animal husbandry. The respective proportion among men was slightly over one-third (36%) (Table 15). The second most accidents occurred in other agriculture and forestry work, including tasks such as installation and maintenance of machinery and equipment. Less than one-fifth (16%) of accidents at work occurred while performing other tasks related to farming. On the basis of the available statistical data no actual conclusions can, however, be drawn on the dangerousness of work in different areas, because then the amount of working time used on different tasks should also be known. The classification of the variable describing the stage of work is national. The classification used by MELA is more detailed than the ESAW variable illustrating the working process. .

**Table 15. Farmers' accidents at work by stage of work and gender in 2006**

	Total		Males		Females	
	N	%	N	%	N	%
<b>Total</b>	<b>5019</b>	<b>100</b>	<b>3 734</b>	<b>100</b>	<b>1 285</b>	<b>100</b>
Farming work	778	15,5	672	18,0	106	8,2
Animal husbandry	2337	46,6	1 352	36,2	985	76,7
Forest work	413	8,2	386	10,3	27	2,1
Construction work	252	5,0	228	6,1	24	1,9
Other agricultural and forestry work	1 111	22,1	971	26,0	140	10,9
Other work	128	2,6	125	3,3	3	0,3

In roughly one-third of the cases (34%) the deviation leading to an accident of the farmer was falling, jumping, stumbling or slipping. Violence, a shocking situation or a non-standard practice (e.g. neglected protection) was the reason behind the accident in one-fourth of the cases (25%).

## Farmers most often injured as a consequence of horizontal or vertical impact with or against a stationary object

Horizontal or vertical impact with or against a stationary object was the most common mode of injury for farmers. In some three tenths of the cases (31%) the person was injured due to horizontal or vertical impact with or against the floor, ground or similar (Figure 13). Women farmers were pushed or kicked by an animal more often than men, as almost every fourth (24%) of women farmers' accidents were caused by an animal. Every tenth (12%) man injured in an accident was hurt by an animal bite, kick or similar. In over one fourth of farmers' accidents at work (27%) the material agent was a living organism or a human-being (Figure 14). In all probability most of these farmers' accidents were caused by animals. Various buildings, structures and surfaces were the material agents in every fifth accident (21%). Physical phenomena and natural elements caused 11 per cent of the accidents at work. The Farmers' Social Insurance Institution collects data on the material agents using the ESAW classification.

Figure 13. Farmers' accidents at work by contact-mode of injury (ESAW) and gender in 2006

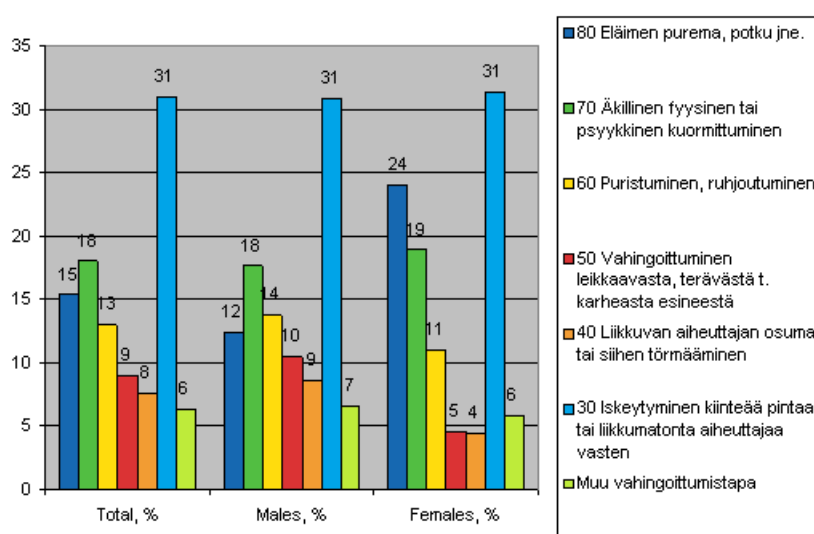
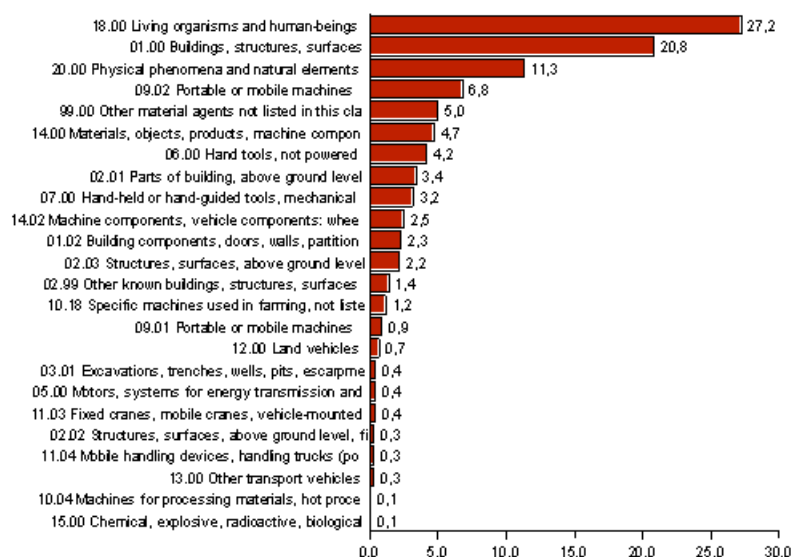


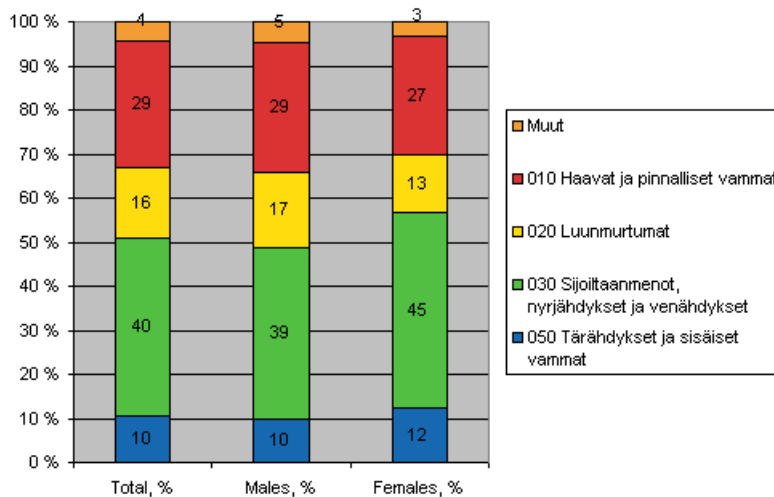
Figure 14. Farmer's accidents by Material Agent of Contact - Mode of Injury in 2006



In 2006, a total of 40 per cent of farmers' injuries sustained in accidents at work were various kinds of dislocations, sprains and strains. Wounds and superficial injuries form the second biggest group of injuries (29%). Nearly every sixth of all farmers' injuries sustained in accidents at work were bone fractures (16%).

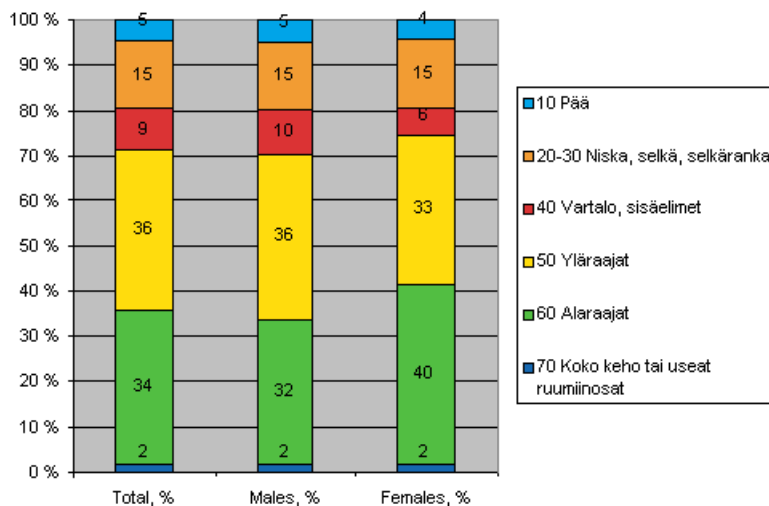
There were no significant differences in the distributions of men's and women's injuries: men's injuries were more often wounds and superficial injuries, while women's injuries were different kinds of concussions and internal injuries (Figure 15).

**Figure 15. Farmers' accidents at work by type of injury and gender in 2006**



Exactly 70 per cent of the accidents at work which occurred to farmers concerned extremities (Figure 16). Women injured their lower extremities more often than men did, while men's injuries concerned their upper extremities. Injuries to lower extremities most often involved knees and those to upper extremities palms or fingers.

**Figure 16. Farmers' accidents at work by injured body part and gender in 2006**



### *Self-employed persons most often injured in manufacturing occupations and building construction*

In 2006 insurance companies paid self-employed persons compensation for a total of 5,422 accidents at work. This also includes accidents on which compensation was paid only for medical treatment expenses. The proportion of these accidents at work that led to absence from work of less than four days was about 40 per cent of all self-employed persons' accidents. One year previously compensation was paid for 5,241 accidents. The data concern self-employed persons other than farmers.

In 2006 self-employed persons suffered from 3,190 accidents at work that led to disability lasting at least four days. This is 48 cases more than in the year before. The gender distribution of accidents at work among self-employed persons is the same as among wage and salary earners: most (87%) of the accidents of self-employed persons occurred to men. The age distribution of victims of accidents at work show that around two-thirds (64%) of self-employed persons' accidents occurred in the age group of the 35 to 54-year-olds (Table 16).

**Table 16. Self-employed persons' accidents at work by gender and age in 2006**

Age	Total		Males		Females	
	N	%	N	%	N	%
<b>Total</b>	<b>3 190</b>	<b>100</b>	<b>2 787</b>	<b>100</b>	<b>403</b>	<b>100</b>
15-24	35	1,1	31	1,1	4	1,0
25-34	398	12,5	345	12,4	53	13,2
35-44	967	30,3	865	31,0	102	25,3
45-54	1 062	33,3	922	33,1	140	34,7
55-64	675	21,2	580	20,8	95	23,6
Others	53	1,7	44	1,6	9	2,2

Similarly to wage and salary earners, self-employed persons also had the highest numbers of accidents at work in manufacturing occupations and building construction. Examined by industry, self-employer persons' risk industries are also mostly the same as those of wage and salary earners. The most dangerous industries are construction and transport, storage and communication. The variables describing the causes and consequences of self-employed persons' accidents are examined more closely in Appendix Tables 6 to 10.

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