


The Scottish Burden of Disease Study, 2015

Age–gender report



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Key points

- In 2015, the population of Scotland lost around 1,356,800 disability-adjusted life years (DALYs) owing to early death or living in less than ideal health. This equates to around 255 DALYs for every 1,000 people.
- Women accounted for a slightly higher proportion of the overall disease burden in Scotland in 2015 than men (51% compared with 49%).
- Adults aged 65 years and over made up 18% of the population but experienced 45% of the disease burden in Scotland in 2015.
- The fatal burden contributed a higher proportion to the total burden of disease in men (55%) than it did for women (48%). Conversely, the non-fatal burden contributed a higher proportion of the total disease burden in women (52%) compared to men (45%).
- Among men aged 15–34, the fatal burden accounted for 34% of the total disease burden in this age group, compared with only 17% in women aged 15–34 years.
- Cancers, cardiovascular diseases, mental and substance use disorders, neurological disorders and musculoskeletal disorders accounted for over two-thirds (69%) of the disease burden in Scotland in 2015.
- Overall, 25 individual diseases, conditions and injuries accounted for over two-thirds (69%) of the total disease burden in Scotland.
- Ischaemic heart disease was the largest contributor to the disease burden in Scotland, followed by neck and lower back pain, and depression.
- Women suffered a proportionally higher disease burden from neck and lower back pain, depression, Alzheimer's disease and other dementias, migraine and anxiety disorders, compared to men.
- Men, on the other hand, suffered a proportionately higher disease burden from ischaemic heart disease, suicide and self-harm-related injuries, alcohol and drug use disorders, and chronic liver disease (including cirrhosis).

Chapter 1: Introduction

Burden of disease studies aim to estimate the total amount of illness, injury, disability and early death affecting a country at a specific point in time. To do this, they use a single measure which combines fatal burden [i.e. the years of life lost (YLL) due to people dying early] and non-fatal burden [i.e. years lost owing to living in less than ideal health – years of life with disability (YLD)]. The combined measure is called the disability-adjusted life year (DALY). As well as providing an overall measure, burden of disease estimates show how different diseases have an impact on the health of the population. This report explores how the disease burden in Scotland in 2015 varied by gender and age.

Details on the calculation of DALYs and interpreting the results presented in this chapter can be found in the Scottish Burden of Disease **overview report**.

In this report, we cover both estimates calculated for individual conditions (for example, lung cancer, depression, chronic kidney disease or osteoarthritis) and for broad disease groupings. In the Scottish Burden of Disease Study, we have used the Global Burden of Disease 2015 study classification, which groups individual conditions into 21 disease groups. It is important to be aware that some disease groups, such as unintentional injuries, cancers and other non-communicable diseases are made up of a large number of separate diseases or injuries, while others, such as chronic liver disease, self-harm and interpersonal violence, include only a few specific conditions. Ranking by disease group and ranking by individual conditions may present different stories. For example, cancer is the disease group causing the most burden, but ischaemic heart disease (within the cardiovascular disease group) is the specific disease causing the most burden. This reflects the level of reporting and the choice in how the disease group level is constructed. It is important to use the level of reporting that is most suited to a specific purpose.

The structure of the report, therefore, has been designed to provide a descending level of detail for disease groups and individual conditions. Chapter 2 provides an overview of the total disease burden experienced in Scotland in 2015. In Chapter 3, results are presented by broad disease, condition or injury grouping for Scotland, by age group and gender. In Chapter 4, we focus on exploring the age and gender differences for the 25 individual diseases, conditions and injuries which account for over two-thirds (69%) of the disease burden in Scotland.

Chapter 2: Total disease burden experienced in 2015

In 2015, the population of Scotland lost around 1,356,800 DALYs to premature death, or living with disease, conditions or injury. This equates to around 255 DALYs for every 1,000 people. This burden was split almost equally between the fatal and non-fatal burden. Approximately 695,800 YLL caused by premature death (51% of total disease burden) and 661,000 YLD (49% of total disease burden) (**Table 1**).

Table 1: DALY and contribution of YLL and YLD by gender, Scotland 2015.

| Burden | Men, <i>n</i> (%) | Women, <i>n</i> (%) | All, <i>n</i> (%) |
|------------------------|-------------------|---------------------|-------------------|
| YLL (fatal burden) | 364,600 (55%) | 331,200 (48%) | 695,800 (51%) |
| YLD (non-fatal burden) | 297,800 (45%) | 363,200 (52%) | 661,000 (49%) |
| DALY | 662,400 (100%) | 694,400 (100%) | 1,356,800 (100%) |

Women accounted for a slightly higher proportion of the overall disease burden (total DALY) than men (51% compared with 49%). This equated to women experiencing approximately 32,000 more DALYs than men. However, the contribution of fatal burden (YLL) to the total burden of disease (DALY) was higher in men (55%) than women (48%). Consequently, the proportion of non-fatal burden was higher in women (52%) than men (45%) (**Table 1**).

Does the overall disease burden vary by age and gender?

Overall, those aged 35 years and above accounted for 58% of the population but experienced over 80% of the DALYs in Scotland in 2015. People aged 65 years and over accounted for 18% of the population and 45% of the disease burden, slightly more than those aged 35–64 years (40% of the population and 40% of the disease burden).

Among those aged 35–64 years, men suffered a proportionally higher disease burden than women (42% vs. 38%), while among those aged 65 years and older, women suffered a proportionately higher disease burden than men (47% vs. 42%) (**Table 2**).

The disease burden in infants and adolescents (aged 0–14 years), and adolescents and young adults (aged 15–34 years) did not differ by gender. Infants and children aged 0–14 years made up 16% of the population, but accounted for only 3% of the total disease burden in Scotland in 2015, while adolescents and young adults aged 15–34 years made up 26% of the population, but accounted for 12% of the burden (**Table 2**).

Table 2: DALY by age group and gender, Scotland 2015.

| Age group (years) | Men, <i>n</i> (%) | Women, <i>n</i> (%) | All, <i>n</i> (%) |
|--------------------------|--------------------------|----------------------------|--------------------------|
| 0–14 | 22,600 (3%) | 19,100 (3%) | 41,700 (3%) |
| 15–34 | 83,100 (13%) | 81,200 (12%) | 164,200 (12%) |
| 35–64 | 277,200 (42%) | 266,100 (38%) | 543,300 (40%) |
| ≥ 65 | 279,500 (42%) | 328,000 (47%) | 607,500 (45%) |
| Total | 662,400 (100%) | 694,400 (100%) | 1,356,800 (100%) |

Fatal and non-fatal burden by age group and gender

Overall, the non-fatal burden accounted for more DALYs in each age group up until the age of 65 years and over. However, the fatal burden was notably higher among men than women in the 15–34 and 35–64 age groups. To illustrate, the fatal burden accounted for 33.6% of the total disease burden for men aged 15–34, compared with only 16.8% in women in this age group. The corresponding figures for the 35–64 age group were 51.3% for men and 39.4% for women (**Figures 1 and 2**).

Figure 1: Percentage contribution of YLL (fatal) and YLD (non-fatal) in men by age group, Scotland 2015.

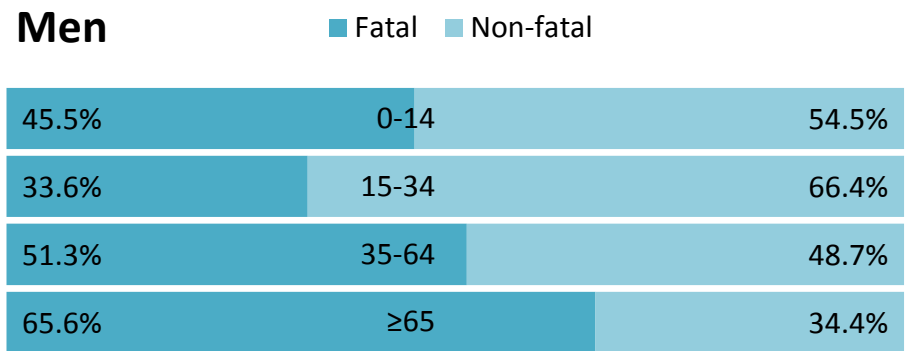
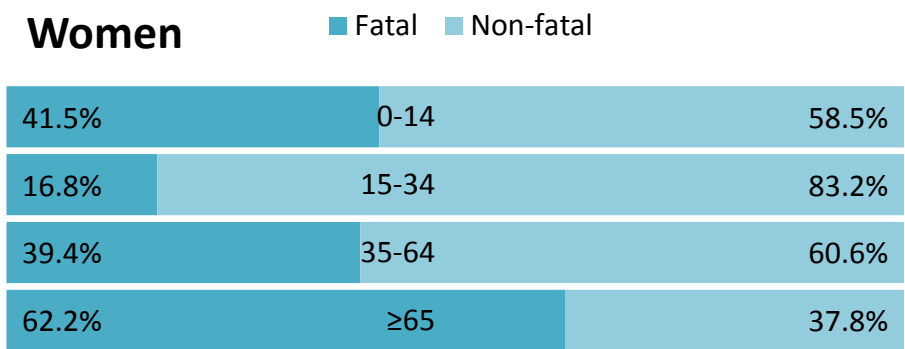


Figure 2: Percentage contribution of YLL (fatal) and YLD (non-fatal) in women by age group, Scotland 2015.



Note: when comparing fatal and non-fatal, we are **not** saying that X% of the burden in a specific age group is fatal compared to Y% being non-fatal. We are indicating whether the burden is predominantly lived with or if it causes death. Non-fatal burden is not the same as prevalence of a disease. So, for example, when we say that 33.6% of the burden is fatal in men aged 15–34 years, what we mean is that of the men in this age group, 33.6% of the burden in 2015 is caused by early death and 66.4% is caused by the consequences of living in less than ideal health. We are **not** saying that 33.6% of people die.

Chapter 3: Which disease groups cause the most burden?

Cancers (17.5% of total DALY), cardiovascular diseases (15.7%), mental and substance use disorders (15.3%), musculoskeletal disorders (10.6%) and neurological disorders (10.2%) were the leading causes of total burden in Scotland in 2015, when looked at by disease groups. Together, they accounted for approximately 70% of the total disease burden (68% for men and 71% for women) (Table 3).

Table 3: DALY and rank of disease group by gender, 2015.

| Disease group | Men, % of total DALY | Men, rank | Women, % of total DALY | Women, rank | All persons, % of total DALY | All persons, rank |
|--|----------------------|-----------|------------------------|-------------|------------------------------|-------------------|
| Cancers | 17.8 | 2 | 17.3 | 1 | 17.5 | 1 |
| Cardiovascular diseases | 17.9 | 1 | 13.6 | 3 | 15.7 | 2 |
| Mental and substance use disorders | 16.0 | 3 | 14.7 | 2 | 15.3 | 3 |
| Musculoskeletal disorders | 8.7 | 4 | 12.5 | 5 | 10.6 | 4 |
| Neurological disorders | 7.6 | 5 | 12.7 | 4 | 10.2 | 5 |
| Chronic respiratory diseases | 5.6 | 7 | 6.5 | 6 | 6.0 | 6 |
| Other non-communicable diseases | 5.6 | 6 | 6.2 | 7 | 5.9 | 7 |
| Diabetes, urogenital, blood, and endocrine diseases | 4.7 | 8 | 4.9 | 8 | 4.8 | 8 |
| Unintentional injuries | 3.5 | 9 | 2.4 | 10 | 2.9 | 9 |
| Digestive diseases | 2.1 | 12 | 2.4 | 9 | 2.3 | 10 |
| Chronic liver disease (including cirrhosis) | 2.5 | 11 | 1.7 | 12 | 2.1 | 11 |
| Self-harm and interpersonal violence | 3.1 | 10 | 1.1 | 13 | 2.1 | 12 |
| Diarrhoea, lower respiratory, and other common infectious diseases | 1.9 | 13 | 1.9 | 11 | 1.9 | 13 |

| Disease group | Men, % of total DALY | Men, rank | Women, % of total DALY | Women, rank | All persons, % of total DALY | All persons, rank |
|---|----------------------|-----------|------------------------|-------------|------------------------------|-------------------|
| Neonatal disorders | 1.0 | 15 | 1.0 | 14 | 1.0 | 14 |
| Transport injuries | 1.4 | 14 | 0.5 | 15 | 0.9 | 15 |
| Nutritional deficiencies | 0.2 | 18 | 0.4 | 16 | 0.3 | 16 |
| Other communicable and nutritional diseases | 0.2 | 16 | 0.2 | 17 | 0.2 | 17 |
| HIV/AIDS and tuberculosis | 0.2 | 17 | 0.1 | 19 | 0.1 | 18 |
| Maternal disorders | <0.1 | 21 | 0.1 | 18 | 0.1 | 19 |
| Forces of nature, war, and legal intervention | <0.1 | 19 | <0.1 | 20 | <0.1 | 20 |
| Neglected tropical diseases and malaria | <0.1 | 20 | <0.1 | 21 | <0.1 | 21 |
| Totals | 100.0 | | 100.0 | | 100.0 | |

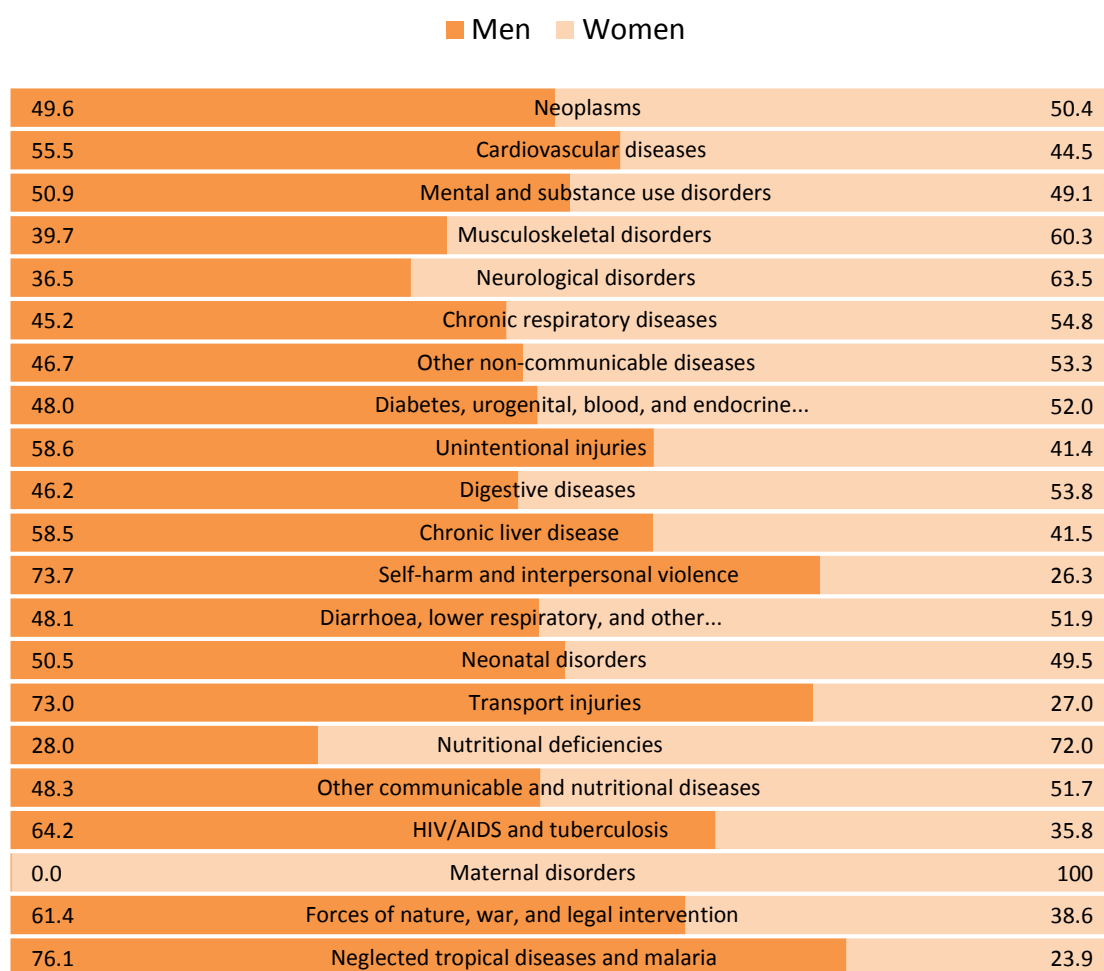
Note: AIDS, acquired immune deficiency syndrome; HIV, human immunodeficiency virus.

The ranking of disease groups, however, differed slightly for men and women. For men, cardiovascular diseases are ranked first (17.9% of male DALYs) followed by cancers (17.8%), mental and substance use disorders (16.0%) and then musculoskeletal disorders (8.7%). In contrast, for women, cancers are first (17.3% of female DALYs), followed by mental and substance use disorders (14.7%), then cardiovascular diseases (13.6%), with neurological disorders (12.7) in fourth place, and then musculoskeletal disorders in fifth (12.5%). Men also experienced more burden from self-harm and interpersonal violence than women (3.1% and 1.1%, respectively). Women, however, experienced more burden than men from neurological disorders (12.7% and 7.6%, respectively) and musculoskeletal conditions (12.5% and 8.7%, respectively).

Although the ranking of disease burden by disease groupings shown in **Table 3** is broadly the same for men and women, **Figure 3** illustrates how there are notable differences in the gender contribution for some disease groupings. For example, men suffer 74% of the burden for self-harm and interpersonal violence, 73% of

transport injuries, 59% of the chronic liver disease (including cirrhosis) and 56% of the cardiovascular diseases burden. In contrast, women suffer 72% of the burden for nutritional deficiencies, 64% of the neurological disorders burden, 60% of the burden for musculoskeletal disorders and 55% of the chronic respiratory disease burden.

Figure 3: Percentage of total burden by gender and by disease group, 2015.



The distribution of the burden in these disease groups varied considerably when both age and gender are taken into consideration (**Table 4**). Among infants and children, for example, other non-communicable diseases (which includes congenital anomalies) and neonatal disorder were the highest ranked disease groups, accounting for over 50% of disease burden in this age group.

For the 15–34 years age group, mental and substance use disorders and neurological disorders were the leading causes of burden for both men and women

(contributing over half of the total burden for this age group). Musculoskeletal disorders were the third largest contributor to disease burden in women in this age group, whereas in men it was self-harm and interpersonal violence.

In both men and women aged 35–64 years, mental and substance use disorders and cancers were the main causes of burden, followed by neurological disorders for women and cardiovascular disorders for men. Cardiovascular diseases and cancers were the leading causes of burden in men and women age 65 years and over, accounting for almost one-quarter (23%) of the disease burden in this age group.

Table 4: Ranking of level 2 groups, by age and gender, Scotland, 2015.

| | Overall | Men | | | | | Women | | | | |
|--|---------|----------|----------|-------|-------|------|----------|----------|-------|-------|------|
| | | All ages | Under 15 | 15-34 | 35-64 | ≥ 65 | All ages | Under 15 | 15-34 | 35-64 | ≥ 65 |
| Cancers | 1 | 2 | 9 | 8 | 2 | 2 | 1 | 9 | 5 | 2 | 2 |
| Cardiovascular diseases | 2 | 1 | 12 | 9 | 3 | 1 | 3 | 13 | 10 | 5 | 1 |
| Mental and substance use disorders | 3 | 3 | 6 | 1 | 1 | 8 | 2 | 8 | 1 | 1 | 8 |
| Neurological disorders | 4 | 4 | 3 | 2 | 4 | 6 | 5 | 3 | 2 | 3 | 5 |
| Musculoskeletal disorders | 5 | 5 | 8 | 4 | 5 | 3 | 4 | 6 | 3 | 4 | 3 |
| Chronic respiratory diseases | 6 | 7 | 4 | 10 | 10 | 4 | 6 | 5 | 7 | 6 | 4 |
| Other non-communicable diseases | 7 | 6 | 2 | 5 | 9 | 7 | 7 | 2 | 4 | 8 | 6 |
| Diabetes, urogenital, blood, and endocrine diseases | 8 | 8 | 10 | 11 | 7 | 5 | 8 | 10 | 6 | 7 | 7 |
| Unintentional injuries | 9 | 9 | 5 | 6 | 11 | 11 | 10 | 4 | 9 | 11 | 11 |
| Digestive diseases | 10 | 12 | 14 | 12 | 12 | 10 | 9 | 15 | 11 | 10 | 9 |
| Chronic liver disease | 11 | 11 | 15 | 13 | 6 | 12 | 12 | 16 | 16 | 9 | 12 |
| Self-harm and interpersonal violence | 12 | 10 | 16 | 3 | 8 | 13 | 13 | 11 | 8 | 12 | 16 |
| Diarrhoea, lower respiratory, and other common infectious diseases | 13 | 13 | 7 | 15 | 14 | 9 | 11 | 7 | 15 | 13 | 10 |
| Neonatal disorders | 14 | 15 | 1 | 14 | 21 | 21 | 14 | 1 | 14 | 21 | 21 |
| Transport injuries | 15 | 14 | 11 | 7 | 13 | 14 | 15 | 12 | 12 | 14 | 14 |
| Nutritional deficiencies | 16 | 18 | 13 | 19 | 17 | 15 | 16 | 14 | 13 | 15 | 13 |
| Other communicable and nutritional diseases | 17 | 16 | 17 | 16 | 16 | 16 | 17 | 18 | 18 | 16 | 15 |
| HIV/AIDS and tuberculosis | 18 | 17 | 18 | 17 | 15 | 17 | 19 | 17 | 19 | 17 | 17 |
| Maternal disorders | 19 | 21 | 21 | 21 | 20 | 20 | 18 | 20 | 17 | 18 | 20 |
| Forces of nature, war, and legal intervention | 20 | 19 | 19 | 18 | 18 | 18 | 20 | 21 | 20 | 19 | 18 |
| Neglected tropical diseases and malaria | 21 | 20 | 20 | 20 | 19 | 19 | 21 | 19 | 21 | 20 | 19 |

Note: the data used for this image are also available in **Excel**.

Chapter 4: Which individual diseases cause the most burden?

In Chapter 3, we presented DALY results by 21 broad disease groupings. In this section, we focus on those individual diseases that account for the majority of the disease burden, by gender and age group in Scotland. **Table 5** below presents the percentage and ranking by gender for the 25 diseases with the highest DALYs in Scotland in 2015.

Table 5: Percentage of DALY and rank for the individual diseases with highest DALYs by gender, 2015.

| Disease group | Men, % of total DALY | Men, rank | Women, % of total DALY | Women, rank | All persons, % of total DALY | All persons, rank |
|--|----------------------|-----------|------------------------|-------------|------------------------------|-------------------|
| Ischaemic heart disease | 9.6 | 1 | 5.3 | 3 | 7.4 | 1 |
| Neck and lower back pain | 5.5 | 2 | 7.8 | 1 | 6.6 | 2 |
| Depression | 4.1 | 5 | 7.0 | 2 | 5.6 | 3 |
| Chronic obstructive pulmonary disease | 4.0 | 6 | 4.9 | 5 | 4.5 | 4 |
| Trachea, bronchus, and lung cancers | 4.4 | 4 | 4.3 | 7 | 4.4 | 5 |
| Cerebrovascular disease | 4.0 | 7 | 4.4 | 6 | 4.2 | 6 |
| Alzheimer's disease and other dementias | 3.0 | 9 | 5.3 | 4 | 4.2 | 7 |
| Drug use disorders | 5.0 | 3 | 2.0 | 12 | 3.5 | 8 |
| Sense organ diseases | 2.5 | 10 | 2.5 | 11 | 2.5 | 9 |
| Anxiety disorders | 1.4 | 20 | 3.0 | 9 | 2.2 | 10 |
| Chronic liver diseases (including cirrhosis) | 2.5 | 11 | 1.7 | 15 | 2.1 | 11 |
| Alcohol dependence | 3.2 | 8 | 1.0 | 27 | 2.1 | 12 |
| Migraine | 0.9 | 32 | 3.2 | 8 | 2.0 | 13 |
| Diabetes mellitus | 2.2 | 13 | 1.6 | 16 | 1.9 | 14 |
| Colon and rectum cancer | 2.1 | 14 | 1.7 | 13 | 1.9 | 15 |

| Disease group | Men, % of total DALY | Men, rank | Women, % of total DALY | Women, rank | All persons, % of total DALY | All persons, rank |
|---|----------------------------|--------------|---------------------------------|----------------|---------------------------------------|-------------------------|
| Suicide and self-harm related injuries | 2.4 | 12 | 0.9 | 31 | 1.6 | 16 |
| Other cardiovascular and circulatory diseases | 1.5 | 17 | 1.6 | 17 | 1.6 | 17 |
| Lower respiratory infections | 1.5 | 19 | 1.6 | 18 | 1.5 | 18 |
| Falls | 1.7 | 16 | 1.4 | 23 | 1.5 | 19 |
| Breast cancer | 0.0 | 115 | 2.9 | 10 | 1.5 | 20 |
| Other musculoskeletal disorders | 1.3 | 21 | 1.5 | 19 | 1.5 | 21 |
| Medication overuse headache | 1.1 | 27 | 1.5 | 20 | 1.3 | 22 |
| Rheumatoid arthritis | 0.8 | 36 | 1.7 | 14 | 1.3 | 23 |
| Skin and subcutaneous diseases | 1.1 | 24 | 1.4 | 22 | 1.2 | 24 |
| Osteoarthritis | 0.9 | 30 | 1.5 | 21 | 1.2 | 25 |
| Total of 25 diseases with highest disease burden | 66.6 | | 71.7 | | 69.2 | |

These 25 diseases, conditions or injuries accounted for over two-thirds (69.2%) of the disease burden (66.6% in men and 71.7% in women) in Scotland in 2015. Five diseases alone: ischaemic heart disease, depression, neck and lower back pain, lung cancer and chronic obstructive pulmonary disease (COPD) account for over one-quarter (28.5%) of the disease burden in Scotland.

Overall, ischaemic heart disease was the largest contributor to the disease burden in Scotland (7.4% of total DALYs) followed by neck and lower back pain (6.6%) and depression (5.6%). However, the proportion of burden contributed by individual diseases varies considerably between men and women, for example:

- Ischaemic heart disease was the largest contributor to the disease burden in men (9.6% of male DALYs), but was third for women (5.3% of female DALYs).
- Depression was the second highest contributor to women's disease burden (7.0% of female DALYs), but was ranked fifth in men (4.1%).

- The total DALYs contributed by trachea, bronchus and lung cancers were similar in men (4.4%) and women (4.3%). However, while these conditions were the fourth highest contributor to men's disease burden, it ranked seventh among women.
- Alzheimer's disease and other dementias were the fourth highest contributor to the disease burden in women (5.3% of female DALYs) but in men it was the ninth highest contributor to disease burden (3.0%).
- Migraine ranked eighth in women and accounted for 3.2% of their total DALYs but was ranked 32nd in men (0.9% of male DALYs).
- Anxiety disorders were the ninth highest contributor to female DALYs (3.0%), compared with 20th in men (1.4% of male DALYs).
- Rheumatoid arthritis was ranked 14th in women and accounted for 1.7% of their total DALYs but was ranked 36th in men (0.8% of male DALYs).
- Men suffered a proportionately higher disease burden than women from: alcohol dependence (3.2% of male DALYs vs. 1.0% of female DALYs); drug use disorders (5.0% vs. 2.0%), chronic liver disease (including cirrhosis) (2.5% vs. 1.7%), and suicide and self-harm-related injuries (2.4% vs. 0.9%). Women suffered a proportionately higher burden of neck and lower back pain than men (7.8% versus 5.5%).

Age and gender patterns in burden of disease for individual diseases

The previous section looked at the different contributions made by each disease, condition or injury to the total DALYs for men and women. This section now looks at the gender balance within each specific disease. Rate ratios and rate differences of crude rates were compared to evaluate the difference in total burden between men and women for each of the 25 diseases contributing the highest disease burden in Scotland in 2015 (**Table 6**).

A rate ratio of 1.0 indicates that the crude rates for men and women were the same; a rate higher than 1.0 shows that the burden was higher among men; and a rate lower than 1.0 shows that the burden was lower among men.

The combined men:women rate ratio for the 25 diseases contributing the highest disease burden in Scotland was 0.9 (indicating a higher disease burden experience overall for women for the 25 leading causes of disease burden in Scotland).

However, there were clear differences in burden by individual diseases (**Table 6**).

Men had 3.2 times the burden from alcohol dependence, 2.7 times the burden from suicide and self-harm, 2.5 times the burden from drug use disorders, 1.8 times the burden from ischaemic heart disease and 1.5 times the burden from chronic liver disease (including cirrhosis). Women experienced higher rates of burden than men for some diseases, such as migraine, anxiety disorders, Alzheimer's disease and other dementias, rheumatoid arthritis, osteoarthritis and depression.

Table 6: Comparison of crude DALY rates – male:female ratios by individual disease, 2015.

| DALY rank | Disease | Crude DALY per 100 000, men | Crude DALY per 100 000, women | Men:women ratio |
|------------------|---|------------------------------------|--------------------------------------|------------------------|
| 1 | Ischaemic heart disease | 2,424 | 1,344 | 1.8 |
| 2 | Neck and lower back pain | 1,387 | 1,952 | 0.7 |
| 3 | Depression | 1,039 | 1,770 | 0.6 |
| 4 | Chronic obstructive pulmonary disease | 1,025 | 1,230 | 0.8 |
| 5 | Trachea, bronchus, and lung cancers | 1,121 | 1,085 | 1.0 |
| 6 | Cerebrovascular disease | 1,009 | 1,106 | 0.9 |
| 7 | Alzheimer's disease and other dementias | 749 | 1,331 | 0.6 |
| 8 | Drug use disorders | 1,261 | 505 | 2.5 |
| 9 | Sense organ diseases | 644 | 634 | 1.0 |
| 10 | Anxiety disorders | 358 | 749 | 0.5 |
| 11 | Chronic liver diseases (including cirrhosis) | 631 | 423 | 1.5 |
| 12 | Alcohol dependence | 801 | 251 | 3.2 |
| 13 | Migraine | 225 | 793 | 0.3 |
| 14 | Diabetes mellitus | 551 | 410 | 1.3 |
| 15 | Colon and rectum cancer | 520 | 432 | 1.2 |
| 16 | Suicide and self-harm-related injuries | 617 | 226 | 2.7 |
| 17 | Other cardiovascular and circulatory diseases | 392 | 392 | 1.0 |
| 18 | Lower respiratory infections | 389 | 391 | 1.0 |
| 19 | Falls | 424 | 343 | 1.2 |
| 20 | Breast cancer | 2 | 717 | 0.0 |
| 21 | Other musculoskeletal disorders | 342 | 389 | 0.9 |
| 22 | Medication overuse headache | 270 | 388 | 0.7 |
| 23 | Rheumatoid arthritis | 209 | 426 | 0.5 |
| 24 | Skin and subcutaneous diseases | 279 | 349 | 0.8 |
| 25 | Osteoarthritis | 239 | 376 | 0.6 |
| | Total of 25 diseases with highest disease burden | 16,910 | 18,014 | 0.9 |

Note: shaded boxes indicate where the burden was higher for women than men.

The overall disease burden was not evenly distributed over the different stages of life for either men or women. This was partly owing to different diseases that have an impact at different ages, and partly owing to the different population structures for men and women. The individual disease burden in the four broad age groups is described below and in **Table 7**.

Table 7: Diseases ranked by overall DALY, and then ranked within age and gender strata, Scotland, 2015.

| | Overall | Males | | | | | Females | | | | |
|---|---------|----------|----------|-------|-------|------|----------|----------|-------|-------|------|
| | | All ages | Under 15 | 15-34 | 35-64 | ≥ 65 | All ages | Under 15 | 15-34 | 35-64 | ≥ 65 |
| Ischaemic heart disease | 1 | 1 | 76 | 21 | 1 | 1 | 3 | 76 | 52 | 8 | 2 |
| Neck and lower back pain | 2 | 2 | 6 | 3 | 2 | 8 | 1 | 5 | 1 | 2 | 6 |
| Depression | 3 | 5 | 52 | 5 | 4 | 13 | 2 | 49 | 2 | 1 | 7 |
| Chronic obstructive pulmonary disease | 4 | 6 | 18 | 30 | 9 | 5 | 5 | 17 | 23 | 5 | 4 |
| Trachea, bronchus, and lung cancers | 5 | 4 | 105 | 59 | 6 | 2 | 7 | 106 | 62 | 7 | 5 |
| Cerebrovascular disease | 6 | 7 | 27 | 32 | 10 | 4 | 6 | 46 | 37 | 11 | 3 |
| Alzheimer's disease and other dementias | 7 | 9 | 23 | 99 | 56 | 3 | 4 | 50 | 95 | 43 | 1 |
| Drug use disorders | 8 | 3 | 68 | 1 | 3 | 71 | 12 | 65 | 4 | 9 | 101 |
| Sense organ diseases | 9 | 10 | 22 | 18 | 14 | 6 | 11 | 16 | 12 | 17 | 8 |
| Anxiety disorders | 10 | 20 | 47 | 8 | 13 | 38 | 9 | 44 | 5 | 3 | 20 |
| Chronic liver diseases (including cirrhosis) | 11 | 11 | 42 | 20 | 5 | 20 | 15 | 51 | 26 | 10 | 24 |
| Alcohol dependence | 12 | 8 | 55 | 2 | 7 | 32 | 27 | 70 | 8 | 21 | 70 |
| Migraine | 13 | 32 | 34 | 7 | 29 | 73 | 8 | 28 | 3 | 4 | 56 |
| Diabetes mellitus | 14 | 13 | 39 | 24 | 12 | 10 | 16 | 38 | 28 | 19 | 12 |
| Colon and rectum cancer | 15 | 14 | 97 | 31 | 15 | 9 | 13 | 93 | 54 | 16 | 11 |
| Suicide and self-harm related injuries | 16 | 12 | 54 | 4 | 8 | 63 | 31 | 37 | 10 | 18 | 79 |
| Lower respiratory infections | 18 | 19 | 21 | 43 | 24 | 11 | 18 | 24 | 43 | 31 | 10 |
| Falls | 19 | 16 | 15 | 12 | 16 | 17 | 23 | 10 | 17 | 32 | 15 |
| Breast cancer | 20 | 115 | 116 | 116 | 103 | 105 | 10 | 118 | 27 | 6 | 9 |
| Other musculoskeletal disorders | 21 | 21 | 8 | 9 | 21 | 33 | 19 | 9 | 9 | 14 | 23 |
| Medication overuse headache | 22 | 27 | 64 | 13 | 17 | 49 | 20 | 47 | 6 | 13 | 33 |
| Skin and subcutaneous diseases | 24 | 24 | 4 | 11 | 32 | 40 | 22 | 3 | 7 | 26 | 37 |
| Schizophrenia | 26 | 18 | 78 | 10 | 11 | 45 | 32 | 62 | 20 | 20 | 44 |
| Asthma | 32 | 39 | 5 | 16 | 38 | 59 | 26 | 7 | 11 | 27 | 40 |
| Congenital anomalies | 33 | 31 | 1 | 14 | 39 | 77 | 34 | 2 | 15 | 36 | 80 |
| Road injuries | 34 | 23 | 17 | 6 | 18 | 54 | 47 | 23 | 21 | 41 | 62 |
| Prostate cancer | 35 | 15 | 109 | 108 | 33 | 7 | 130 | 87 | 127 | 125 | 116 |
| Diarrhoea and other common infectious diseases | 56 | 54 | 9 | 40 | 64 | 67 | 51 | 13 | 34 | 60 | 53 |
| Other neonatal disorders | 60 | 60 | 3 | 121 | 120 | 121 | 57 | 1 | 129 | 129 | 119 |
| Preterm birth complications | 63 | 56 | 2 | 70 | 120 | 121 | 65 | 4 | 75 | 127 | 119 |
| Neonatal encephalopathy (birth asphyxia and birth trauma) | 79 | 78 | 11 | 37 | 116 | 119 | 76 | 6 | 41 | 124 | 119 |
| Autistic spectrum disorders | 81 | 67 | 7 | 22 | 99 | 113 | 94 | 18 | 46 | 102 | 107 |
| Sudden infant death syndrome | 91 | 87 | 10 | 121 | 120 | 121 | 85 | 8 | 129 | 129 | 119 |

Note: the data used for this image are also available in **Excel**.

Infants and children aged 0–14 years

Among infants and children aged 0–14 years, anomalies present at birth (e.g. Down's syndrome, congenital heart anomalies), pre-term birth complications and other neonatal disorders were the largest contributors to disease burden in this age group in both genders, accounting for approximately one-quarter of all DALYs in those under 15 years of age.

Adolescents and young adults aged 15–34 years

The distribution of diseases responsible for the burden among adolescents and young adults was different by gender. Alcohol dependence, drug use disorders, suicide and self-harm-related injuries, and neck and lower back pain were the major contributors to disease burden among men (accounting for nearly half of the disease burden in men in this age group). In contrast, migraine, neck and lower back pain, and depression were the largest contributors to women's disease burden in this age group (accounting for over 40% of their DALYs).

Adults aged 35–64 years

In this age group, ischaemic heart disease was the main cause of burden in men, followed by neck and lower back pain, then drug use disorders. In women of this age group, depression was the main cause of burden followed by neck and lower back pain and then anxiety. Notably, chronic liver disease (including cirrhosis) was the fifth main cause of burden in men but only 10th in women.

Adults aged 65 years and over

Alongside lung cancer, chronic diseases such as ischaemic heart disease, chronic obstructive pulmonary disease, Alzheimer's disease and other dementias, and cerebrovascular diseases were the major contributors to burden in both men and women aged 65 years and over. There were some differences in the relative

rankings. For example, lung cancer was the second largest contributor for men but was ranked fifth for women in this age group. Alzheimer's disease and other dementias were the main cause of burden in women aged 65 years and over and the third largest in men.

How can I find out more?

Visit our web pages at www.scotpho.org.uk/comparative-health/burden-of-disease/overview to find other reports in our Scottish Burden of Disease series, technical information and detailed results for all 132 diseases and injuries.

Contact the Scottish Burden of Disease team at: nhs.healthscotland-sbod-team@nhs.net

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