



Ministry  
of Defence

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Dear [REDACTED]

Thank you for your email dated 13 March 2023 requesting the following information:

I was hoping that you would be able to provide me with the details pertaining to the number of deaths related to heart disease within the armed forces, preferably for the last 20 years or so; alongside any information regarding the number of troops discharged from service due to cardiovascular problems.

I am treating your correspondence as a request for information under the Freedom of Information Act 2000. A search for the information has now been completed within the Ministry of Defence, and I can confirm that information in scope of your request is held.

Section 40(2) has been applied to some of the information to protect personal information as governed by the Data Protection Act 2018 and GDPR. In line with JSP200 Statistics Disclosure Guidance, some demographic categories have been combined to reduce the possible inadvertent disclosure of individual identities. Section 40 is an absolute exemption and there is therefore no requirement to consider the public interest in deciding to withhold the information.

From 1 January 2003 to 31 December 2022, **173** UK armed forces personnel died from diseases of the circulatory system. **Table 1** presents this information by ICD10<sup>1</sup> circulatory system blocks as defined in chapter four.

From 1 January 2003 to 31 December 2022, **1,236** UK regular armed forces personnel were medically discharged with an ICD-10 code for circulatory system disorders listed as a principal or contributory cause (**Table 2**).

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<sup>1</sup> International statistical classification of diseases and related health problems 10th revision

**Table 1: UK regular armed forces deaths by diseases of the circulatory system, numbers.  
1 January 2003 – 31 December 2022**

Cause	n
<b>Disease of the circulatory system</b>	<b>173</b>
<b>Hypertensive diseases (I10-I15)</b>	<b>3</b>
Hypertensive heart disease	3
<b>Ischemic heart diseases (I20-I25)</b>	<b>75</b>
Acute myocardial infarction	27
Chronic ischaemic heart disease	46
Other acute ischaemic heart diseases	2
<b>Pulmonary heart disease and diseases of pulmonary circulation (I26-I28)</b>	<b>7</b>
Pulmonary embolism	7
<b>Other forms of heart disease (I30-I52)</b>	<b>56</b>
Acute and subacute endocarditis	1
Acute myocarditis	1
Atrial fibrillation and flutter	1
Cardiac arrest	18
Cardiomyopathy	8
Complications and ill-defined descriptions of heart disease	12
Heart failure	7
Nonrheumatic aortic valve disorders	1
Other cardiac arrhythmias	5
Other conduction disorders	2
<b>Cerebrovascular diseases (I60-I69)</b>	<b>22</b>
Cerebral infarction	1
Intracerebral haemorrhage	4
Other cerebrovascular diseases	1
Other nontraumatic intracranial haemorrhage	1
Stroke, not specified as haemorrhage or infarction	8
Subarachnoid haemorrhage	7
<b>Diseases of arteries, arterioles and capillaries (I70-I79)</b>	<b>7</b>
Aortic aneurysm and dissection	4
Arterial embolism and thrombosis	2
Other disorders of arteries and arterioles	1
<b>Diseases of veins, lymphatic vessels and lymph nodes, not elsewhere classified (I80-I89)</b>	<b>3</b>
Phlebitis and thrombophlebitis	3

Source: Defence Statistics Health

1. UK regular armed forces, including all trained and untrained personnel and non-regulars who died on deployment

**Table 2: UK regular armed forces personnel<sup>1</sup> medically discharged with a principal or contributory cause of circulatory system disorders and subgroup<sup>2,3</sup>, numbers 1 January 2003 to 31 December 2022<sup>4</sup>**

Cause	n
<b>Disease of the circulatory system</b>	<b>1,236</b>
<b>Chronic rheumatic heart diseases (I05-I09)</b>	~
Rheumatic mitral valve diseases	~
<b>Hypertensive diseases (I10-I15)</b>	<b>260</b>
Essential (primary hypertension)	257
Hypertensive renal disease	~
Secondary hypertension	~
<b>Ischemic heart diseases (I20-I25)</b>	<b>102</b>
Angina pectoris	9
Acute myocardial infarction	48
Certain current complications following acute myocardial infarction	~
Other acute ischaemic heart diseases	~
Chronic ischaemic heart disease	53
<b>Pulmonary heart disease and diseases of pulmonary circulation (I26-I28)</b>	<b>67</b>
Pulmonary embolism	62
Other pulmonary heart diseases	~
Other diseases of pulmonary vessels	~
<b>Other forms of heart disease (I30-I52)</b>	<b>236</b>
Acute pericarditis	~
Other diseases of pericardium	12
Nonrheumatic mitral valve disorders	6
Nonrheumatic aortic valve disorders	13
Endocarditis, valve unspecified	~
Acute myocarditis	8
Myocarditis in diseases classified elsewhere	~
Cardiomyopathy	54
Atrioventricular and left bundle- branch block	7
Other conduction disorders	17
Cardiac arrest	~
Paroxysmal tachycardia	31
Atrial fibrillation and flutter	53
Other cardiac arrhythmias	23
Heart failure	~
Complications and ill-defined descriptions of heart disease	14
<b>Cerebrovascular diseases (I60-I69)</b>	<b>100</b>
Subarachnoid haemorrhage	16
Intracerebral haemorrhage	10
Other nontraumatic intracranial haemorrhage	~
Cerebral infarction	19
Stroke, not specified as haemorrhage or infarction	40
Occlusion and stenosis of precerebral arteries, not resulting in cerebral infarction	~
Occlusion and stenosis of cerebral arteries, not resulting in cerebral infarction	~
Other cerebrovascular diseases	9
<b>Diseases of arteries, arterioles, and capillaries (I70-I79)</b>	<b>250</b>
Aortic aneurysm and dissection	~

Other aneurysm and dissection	5
Other peripheral vascular diseases	223
Arterial embolism and thrombosis	5
Other disorders of arteries and arterioles	11
Diseases of capillaries	~
<b>Diseases of veins, lymphatic vessels and lymph nodes, not elsewhere classified (I80-I89)</b>	<b>131</b>
Phlebitis and thrombophlebitis	71
Portal vein thrombosis	~
Other venous embolism and thrombosis	14
Varicose veins of lower extremities	11
Haemorrhoids	~
Oesophageal varices	~
Varicose veins of other sites	20
Other disorders of veins	~
Nonspecific lymphadenitis	~
Other noninfective disorders of lymphatic vessels and lymph nodes	7
<b>Other and unspecified disorders of the circulatory system (I95-I99)</b>	<b>155</b>

Source: FMed 23, DMICP & JPA.

1 UK regular armed forces includes trained and untrained personnel, Gurkhas and MPGS.

2 Personnel are only counted once per cause subgroup.

3 Personnel may have multiple subgroups associated with their medical discharge. Therefore, the subgroup breakdown may not equal the total.

4 Data from 1 April 2022 onwards is provisional and subject to change.

~ In line with JSP 200 figures fewer than five have been suppressed. Where there was only one cell in a row or column that was fewer than five, the next smallest number has also been suppressed so that numbers cannot simply be derived from totals.

Please note, personnel can be discharged due to multiple conditions and therefore circulatory system disorders may not be the only cause of medical discharge.

Under section 16 of the Act (Advice and Assistance), you may find it useful to note the following:

Due to the small numbers of some causes of circulatory system deaths and medical discharges, numbers have been presented for the whole twenty year period in line with Joint Service Publication 200 – statistics, guidance for statistical disclosure control.

Defence Statistics Health compiles the Department's authoritative deaths database for all **UK Armed Forces personnel who died whilst in Service** going back to 1984. Information is compiled from several internal and external sources from which we release several internal analyses and external National Statistics Notices.

Defence Statistics receive weekly notifications of all regular armed forces deaths from the Joint Casualty and Compassionate Cell (formerly the single service casualty cells). Defence Statistics also receive cause of death information from military medical sources in the single services. At the end of each calendar year, Defence Statistics cross-reference the medical information it holds against publicly available death certificate information available from NHS Digital and The General Registrar's Office Scotland.

To record information on cause of death, coding is carried out according to World Health Organisation's International Classification of Diseases 10th edition (ICD-10) and internationally agreed rules. Deaths from diseases of the circulatory system were identified as personnel with a principal ICD10 code between I00 and I99.

The information on deaths presented are for the UK regular armed forces, including all trained and untrained personnel and non-regulars who died on deployment are also included since they are classified as 'regular' personnel for the duration of their overseas deployment.

Medical discharge figures presented are for UK Regular armed forces personnel (including Gurkhas and MPGS).

Medical discharges are the result of several specialists (medical, occupational, psychological, personnel, etc.) coming to the conclusion that an individual is suffering from a medical condition that pre-empts their continued service in the armed forces. Statistics based on these discharges do not represent measures of true morbidity or pathology. At best they indicate a minimum burden of ill-health in the armed forces. Furthermore, the number and diversity of processes involved with administering a medical discharge introduce a series of time lags, as well as impact on the quality of data recorded.

The information on medical discharges was sourced from electronic personnel records from Defence Medical Information Capability Programme (DMICP) and manually entered paper documents from medical boards (FMed 23s). The primary purpose of these medical documents is to ensure the appropriate administration of each individual patient's discharge. Statistical analysis and reporting is a secondary function.

Medical discharges due to circulatory system disorders were identified as personnel who were discharged with a principal or contributory cause coded between I00 and I99 in ICD-10.

The principal condition of discharge is the first principal ICD-10 code on the medical discharge documents. Contributory causes of medical discharge are any other condition on the medical discharge documents.

Defence Statistics release annual updates on medical discharges in the UK armed forces as an Official Statistic publication. The last statistical release was on 15 July 2021 which presented data up to 31 March 2021. The latest report can be found at:

<https://www.gov.uk/government/collections/medical-discharges-among-uk-service-personnel-statistics-index>

If you have any queries regarding the content of this letter, please contact this office in the first instance.

If you wish to complain about the handling of your request, or the content of this response, you can request an independent internal review by contacting the Information Rights Compliance team, Ground Floor, MOD Main Building, Whitehall, SW1A 2HB (e-mail [CIO-FOI-IR@mod.gov.uk](mailto:CIO-FOI-IR@mod.gov.uk)). Please note that any request for an internal review should be made within 40 working days of the date of this response.

If you remain dissatisfied following an internal review, you may raise your complaint directly to the Information Commissioner under the provisions of Section 50 of the Freedom of Information Act. Please note that the Information Commissioner will not normally investigate your case until the MOD internal review process has been completed. The Information Commissioner can be contacted at: Information Commissioner's Office, Wycliffe House, Water Lane, Wilmslow, Cheshire, SK9 5AF. Further details of the role and powers of the Information Commissioner can be found on the Commissioner's website at <https://ico.org.uk/>.

I hope this is helpful.

Yours sincerely

Defence Statistics Health Head (B1)