



This Official Statistic provides summary information on deaths among UK Regular Armed Forces personnel and 'on duty' Reservists which occurred whilst on training or exercise from 1 January 2000 to 31 August 2019. This information was first published as an Official Statistic on 30 March 2017.

On the 16 October 2015 the Sub-Committee of the House of Commons Defence Select Committee announced an inquiry into the duty of care of Service personnel during military training: [Beyond endurance? Military exercises and the duty of care inquiry](#). This bulletin has been developed in support of the inquiry and subsequently continued after its conclusion on 29 November 2016 in order to provide Official Statistics and meet the continued public interest in the number of UK Armed Forces who die whilst on training and exercise. Publishing this information ensures the public has equal access to the information and supports the MOD's commitment to release information where possible.

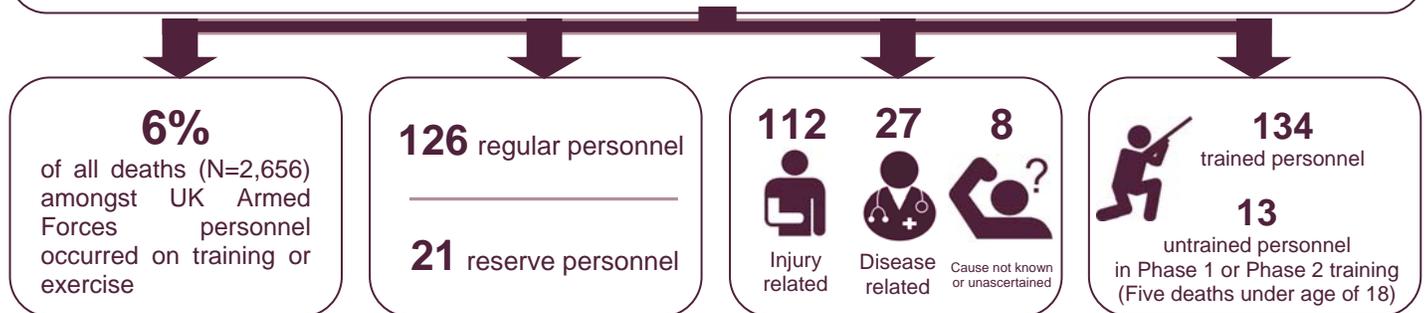
The statistics provided are for all types of training and exercise and for all causes of death: disease related conditions; injuries; or where the cause was not yet known or unascertained.

Key Points and Trends

147

UK Armed Forces deaths whilst on training or exercise 1 January 2000 to 31 August 2019

Since the previous release of this information on 28 March 2019 there have been **no** deaths on training or exercise.



Naval Service

25 deaths in the **Naval Service**
Nine from the Royal Navy
16 from the Royal Marines

Biggest cause of death:
 Diving or Snorkeling Incidents with **seven** deaths

Army

99 deaths in the **Army**

Biggest cause of death:
 Disease-related conditions with **21** deaths

RAF

23 deaths in the **RAF**

Biggest cause of death:
 Aircraft accidents with **12** deaths

Responsible Statistician: Deputy Head of Health Tel: 030 67984423 Email: DefStrat-Stat-Health-Hd@mod.gov.uk
Further Information/Mailing list: Tel: 030 67984423 Email: DefStrat-Stat-Health-PQ-FOI@mod.gov.uk
Press office: Tel: 020 72183253
Background Quality Report: <https://www.gov.uk/government/statistics/military-deaths-in-service-statistics-background-quality-reports>

Would you like to be added to our **contact list**, so that we can inform you about updates to these statistics and consult you if we are thinking of making changes? You can subscribe to updates by emailing DefStrat-Stat-WDS-Pubs@mod.gov.uk

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Other bulletins in this series can be found at:
<https://www.gov.uk/government/collections/training-and-exercise-deaths-in-the-uk-armed-forces>

Supplementary tables and further detail containing all data presented in this publication can be found at:
<https://www.gov.uk/government/collections/training-and-exercise-deaths-in-the-uk-armed-forces>

Introduction

The ultimate aim of all training is the creation of resilient soldiers and commanders who can analyse, decide and manoeuvre to win in the complex battle space of the 21st Century. Training provides the means to practice, develop, and validate, within constraints, the practical application of a common doctrine. It also provides the basis for the training of commanders and their staffs in the exercise of command and control respectively. Training should produce force elements at readiness to deploy and undertake specified tasks. Once committed to operations, training plays an important role in optimising the force to meet developing mission requirements.

This report provides information on deaths among UK Regular Armed Forces personnel and ‘on duty’ Reservists which occurred whilst on training and exercise. These data does not include members of the Royal Fleet Auxiliary, Merchant Navy or MOD civilians.

The data used in this report forms a subset of data from the National Statistic publication: [Deaths in the UK Regular Armed Forces: Annual Summary and Trends over Time - 1 January 2007 to 28 March 2019](#)¹. Each report uses different ways of categorising deaths and are therefore mutually exclusive of one another.

On 16 October 2015 the Sub-Committee of the House of Commons Defence Select Committee announced an inquiry into the duty of care of Service personnel during military training: [Beyond endurance? Military exercises and the duty of care inquiry](#)². This Official Statistic was developed in support of the inquiry and subsequently continued after its conclusion on 29 November 2016 to provide Official Statistics to meet the continued public interest in the number of UK Armed Forces who die whilst on training and exercise.

This information was first published as an Official Statistic on 30 March 2017.

Publishing this information ensures the public has equal access to the information and supports the MOD’s commitment to release information where possible.

¹ <https://www.gov.uk/government/collections/uk-armed-forces-deaths-in-service-statistics-index>

² <http://www.parliament.uk/business/committees/committees-a-z/commons-select/defence-committee/defencesubcommittee/inquiries/parliament-2015/inquiry/>

In order to provide sufficient time to complete analysis for this publication, the information shown has been compiled from data held by Defence Statistics as at 31 August 2019.

Details of the data sources and methods used to collect and analyse these data are described in the '**Methodology**' section of the report. In line with National Statistics protocols, amendments have been annotated by the letter 'r' and explanations provided in the section '**Changes to previously published data**'.

All tables provided in the release of this report are available in separate MS Excel or OpenOffice document files. These can be accessed at <https://www.gov.uk/government/collections/training-and-exercise-deaths-in-the-uk-armed-forces>

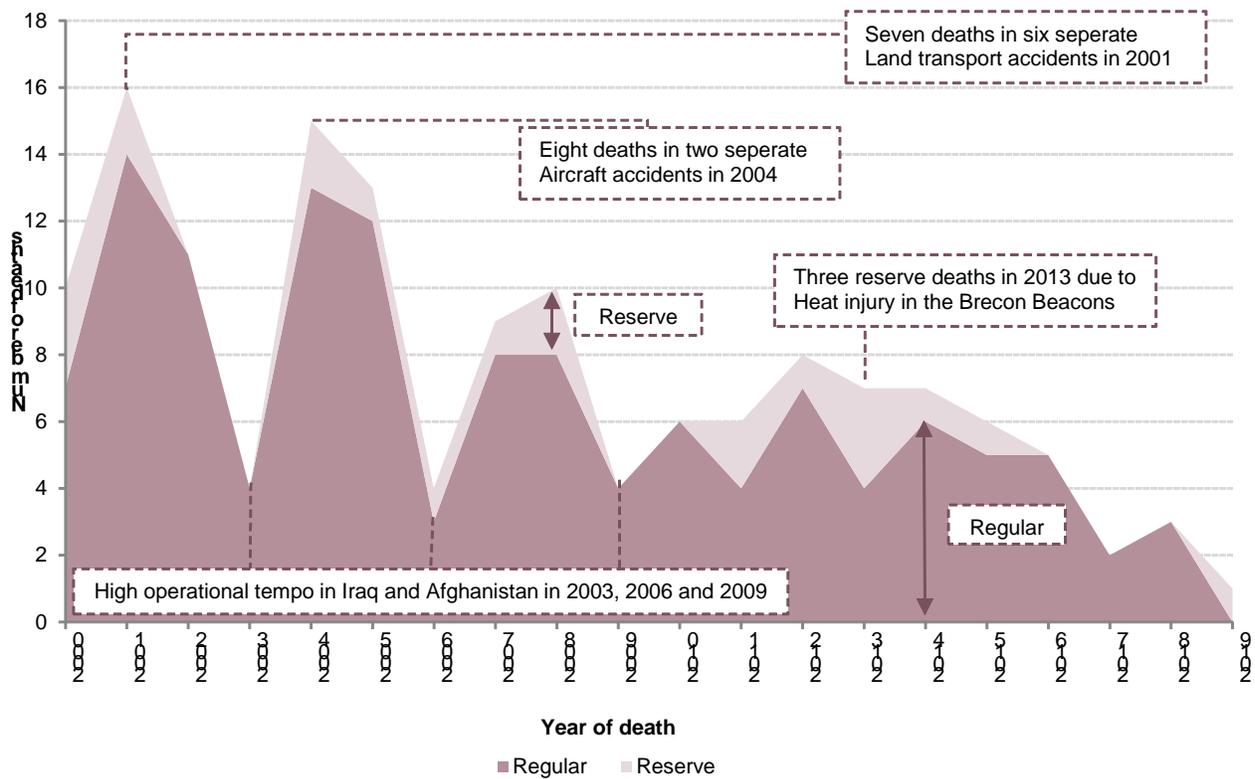
Results

Figure 1 presents the number of UK Armed Forces deaths which occurred whilst on training or exercise by year of death. From 1 January 2000 up to and including 31 August 2019, **147** UK Armed Forces personnel died whilst taking part in some form of training or exercise. This represents 6% of all UK Regular Armed Forces personnel and 'on-duty' reservist deaths (N=2,656) for the same period.

The most training and exercise deaths observed in any given year were in 2001 when 16 personnel died. Seven personnel died in six separate Land Transport Accidents in this year.

A further breakdown of these deaths by regular and reserve forces can be found in the accompanying [supplementary tables](#)³ to this document.

Figure 1: UK Armed Forces¹ deaths² on training³ or exercise by calendar year⁴, numbers
1 January 2000 to 31 August 2019



Source: Defence Statistics Health

1. Figures are for regular and reservist personnel 'on duty'.
2. Figures are for all causes of death and therefore include those deaths that occurred due to injury or natural causes whilst on training or exercise.
3. Figures are for all types of training and exercise.
4. Up to and including 31 August 2019.

Figures 2 to 4 present the number of UK Armed Forces deaths which occurred whilst on training or exercise by year and Service.

Between 01 January 2000 and 31 August 2019, in the Naval Service, 25 personnel died whilst on training or exercise (**Figure 2**). This represents 5% of all Naval Service deaths (n=467) for the period 1 January 2000 to 31 August 2019. Nine personnel were from the Royal Navy and 16 from the Royal Marines.

³ <https://www.gov.uk/government/collections/training-and-exercise-deaths-in-the-uk-armed-forces>

The most training and exercise deaths in any given year for the Naval Service were in 2002 when five personnel died. All five personnel were from the Royal Navy. Three people died in two separate aircraft accidents and two people died in two separate diving accidents.

In the Army, 99 personnel died whilst on training or exercise (**Figure 3**). This represents 6% of all Army deaths (n=1,711) for the period 1 January 2000 to 31 August 2019. There were 38% (n=38) of Army training or exercise deaths in the Infantry and 12% (n=12) in The Royal Logistic Corps. This is representative of the Army as a whole with the Infantry and The Royal Logistic Corps being the two biggest Arm Corps. A breakdown of all Army deaths by Arm Corps can be found in additional **Table A1** of the accompanying [supplementary tables](#)⁴ to this document.

The most training and exercise deaths in any given year for the Army were in 2004 when 11 personnel died. There were six deaths in one incident following a Lynx helicopter accident.

In the RAF, 23 personnel died whilst on training or exercise (**Figure 4**). This represents 5% of all RAF deaths (n=478) for the period 1 January 2000 to 31 August 2019.

The most training and exercise deaths in any given year for the RAF were in 2001 when five personnel died. Two deaths occurred in one incident following a Yachting accident. In 2004, 2007, 2009 and 2012 one aircraft accident in each year accounted for all deaths.

Figure 2: Naval Service^{1,2} deaths³ on training⁴ or exercise by calendar year⁵, numbers
1 January 2000 to 31 August 2019

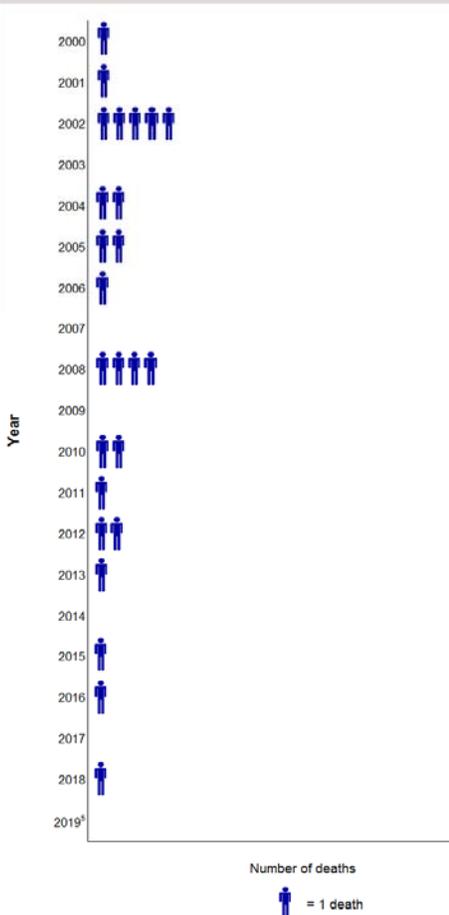


Figure 3: Army¹ deaths³ on training⁴ or exercise by calendar year⁵, numbers
1 January 2000 to 31 August 2019

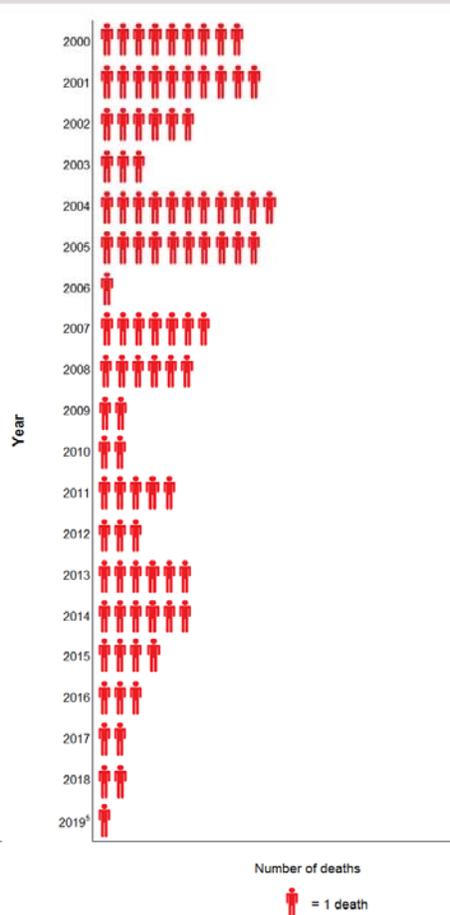
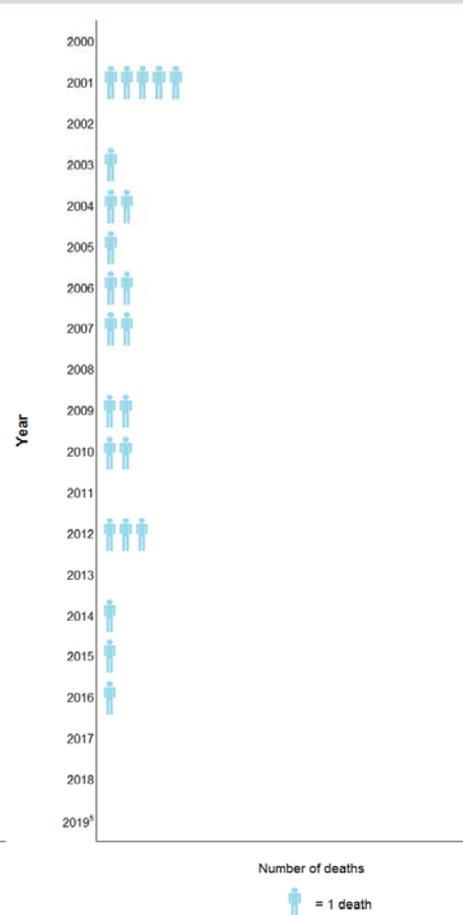


Figure 4: RAF¹ deaths³ on training⁴ or exercise by calendar year⁵, numbers
1 January 2000 to 31 August 2019



Source: Defence Statistics Health

1. Figures are for regular and reservist personnel 'on duty'.
2. Royal Navy and Royal Marines.
3. Figures are for all causes of death and therefore include those deaths that occurred due to injury or natural causes whilst on training or exercise.
4. Figures are for all types of training and exercise.
5. Up to and including 31 August 2019.

⁴ <https://www.gov.uk/government/collections/training-and-exercise-deaths-in-the-uk-armed-forces>

Figures 5 to 9 present the number of UK Armed Forces deaths that occurred whilst on training and exercise by Service type, gender, trained status, medical cause and training type.

Of the 147 deaths which occurred whilst on training or exercise:

- 86% (n=126) were regular personnel and 14% (n=21) were reserve forces. 86% (n=18) of reserve deaths were from the Army (Figure 5).
- 95% (n=140) were males and 5% (n=7) were females (Figure 6).
- 91% (n=134) were fully trained personnel and 9% (n=13) were untrained personnel in phase 1 or phase 2 of their training (Figure 7).
- 76% (n=112) of deaths were the result of injuries. 18% (n=27) the result of disease-related conditions and 5% (n=8) cause not yet known or unascertained. 85% (n=23) of disease-related conditions were due to conditions of the circulatory system such as heart attacks and coronary artery disease. (Figure 8).
- 44% (n=65) of deaths occurred whilst undertaking collective training, 35% (n=51) occurred in individual specific training, 15% (n=22) whilst on adventurous training and 6% (n=9) other training (Figure 9).

A further breakdown of these deaths by each Service can be found in the accompanying [supplementary tables](#)⁵ to this document.

Figure 5: UK Armed Forces¹ deaths² on training³ or exercise by Service type, numbers
1 January 2000 to 31 August 2019

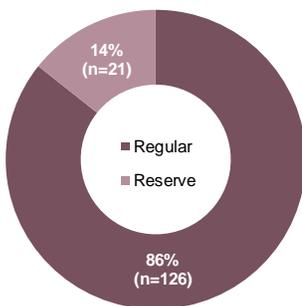


Figure 6: UK Armed Forces¹ deaths² on training³ or exercise by gender, numbers
1 January 2000 to 31 August 2019

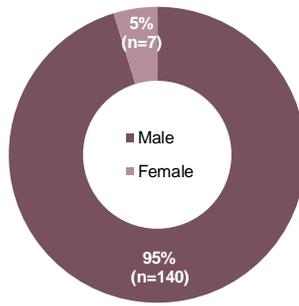


Figure 7: UK Armed Forces¹ deaths² on training³ or exercise by trained status⁴, numbers
1 January 2000 to 31 August 2019

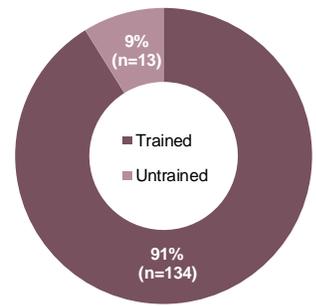


Figure 8: UK Armed Forces¹ deaths² on training³ or exercise by cause of death, numbers
1 January 2000 to 31 August 2019

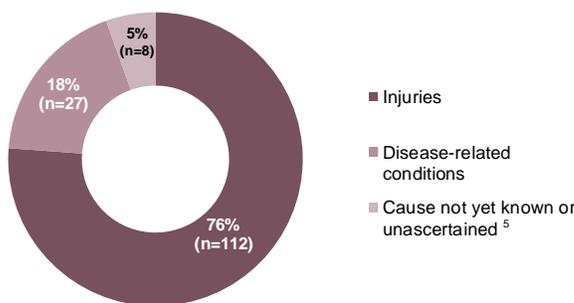
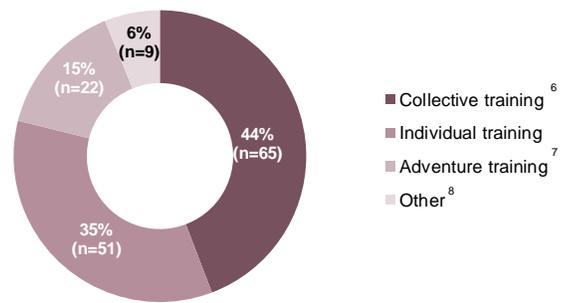


Figure 9: UK Armed Forces¹ deaths² on training³ or exercise by type of training, numbers
1 January 2000 to 31 August 2019



Source: Defence Statistics Health

1. Figures are for regular and reservist personnel 'on duty'.
 2. Figures are for all causes of death and therefore include those deaths that occurred due to injury or natural causes whilst on training or exercise.
 3. Figures are for all types of training and exercise.
 4. Untrained personnel are classed as those in phase 1 and phase 2 of their training.
 5. Deaths which have been investigated by a coroner or by the Procurator Fiscal for Scotland and for which no definitive medical cause of death can be found.
 6. In accordance with the Defence Collective Training Policy issued on 2 June 2015, Collective Training is defined as "training that is aimed at improving the ability of teams, units or formations to function as a cohesive entity and so enhance operational capability."
 7. Adventurous training deaths have been identified on the basis of personnel participating in specifically regulated Adventurous training courses. Some activities performed under Adventurous training can also form part of an individual's specific job role (e.g. Parachuting) and therefore a death is not assumed to be on Adventurous training unless stated as such.
 8. Includes six deaths which occurred whilst conducting training on operations and three deaths which occurred on selection training.
- *Percentages may not add up to 100% due to rounding.

⁵ <https://www.gov.uk/government/collections/training-and-exercise-deaths-in-the-uk-armed-forces>

Figure 10 presents the number of UK Armed Forces deaths which occurred whilst on training or exercise by activity type. Aircraft accidents were the single biggest cause of death accounting for 20% (n=29) of training or exercise deaths over the period of 1 January 2000 to 31 August 2019. It is essential for the UK Armed Forces to create a training programme that prepares personnel for real time scenarios that could happen in an operational environment. The use of aircraft is vital to recreate such scenarios. The nature of an aircraft accident whether pilot or mechanical error, will often lead to multiple fatalities in any one incident with aircraft being used to manoeuvre personnel to designated positions and areas. There were 12 separate incidents that accounted for the 29 deaths due to aircraft accidents.

Deaths as a result of disease-related conditions accounted for 18% (n=27) of deaths whilst on training or exercise, with 23 of those due to diseases or conditions of the circulatory system. Training in the UK Armed Forces is vigorous and demands the highest standards of individual fitness to ensure operational capability. Underlying conditions cannot always be detected in an individual which aligned with strenuous physical activity can sadly cause fatalities.

In the Naval Service, diving or snorkelling incidents were the biggest cause of death with 28% (n=7) of all Naval Service training and exercise deaths. Six were Military Diving incidents and one Snorkelling incident whilst on Adventurous training. Military Diving is recognised as an activity which due to the nature of the unforgiving environment poses an absolute Risk to Life (RtL). The RtL is mitigated through frequent frontline assurance and close regulation by the Defence Maritime Regulator to ensure the MOD complies with the Health and Safety Executive (HSE) approved code of practice and aligns where possible with UK legislation. Any deviations are reported to the HSE by the MOD Superintendent of Diving on behalf of the Defence Maritime Regulator for approval.

In the Army, deaths due to disease-related conditions were the biggest cause of death with 21% (n=21) of all Army training and exercise deaths. 81% (n=17) of disease-related conditions were due to conditions of the circulatory system such as heart attacks and coronary artery disease.

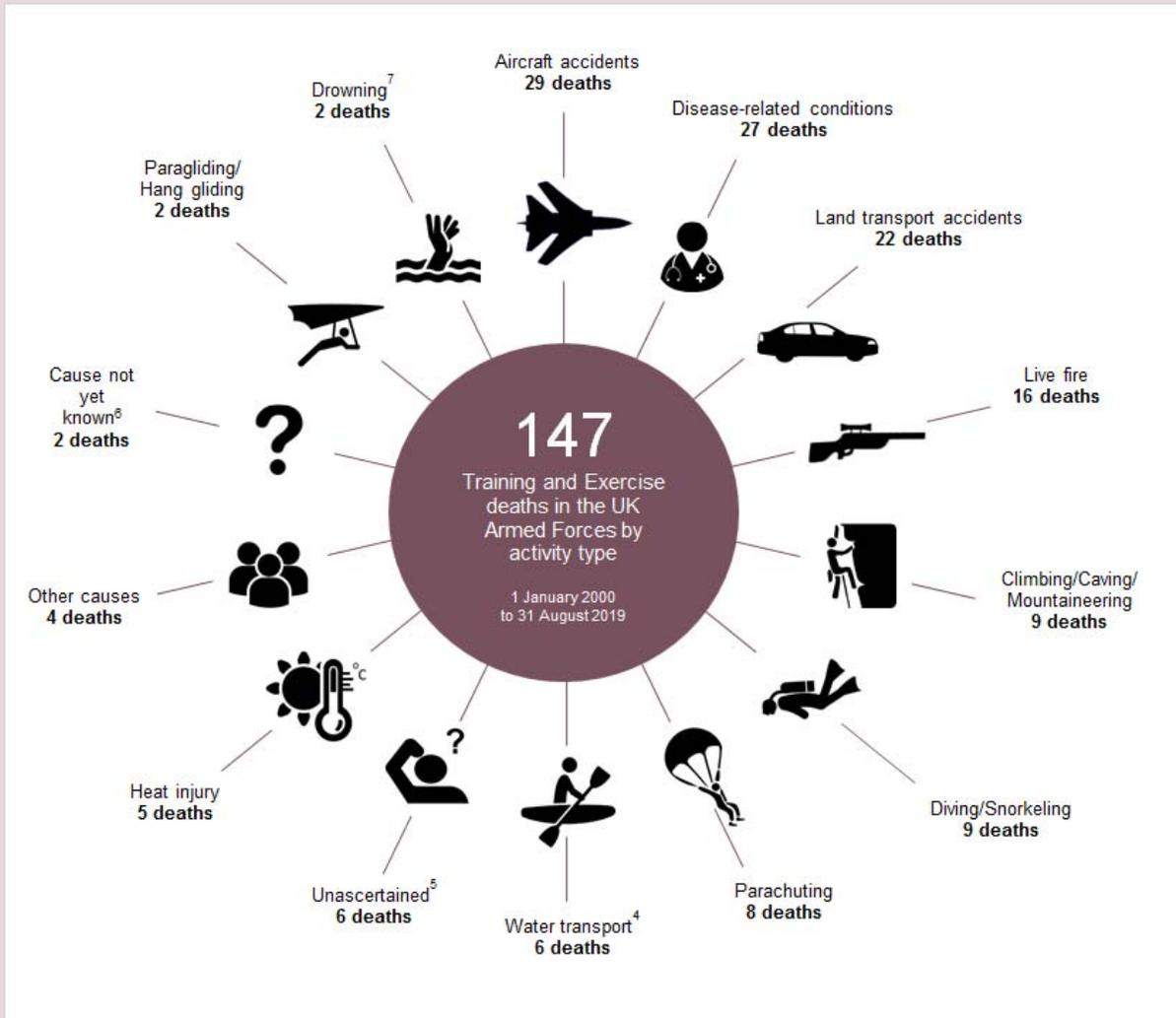
Land transport accidents accounted for 17% (n=17) of all Army training and exercise deaths, with live fire accidents accounting for 14% (n=14).

In the RAF, deaths due to aircraft accidents were the biggest cause of death with 52% (n=12) of all RAF training and exercise deaths. Disease-related conditions accounted for 13% (n=3) and water transport accidents and other causes both 9% (n=2)

A further breakdown of all deaths by activity type and Service can be found in the accompanying [supplementary tables](#)⁶ to this document.

⁶ <https://www.gov.uk/government/collections/training-and-exercise-deaths-in-the-uk-armed-forces>

Figure 10: UK Armed Forces¹ deaths² on training³ or exercise by activity type, numbers
 1 January 2000 to 31 August 2019



Source: Defence Statistics Health

1. Figures for regular and reservist personnel 'on duty'.
2. Figures are for all causes of death and therefore include those deaths that occurred due to injury or natural causes whilst on training or exercise.
3. Figures are for all types of training and exercise.
4. Includes Kayaking, Rafting, Canoeing, Yachting and all other water transport.
5. Deaths which have been investigated by a coroner by the Procurator Fiscal for Scotland and for which no definitive medical cause of death was found.
6. Deaths which have not yet been investigated by a coroner or investigations are ongoing.
7. Not water transport related.

Glossary

Adventurous training – Challenging outdoor training for Service personnel in specified adventurous activities, involving controlled exposure to risk, in order to develop leadership, teamwork, physical fitness, moral and physical courage, among other personal attributes and skills vital to Operational Capability.

Armed Forces – The UK Armed Forces form the military of the United Kingdom, tasked with defence of the country, its overseas territories and the Crown dependencies; as well as promoting the UK's wider interests, supporting international peacekeeping efforts, and providing humanitarian aid.

Army – The British Army consists of the General Staff and the deployable Field Army and the Regional Forces that support them, as well as Joint elements that work with the Royal Navy and Royal Air Force. Its primary task is to help defend the interests of the UK.

Collective training – Training that is aimed at improving the ability of teams, units or formations to function as a cohesive entity and so enhance operational capability.

House of Commons Defence Select Committee – The Defence Committee is appointed by the House of Commons to examine the expenditure, administration, and policy of the Ministry of Defence and its associated public bodies.

Ministry of Defence – The Ministry of Defence (MOD) is the United Kingdom government department responsible for the development and implementation of government defence policy and is the headquarters of the British Armed Forces. The principal objective of the MOD is to defend the United Kingdom and its interests. The MOD also manages day to day running of the armed forces, contingency planning and defence procurement.

Phase 1 training is all new entry training to provide basic military skills.

Phase 2 training is initial individual specialisation.

Phase 3 training is that undertaken throughout a career, often linked to progression in rank and which develops military knowledge, skills and attitude.

Royal Air Force (RAF) – The Royal Air Force (RAF) is the aerial defence force of the UK.

Royal Marines (RM) – Royal Marines are sea-going soldiers who are part of the Naval Service. RM officer ranks were aligned with those of the Army on 1 July 1999.

Royal Navy (RN) – The sea-going defence forces of the UK but excludes the Royal Marines and the Royal Fleet Auxiliary Service (RFA).

Methodology

Data Sources

Defence Statistics receive weekly notifications of all regular Armed Forces deaths from the Joint Casualty and Compassionate Centre (formerly the single Service casualty cells). Defence Statistics also receive cause of death information from military medical sources in the single Services.

NOTICAS - Notification of Casualty (NOTICAS) is the name for the formalised system of reporting casualties within the UK Armed Forces. It sets in train the MOD's next of kin informing procedure. The MOD's Joint Casualty and Compassionate Policy and procedures set out the guidance under which a NOTICAS report is to be raised. NOTICAS takes precedence over all but the most urgent operational and security matters.

Joint Personnel Administration (JPA) system service requests - JPA is the system used by the Armed Forces to deal with matters of pay, leave and other personnel administrative tasks. JPA replaced a number of single-Service IT systems and was implemented in April 2006 for the RAF, November 2006 for the Naval Service and April 2007 for the Army. When an incident occurs a service request is raised for each casualty which holds brief information about each incident.

Armed Forces Memorial database (AFMDb) - The AFMDb is owned by the tri-Service Joint Casualty and Compassionate Centre. The AFMDb database was created in order to identify Service personnel whose names were to be, and continue to be engraved on the Armed Forces Memorial at the National Arboretum in Staffordshire. The AFMDb records the deaths of all personnel who have died in Service since 1st Jan 1948 and for those who were killed or who died in Palestine from 1st Aug 1945 to 31st Aug 1948. Please note, the AFMDb is not regarded as a validated source of historical fatality information, therefore, it cannot be guaranteed to be 100% complete or accurate due to it being populated manually from Service files.

Defence Inquests Unit (DIU) Post Inquest Report (PIR) - The Defence Inquests Unit (DIU) was established in 2008 at the direction of Ministers and the Permanent Under Secretary (PUS) to coordinate and manage all Defence related inquests into the deaths of Service and MOD personnel, who die on, or as a result of injuries sustained while on operations; and those who die as a result of training activity. The DIU is also the Departmental focal point for any other inquests involving MOD personnel. Defence Statistics receive regular PIR's from the DIU at the conclusion of a coroner's inquest. The PIR summarises the circumstances surrounding a death, the medical cause of death and the verdict reached by the coroner.

Death Certificates - 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.

Data Coverage

The information on deaths presented are for all regular and reservist UK Armed Forces personnel only who died whilst on duty and whilst taking part in training or on exercise. Members of the Royal Fleet Auxiliary, Merchant Navy and MOD civilians are not included.

Methods

Defence Statistics receive weekly notifications of all regular Armed Forces and 'on duty' reservist deaths from the Joint Casualty and Compassionate Centre (formerly the single Service casualty cells).

Whilst Defence Statistics receive the duty status of all personnel who died in the UK Armed Forces via the NOTICAS reporting system, to identify those deaths that occurred on training or exercise a search of all free text information for mention of 'training' or 'exercise' and any associated abbreviations in the available data sources had to be completed. Therefore figures presented may be subject to change should further information become available.

To identify those deaths that were deemed 'Collective training' and those that were deemed 'Individual' training, the cohort of deaths was sent to each individual Service Secretariat to categorise each death.

Adventurous training deaths have been identified on the basis of personnel participating in specifically regulated Adventurous training courses. Some activities performed under Adventurous training can also form part of an individual's specific job role (e.g. Parachuting) and therefore a death is not assumed to be on Adventurous training unless stated as such.

Personnel who died in hospital of injuries or illness sustained whilst on training and exercise have been included in the data presented.

To record information on cause and circumstances of death, Defence Statistics uses the World Health Organisation's International Statistical Classification of Diseases and Health-related Problems 10th revision (ICD-10). In addition, Defence Statistics also record the casualty reporting categories used by the Joint Casualty and Compassionate Centre, used for reporting to the Chain of Command and for notifying the next of kin.

In line with ICD-10 definition a land transport accident is defined as any accident involving a device that has been designed for, or is being used at the time for, the conveyance of either goods or people from one place to another on land, therefore the definition covers incidents that occur on and off the public highways and incidents that involve non-motorised forms of transport. The scope of this definition does NOT include any deaths occurring in a vehicle as a result of Hostile Action.

Defence Statistics conduct a yearly validation exercise on cause of death information where it cross-references the medical information it holds against publicly available death certificate information available from NHS Digital. This validated information is released yearly in the National Statistic publication: [Deaths in the UK Regular Armed Forces](#).

Defence Statistics also produce a background quality report for the yearly National Statistic on Deaths and this informs users of the statistics about the quality of the data used to produce the publication and any statistics derived from that data. This report can be found on the Gov.UK website: <https://www.gov.uk/government/statistics/military-deaths-in-service-statistics-background-quality-reports>

Strengths and weaknesses of data presented in this notice

A strength of this publication is that considerable validation is undertaken against military and public records to ensure that the information provided is complete and accurate and users of this publication should be confident that the numbers of fatalities presented are accurate. However, some causes of death require a Coroner's report before the cause of death can be formally classified and there is often a time lag between when the death occurred and when the Coroner's inquest takes place. This can result in final cause of death information not being timely and complete.

In addition, death certificates for personnel who die overseas are issued by the MOD and if buried overseas, are not always subject to a coroner's inquest to certify cause of death. Users should be aware of this when using cause of death information.

The release of the information in this notice is controlled by the statistics code of practice as outlined in the Statistics and Registration Act, 2007. This stipulates that statistics in their final form cannot be released prior to a publication. Thus because it can take many months or even years for a coroner's inquest, Defence Statistics do not update the numbers in between the publication of this notice, to ensure there is no breach of the code of practice. Therefore, any requests for information on deaths among the UK Armed Forces are provided using the underlying dataset used to compile this notice.

Changes to previously published data

In preparing this document, Defence Statistics will continually carry out a review of the data recorded on in-Service deaths as a result of training and exercise in UK Armed Forces personnel to ensure the highest accuracy of information and that all cases of deaths attributable to training or exercise are recorded.

More detailed information on the methodology used to create this report can be found in the Background Quality Report (BQR) published at <https://www.gov.uk/government/statistics/military-deaths-in-service-statistics-background-quality-reports>

Further Information

Contact Us

Defence Statistics welcome feedback on our statistical products. If you have any comments or questions about this publication or about our statistics in general, you can contact us as follows:

Defence Statistics Health

Telephone: 030 6798 4423

Email: DefStrat-Stat-Health-Hd@mod.gov.uk

If you require information which is not available within this or other available publications, you may wish to submit a Request for Information under the Freedom of Information Act 2000 to the Ministry of Defence. For more information, see:

<https://www.gov.uk/make-a-freedom-of-information-request>

Other contact points within Defence Statistics are:

Defence Expenditure Analysis	030 6793 4531	DefStrat-Econ-ESES-DEA-Hd@mod.gov.uk
Price Indices	030 6793 2100	DefStrat-Econ-ESES-PI-Hd@mod.gov.uk
Naval Service Manpower	023 9254 7426	DefStrat-Stat-Navy-Hd@mod.gov.uk
Army Manpower	01264 886175	DefStrat-Stat-Army-Hd@mod.gov.uk
RAF Manpower	01494 496822	DefStrat-Stat-Air-Hd@mod.gov.uk
Tri-Service Manpower	020 7807 8896	DefStrat-Stat-Tri-Hd@mod.gov.uk
Civilian Manpower	020 7218 1359	DefStrat-Stat-Civ-Hd@mod.gov.uk

If you wish to correspond by mail, our postal address is:

Defence Statistics Health

Ministry of Defence, Abbey Wood (North)

#6028, Oak, 0, West

Bristol

BS34 8JH

For general MOD enquiries, please call: 020 7218 9000