

# 41 Heat illness prevention

This chapter is split in two parts:

**Part 1: Directive.** This part provides direction that you **must** follow to help you comply with (keep to) health and safety law, Government policy and Defence policy.

**Part 2: Guidance.** This part provides the guidance and good practice that **should** be followed and will help you keep to this policy.

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This part is made up of the following annexes, which are available as separate documents on the Chapter 41 (Heat Illness Prevention) of JSP 375, Volume 1, [Defnet page](#) and on the [GOV.UK](#) website:

Annex A - Commander's guide to heat illness prevention

Annex B - Individual's guide to heat illness

Annex C - Work / rest tables and an aide memoire (summary guidance) for using the QuestTemp 34 wet bulb globe temperature (WBGT) monitor

Annex D - Procurement, calibration and repair of the QT34 wet bulb globe temperature (WBGT) monitor and associated training

Annex E - Heat acclimatisation for deployment to hot climates

Annex F - Hydration guidance

Annex G - Examples of policy compliance

Annex H - Basic guidance for all personnel during extreme heat

## Amendment record

This chapter has been reviewed by the Directorate of Defence Safety (DDS) together with relevant subject matter experts and key safety stakeholders. Any suggestions for amendments **should** in the first instance be directed to the Defence organisation's [Safety Centre/Team Group Mailbox](#) and with their approval, sent to DDS at: [People-DDS-GroupMailbox@mod.gov.uk](mailto:People-DDS-GroupMailbox@mod.gov.uk).

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1.0	Oct 20	First edition.	D HS&EP
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1.4	Mar 23	Update to DAIB telephone number.	D HS&EP
1.5	03 Jun 24	Annual review and revision.	DDS
1.6	16 Dec 24	Minor revisions to supporting text of Policy Statements 1 and 4 including the "Physical opt-out / bad day policy".	DDS
1.7	17 Dec 24	Minor revision to Policy Statement 4.	DDS
1.8	09 May 25	Minor revision to supporting text of Policy Statement 2 to include the increased risk that infection has on heat illness.	DDS

## Terms and definitions

The following table sets out definitions of some of the key terms used in this chapter. General safety terms and definitions are provided in the [Master Glossary of Safety Terms and Definitions](#), which can also be accessed on [GOV.UK](#).

Acclimatised	When personnel in hot environments have undergone a graded supervised programme of increasing exercise to adapt to the conditions. All personnel in the UK and Northern Europe, and those in hot environments who have not undergone a graded supervised programme of increasing exercise to adapt to the environment, are to be considered to be not acclimatised.
Arduous	A physical activity demanding great exertion or effort.
As low as reasonably practicable (ALARP)	When risk has been reduced to a level where applying further control measures would be grossly disproportionate to the benefit that would be gained.
Commander	This is generally, a military person responsible for planning activities, supervising activities, and making sure personnel under their area of responsibility are safe. This term refers to a role rather than the rank of Commander, and it can be a permanent or temporary role (for example, lasting for the duration of a training exercise). In parts of Defence this person could be referred to as a 'responsible person.'
Competent person	A person who has the training, skills, experience and knowledge necessary to perform a task safely and is able to apply them. Other factors, such as attitude and physical ability, can also affect someone's competence. See <a href="http://www.hse.gov.uk/competence/what-is-competence.htm">www.hse.gov.uk/competence/what-is-competence.htm</a> for information on competence.

Control measures	Measures that can be taken to reduce the possibility of a risk arising or reduce the effect of any risk that arises. The control measures are 'elimination, substitution, engineering controls, administrative controls and personal protective equipment (PPE).'
Dynamic risk assessment	A risk assessment that is used to respond to a change in circumstances, increased risk or failure of control measures, carried out whilst an activity is underway and may build on the existing risk assessments for the activity.
Exertional collapse	This is when a person collapses as a direct result of physical exertion normally caused by heat exhaustion, dehydration or underlying health issues.
Heat illness	Heat illness is a range of illnesses, which includes heat cramps, heat exhaustion and heat stroke. The term 'heat illness' describes a physical degradation caused by a rise in core body temperature (the temperature of the internal organs).
Heat exhaustion	Heat exhaustion is the body's response to extreme loss of water and salt, usually through excessive sweating. Left untreated, it can progress to heat stroke.
Heat stroke	Heat stroke is the most serious heat-related illness. The body can no longer control its temperature. The core body temperature rises rapidly and the body cannot cool down. The person may become unresponsive within minutes. It is a medical emergency.
Manager	A person responsible for planning activities, supervising activities and making sure personnel under their area of responsibility are safe. This could be a permanent or temporary role, and in parts of Defence this person could be referred to as a 'line manager,' a 'responsible person,' or a 'delivery manager.'
Risk assessment	A systematic process of identifying hazards and evaluating any risks associated with those hazards.
Wet Bulb Globe Temperature (WBGT)	A combined estimate of the effect of temperature, humidity, wind speed (wind chill), and visible and infrared radiation (usually sunlight) on humans. A WBGT can be provided as a forecast or a current reading from a QuestTemp34 (QT34) monitor.
Work/rest table	A table giving maximum durations of continuous exercise and alternative work / rest schedules for a four-hour period. The figures are based on work rate, dress and WBGT reading. Different tables are used for acclimatised personnel and personnel who are not acclimatised.

## Must and should

Where this chapter says **must**, this means that the action is a compulsory requirement.

Where this chapter says **should**, this means that the action is not a compulsory requirement but is considered good practice.

## Scope

The policy contained within this chapter:

- a. applies to all those **employed by Defence** (military and civilian) including those under the age of 18 (for example recruits and apprentices).
- b. applies to all those working on behalf of, or under the supervision of Defence (for example, contractors or visitors).
- c. applies to all Defence activities carried out in any location (UK or overseas) and at all times of the year.
- d. is not written for young persons in the cadet forces<sup>1</sup>, Defence-run schools, nurseries and so on; those organisations **must** maintain their own safety policies and governance and **must** provide statutory compliant infrastructure and appropriate safe systems of work. They may use material from this chapter as a reference point, but where appropriate their respective policies **should** be adapted to meet the needs of young persons and to follow any applicable Department for Education guidelines or legislation.

## Assurance

The application of the policy contained within this chapter **must** be assured (that is, its use **must** be guaranteed). As part of their overall assurance activity, the commander, manager, or accountable person (AP) **must** make sure that this policy is followed and put into practice effectively. Assurance **must** be carried out in accordance with JSP 815 (Defence Safety Management System Framework) [Element 12 - Assurance](#).

## Alternative acceptable means of compliance

This policy is mandatory across Defence and the only acceptable means of compliance (AMC) is attained by following the directive set out in this chapter. However, there may be circumstances where a small number of military units may be permanently unable to comply with (keep to) parts of the policy. In such circumstances an alternative AMC process is set out in [JSP 375 Directive and Guidance](#).

<sup>1</sup> Guidance for cadet forces is set out in JSP 814 (Policy and Regulations for Ministry of Defence Sponsored Cadet Forces).

## Part 1: Directive

This part provides direction that you **must** follow to help you comply with (keep to) health and safety law, Government policy and Defence policy.

### Introduction

Excessive physical exertion can lead to exertional collapse. The main reason for exertional collapse is 'heat illness' which refers to a range of medical conditions that cause physical degradation as a result of a rise in core body temperature for example **heat exhaustion** and **heat stroke**. In this chapter, the term heat illness refers to a person becoming ill as a result of a significant rise in their core body temperature.

1. Heat illness is a **serious issue** for Defence and potentially a **life-threatening condition**, and it can occur throughout the year, not just in the summer months. It can affect members of the armed forces and civilians performing a range of Defence activities (operational, training and day-to-day tasks), both at home and overseas. The loss of personnel due to heat illness can disrupt mission capabilities, compromise team cohesion, and place additional strain on remaining personnel. Therefore, mitigating the risk of heat illness is essential to safeguarding both the health of personnel and maintaining the operational output.
2. Death from heat illness is preventable and the purpose of this chapter is to improve the awareness and management of heat illness, consideration of the following important points will assist with the prevention of deaths from heat illness.
  - a. **Be informed and stay alert** - It is important that commanders, managers and individuals pay close attention to heat advisories or warnings that have been issued.
  - b. **Consider the risk of heat illness when planning activities** - It is important for commanders and managers to consider the risk of heat illness when undertaking the risk assessment during the planning phase before an activity starts, particularly for physically demanding activities and during periods of hot weather.
  - c. **Know the warning signs of heat-related illness** - It is important that commanders, managers and individuals recognise the warning signs of heat illness that may result from the core body temperature rising to unhealthy levels.
  - d. **Know what to do when heat illness occurs** - It is important that commanders, managers and individuals recognise the symptoms, likely conditions and treatment of heat illness.
3. In the military, excessive physical exertion is the leading cause of heat illness that could lead to death. However, there may also be other causes such as operating in extreme heat or in certain types of clothing and equipment, or a combination of each.
4. The main reason for exertional collapse is heat illness, but it may also be caused as a result of underlying health issues (for example, sickle cell trait). Exertional collapse associated with sickle cell trait (ECAST) is rare, but intense exercise, or an amount or type of exercise a person is not accustomed to, may increase the likelihood. There is further information on sickle in [JSP 950 Leaflet 6-7-7 \(Annex N\)](#).

5. Heat illness is a condition caused by the body overheating, usually as a result of excessive physical exertion or prolonged exposure in high temperatures. It occurs when the core body temperature rises to 39.4°C (103°F) or higher. It is potentially life-threatening and requires emergency treatment. Untreated heat illness can quickly damage the brain, heart, kidneys and muscles. The damage gets worse the longer effective cooling is delayed, increasing the risk of serious complications, including death.

6. It is important that commanders, managers and individuals recognise the signs and symptoms of heat illness, in themselves or others, to help reduce the risk and consider what action they need to take (for example, stopping the activity, reviewing those taking part for signs and symptoms of heat illness, and putting control measures in place).

7. The following (non-exhaustive) list of signs and symptoms of heat illness are.

- a. Agitation.
- b. Nausea or vomiting.
- c. Staggering or loss of co-ordination.
- d. Cramps.
- e. Disturbed vision.
- f. Confusion.
- g. Collapse or loss of consciousness (including fainting).
- h. Dizziness.

**Note:** further guidance on the categorisation of the heat illness conditions and first aid treatment is set out in [Annex A](#) (Commander's guide to heat illness prevention).

8. This policy applies to all Defence activities carried out in any location (UK or overseas) at all times of the year, including (but not limited to) the following.

- a. All forms of outdoor training, exercises, fitness tests, training and organised sport.
- b. Preparing for and taking part in all operations (including combat, humanitarian aid, training foreign forces and providing military aid to civilian authorities).
- c. Activity onboard and within all Defence vessels, aircraft and vehicles.
- d. Ceremonial duties, practice and events.
- e. Selection events for those already in the armed forces who are aiming to progress in their career.
- f. Recruitment and engagement activities involving civilians under the supervision of Defence personnel.
- g. Routine business where factors increase the risk of heat illness.

9. Commanders and managers **must** make sure that suitable and sufficient risk assessments are carried out and recorded, as set out in [Chapter 8](#) (Safety risk assessment and safe systems of work) of JSP 375 Volume 1. The direction and guidance in this chapter relates to assessing and managing the risk of heat illness as part of Defence's standard risk assessment process. If an individual Defence organisation chooses to introduce additional direction or guidance, that direction or guidance **must** be recorded, communicated and followed within that Defence organisation.

10. Climate change has made heatwaves more likely and more severe. Temperatures in the UK can exceed 40°C. At these temperatures, the Met Office issues 'red' weather warnings for heat. 'Amber' weather warnings are issued for temperatures exceeding 30°C. The UK population **must** not be considered to be acclimatised to these heatwaves. To assist when planning Defence activities in the UK, the UK Health and Security Agency (UKHSA) have a weather and health alert system [Adverse Weather and Health Plan - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/publications/adverse-weather-and-health-plan).

11. A red weather warning issued by the Met Office means that there is a risk to life and action **must** be taken to keep yourself and others safe. Action **must** also be considered and appropriate action taken for amber weather warnings. This reinforces Defence's obligations to protect our people during and in the aftermath of extreme temperatures.

12. If a non-essential physically demanding activity, or an activity that would lead to prolonged exposure to the heat, is planned during the period of a red weather warning or up to 48 hours afterwards, then postponing the activity **must** be seriously considered. If postponing the activity is not an option, then the activity **must** be risk assessed and the necessary control measures put in place (as set out in the direction and guidance in this chapter). Plans may need to be reconsidered when there are amber weather warnings.

13. This chapter focusses on heat illness but it is important to recognise that the risk of cold injury can also be life threatening and **must** be considered in the risk assessment for all Defence activities. The direction and guidance on preventing cold injury can be found in [Chapter 42](#) (Cold injury prevention) of JSP 375 Volume 1. The direction and guidance for medical personnel on treating cold injury is in JSP 950, [Leaflet 2-9-4](#).

14. It is important to recognise that many cases of heat illness occur at lower ambient temperatures where excessive physical exertion, and / or the clothing and equipment that is being worn causes the core body temperature to significantly rise and overheat. The type of activity and the equipment to be worn **must** be considered and not just the climatic conditions when planning activities.

### **What is in this chapter.**

15. Part 1 contains the following.

- a. A list of the heat illness prevention policy statements.
- b. Full details of the policy statements.

16. Part 2 contains guidance which **should** be followed to keep to this heat illness prevention policy.

- a. Annex A - Commander's guide to preventing heat illness.
- b. Annex B - Individual's guide to heat illness.
- c. Annex C - Work / rest tables and aide memoire (summary guidance).
- d. Annex D - Procurement, calibration and repair of the QT34 wet bulb globe temperature (WBGT) monitor and associated training).
- e. Annex E - Heat acclimatisation for deployment to hot climates.
- f. Annex F - Hydration guidance.
- g. Annex G - Examples of policy compliance.
- h. Annex H - Basic guidance for all personnel during extreme heat.



## Policy statements

17. The following heat illness prevention policy statements have been established and **must** be followed.

a. **Policy Statement 1.** A commander or manager **must** be appointed to command or supervise Defence activities and they **must** make sure that heat illness is considered when planning those activities. Before the activity begins, personnel taking part in those activities **must** know (by name) who the commander or manager is and who to report any safety occurrences to.

b. **Policy Statement 2.** The risk of heat illness **must** be considered in the risk assessment for Defence activities. The risk assessment **must** as a minimum consider the following heat illness risk factors and control measures.

- |                            |   |
|----------------------------|---|
| (1) Medical plan           | (6) Individual risk factors                     |
| (2) Acclimatisation        | (7) Education and training                      |
| (3) Clothing and equipment | (8) Hydration                                   |
| (4) Expected work rate     | (9) Body-worn heat illness monitoring equipment |
| (5) Environment            |   |

c. **Policy Statement 3.** When planning Defence activities and conducting the risk assessment, a Met Office weather forecast and the work / rest tables **must** be used to determine the safe activity parameters.

When delivering physically demanding activities, a QT34 monitor wet bulb globe temperature (WBGT) reading at the activity location (or that is representative of the activity location) **must** be used to dynamically risk assess and make sure that the activity is conducted within safe parameters.

When delivering other Defence activities, a Met Office WBGT forecast or a QT34 monitor WBGT reading at the activity location (or that is representative of the activity location) **should** be used to dynamically risk assess and make sure that the activity is conducted within safe parameters.

d. **Policy Statement 4.** The commander or manager **must** review the risk assessment immediately before an activity starts to make sure it is still valid, that all the control measures are still in place and to re-assess the risk if necessary.

Where there are changes to the activity whilst it is underway, or to the surrounding circumstances, which could increase the risk of heat illness, then a dynamic risk assessment **must** be carried out.

As part of the dynamic risk assessment the commander or manager **must** consider pausing or stopping the activity, applying further control measures or elevating the risk.

e. **Policy Statement 5.** Commanders and managers **must** monitor the activity to identify and immediately treat any cases of heat illness.

All causes of collapse and suspected or confirmed heat illness cases **must** be reported and investigated in accordance with their Defence organisation's safety occurrence reporting procedures.

The Defence Accident Investigation Branch (DAIB) **must** be notified immediately of all heat illness cases which have resulted in hospitalisation or have been formally diagnosed by a medical professional. Additionally, the DAIB **must** be notified where there are four or more suspected cases of heat illness during the same activity.



- f. **Policy Statement 6.** Those involved in planning or undertaking activities which involve risk of heat illness **must** receive suitable training.

#### **Policy Statement 1**

A commander or manager **must** be appointed to command or supervise Defence activities and they **must** make sure that heat illness is considered when planning those activities. Before the activity begins, personnel taking part in these activities **must** know (by name) who the commander or manager is and who to report any safety occurrences to.

18. The commander or manager **must** be appointed to command or supervise Defence activities and to make sure that all those taking part in activities under their area of responsibility are safe.
19. Heat illness is a significant hazard and the commander or manager **must** consider the risk of heat illness during the planning phase of activities under their area of responsibility.
20. The identity of the commander or manager **must** be communicated effectively and in accordance with any communications plan that was developed as part of the risk assessment for the activity. Before the activity begins, personnel taking part in that activity **must** know (by name) who the commander or manager is and to who to report any safety occurrences.
21. The appointed commander or manager **must** know their responsibilities and they **must** make sure that their junior commanders know their responsibilities and the measures required for the activity to be carried out safely.
22. As part of their appointed role the commander or manager **must** make sure that they:
- a. consider heat illness when planning Defence activities under their area of responsibility;
  - b. know what the risk factors of heat illness are and that heat illness is considered as part of a suitable and sufficient risk assessment;
  - c. know what the signs and symptoms of heat illness are and what actions they need to take when these occur, including basic treatment and reporting;
  - d. understand when and how to obtain a WBGT forecast or QT34 reading and how to use the Work Rest Tables;
  - e. communicate the control measures that have been identified and implemented to reduce the risk of heat illness, to relevant personnel;
  - f. carry out a dynamic risk assessment once the activity has started, if there are any changes to circumstances (for example, weather conditions have changed rapidly); and
  - g. have undertaken the necessary heat illness training in advance of them planning or supervising any activity where a risk of heat illness could reasonably be expected.

### Policy Statement 2

The risk of heat illness **must** be considered in the risk assessment for Defence activities. The risk assessment **must** as a minimum consider the following heat illness risk factors and control measures.

- |                           |  |
|---------------------------|--|
| a. Medical plan           | f. Individual risk factors                     |
| b. Acclimatisation        | g. Education and training                      |
| c. Clothing and equipment | h. Hydration                                   |
| d. Expected work rate     | i. Body-worn heat illness monitoring equipment |
| e. Environment            |  |

23. Commanders and managers **must** make sure that risk assessments are carried out, and that the control measures identified in the risk assessment are put in place to make sure the risks of heat illness are reduced to as low as is reasonably practicable (ALARP) and are communicated to the personnel taking part in the activity.

24. The commander or manager may delegate responsibility for carrying out a risk assessment to a competent person, but they are still responsible for approving the risk assessment and the necessary control measures. Once the commander or manager has approved the risk assessment, it **must** be followed.

25. The risk assessment **must** consider that heat illness can occur at any temperature, including in cold climates when several layers of clothing are worn during physical activities.

26. Medical and training personnel **should** be requested to assist with risk assessments by providing specialist medical and training advice and guidance. Any advice they give **must** be considered, including **if they recommend stopping an activity**.

27. Where the commander or manager has been informed that a person under their area of responsibility has a known physical or medical condition (for example, a heart condition, breathing difficulties, and so on) they **should** seek the advice of medical personnel and if necessary they **must** re-evaluate the risk assessment.

28. The risk of heat illness **must** be considered as part of the wider risk assessment for the activity. All exercises and deployments need to consider the risk associated with heat illness, including those in cold climates, where for example exertion can lead to a heat illness. If a risk of heat illness has been identified, operation orders, exercise instructions and other instructions relating to the activity **must** make clear the control measures identified by the risk assessment and the need for dynamic risk assessments and control measures during the activity.

29. The [MOD Form 5010](#) (please see [Guidance Notes](#)) is the recommended template for recording risk assessments, but alternatives specified by a Defence organisation's Safety and Environmental Management Systems (SEMS) may be used. Risk assessments **must** be kept for audit and investigation purposes, as set out in [Chapter 39](#) (Retention of Records) of JSP 375, Volume 1.

30. Commanders and managers **must** make sure that risk assessments are carried out in line with [Chapter 8](#) (Safety risk assessment and safe systems of work) of JSP 375 Volume 1, by following the five-step risk assessment process set out below.

a. **Step 1 - Identify the hazard.** The hazard is an uncontrolled rise in core body temperature, typically due to exertion, extreme heat or other factors. This hazard is usually related to the work rate of the activity, it can be present throughout the year and in all operating environments.

b. **Step 2 - Decide who might be harmed and how.** The intensity of the activity and the rate of work causes an increase in body temperature, and the external temperature and humidity, along with clothing and equipment, affects the rate at which the body can cool itself. When the rate of heating is higher than the rate of cooling, body temperature will increase, sometimes to dangerous levels.

All personnel involved in the activity are at risk. Some personnel are more at risk, and the likelihood of heat illness can depend on individual risk factors (for example, physical fitness or general health). It may be appropriate to get medical advice, especially if a person has a history of heat illness or a known underlying condition which might increase the risk of heat illness.

For physical activities, the 'Physical Opt-Out and Bad Day Policy' (set out in [JSP 822 Defence Training and Education Policy and Guidance, Vol 4 Chapter 5 \(5.1.9\) - Care and Welfare in Training.pdf](#)) **must** be written into the risk assessment as a control measure to safeguard those who are not feeling well enough to take part in those activities.

c. **Step 3 - Evaluate the risks and identify suitable and sufficient control measures.** The Commander's guide to preventing heat illness ([Annex A](#)) provides guidance on identifying heat illness risk factors, evaluating the risks and identifying suitable and sufficient control measures. In order to decide which control measures **should** be put in place, the risk assessment needs to consider the realistic likelihood and severity of the risk.

If a risk is still assessed as 'high' after control measures are put in place, consideration **must** be given to introducing further control measures to reduce the risk. Commanders and managers **should** get medical advice at this point to start putting together a medical plan to prevent casualties and deal with those who have become casualties.

d. **Step 4 - Record and implement findings.** Once the planning has been completed it is time to act. The risk assessment **must** be recorded and the recommended template for recording the risk-assessment process, is the [MOD Form 5010](#) (please see [Guidance Notes](#)), but alternatives may be used. The record of the risk assessment **must** be retained in line with [Chapter 39](#) (Retention of Records) of JSP 375, Volume 1.

The control measures identified during the risk assessment **must** be included in the instructions for the activity. Where relevant, before starting any activity personnel **must** be briefed on the control measures they **should** be aware of (for example, what action to take if a case of heat illness is identified).

If the risk that remains after applying control measures is higher than the level of acceptable risk delegated by the 'chain of command' and agreed with the commander or manager prior to commencement of the activity, then the risk **must** be elevated through their Defence organisation's elevation process.

e. **Step 5 - Review the risk assessment and update as necessary.** The risk assessment **must** be reviewed immediately before an activity starts to make sure it is still valid and that all the control measures are still in place.

Further risk assessments (dynamic risk assessments) **must** be carried out if an unexpected hazard arises whilst the activity is underway to consider whether the risk assessment and control measures need to be changed. If something has changed (for example, the weather conditions or the duration of the activity has increased), further control measures **must** be considered.

If a dynamic risk assessment is undertaken, then it **must** be recorded so that there is evidence that it took place including all decisions made and actions taken. The recommended template for recording the dynamic risk assessment process is the [MOD Form 5010A](#) (please see [Guidance Notes](#)) but alternatives may be used. The dynamic risk assessment **must** be retained in line with [Chapter 39](#) (Retention of Records) of JSP 375, Volume 1.

Reviews of risk assessments may be triggered by a specific event or circumstance (for example, a high drop-out rate) or can be scheduled (for example, taking a reading from a QT34 monitor every 30 minutes during the day). Further guidance is included in the heat illness risk planning tool in the Commander's guide to preventing heat illness ([Annex A](#)).

31. The commander or manager is responsible for reviewing and approving the risk assessment for the activity and **must** consider any additional control measures that are needed before they approve the risk assessment.

32. Personnel **must** be informed of the control measures and they **should** feel confident in speaking up and reasonably challenging the commander or manager if they have concerns, can offer any alternative control measures, or cannot proceed with the activity until further control measures are considered and put in place.

33. Personnel **must** inform the commander or manager of any known physical or medical condition (for example, a heart condition, breathing difficulties, and so on) that could affect the information the risk assessment was based on, may impact on their personal safety and / or affect their ability to undertake the activity safely.

34. The heat illness risk planning tool and its associated tables in [Annex A](#) illustrate how to consider the risk of heat illness in the five-step risk assessment process. The following heat illness risk factors and control measures **must** be considered as part of that process.

### **Risk factors and control measures**

a. **Medical plan.** As part of the overall risk assessment, commanders or managers **must** make sure that a medical plan has been developed in consultation with the appropriate medical personnel. The medical plan **must** identify an agreed and appropriate response to any casualties or medical incidents. The commander or manager **must** make sure that the following elements have been considered as part of the medical plan.

(1) Exertional heat illness - acute treatment, in line with JSP 950 [Leaflet 2-4-4](#).

(2) The level of medical cover (staffing) needed for the activity.

- (3) The type and amounts of medical equipment needed for the activity (for example, equipment to optimise the 'strip, spray, fan' process or equipment for Ice-Cold Water Immersion Therapy (ICWIT) if available and with the appropriately trained medical personnel (see note below).
- (4) The need for all service personnel to be able to 'strip, spray and fan' casualties vigorously at the point of collapse and not to rely on the attendance of the medical personnel who may not be located in the vicinity of the occurrence. This is explained in more detail in in [Annex B](#).
- (5) How any heat illness casualties will be evacuated, and where they will be evacuated to.
- (6) If physical activities are planned to take place during the period of a red weather warning (or up to 48<sup>2</sup> hours afterwards) then medical advice **must** be sought.

**Note:** Further medical guidance is given in [Chapter 5](#) (First Aid) of JSP 375 Volume 1, JSP 950 [Leaflet 2-4-4](#) and Defence organisation policy.

- b. **Acclimatisation.** The risk of heat illness in hot climates (dry or humid) can be reduced, but not eliminated, by acclimatisation. All personnel performing an activity in the UK or Northern Europe **must** be considered as not acclimatised because the climate is temperate with only occasional heatwaves. Acclimatisation may not be possible for tasks carried out at short notice or for limited periods (for example, for air travel from a temperate to a hot climate) or if lengthy periods are spent in air-conditioned buildings. Guidance on acclimatisation is set out in [Annex E](#).
- c. **Clothing and equipment.** Clothing affects a person's ability to shed excess heat and, along with carrying equipment, may put extra strain on the body. Particular attention is needed when an activity requires the use of specialist clothing or equipment (for example, waterproofs, body armour, ceremonial dress, firefighting equipment, Explosive Ordnance Disposal (EOD) suits or Chemical, Biological, Radiological and Nuclear (CBRN) suits). Clothing **must** be carefully considered to make sure that it is appropriate for the activity and can be adjusted as required (for example, by removing layers of clothing).
- d. **Expected work rate.** The rate the human body generates heat is determined by the work rate. In the UK, the primary cause of heat illness casualties from exertion has been physically demanding military activities, particularly endurance events such as loaded marches, log runs, stretcher races and fitness tests. It is **critical** to assess the work rate so the potential risk can be reduced by applying control measures.  
  
The expected work rate can be determined by using the work / rest tables that are set out in Policy Statement 3 and in [Annex C](#). The 'rate of perceived exertion' (RPE) scale assesses individual work rates based on physical effort. During group activities, the work rate of the activity **should** be determined by the highest individual RPE maintained for more than three minutes.

<sup>2</sup> Medical studies provide evidence of the cumulative effect of the previous day's heat exposure, e.g. [The Effects of Continuous Hot Weather Training on Risk of Exertional Heat Illness](#).

e. **Environment.** The main way that the body loses heat is through sweat evaporating. The environmental factors that affect the efficiency of sweating are temperature, humidity and wind speed. Body temperature can also increase due to the type of clothing being worn or heat radiating from hot surfaces (for example, armacs and vehicles). Physical exertion is affected by the nature of the activity, the environment and terrain, particularly changes in level and the steepness of climbs.

f. **Individual risk factors.** People's responses to heat vary greatly. Personnel **must** inform the commander or manager of any known physical or medical condition (for example, a heart condition, breathing difficulties, sickle cell trait, and so on) that could affect the information the risk assessment was based on, may impact on their personal safety and / or affect their ability to undertake the activity safely.

In line with research<sup>3</sup> and Service Inquiry recommendations<sup>4, 5, 6</sup>, it is recognised that when an individual does not feel well they have a raised risk of heat illness when taking part in certain physical activities. Notably, infection (particularly respiratory infection) increases the risk of exertional heat illness. Where an individual is feeling unwell or suffering from an infection they **must** inform the activity leader immediately and refer to the "Physical Opt-Out and Bad Day Policy" set out in [JSP 822](#). Prior to physically demanding training activities, the activity leader **must** verbally check that participants are feeling well enough to take part in the activity and if not enable them to opt-out.

Individual risk factors to consider are as follows.

(1) **Lifestyle factors** - individual drive and determination, low or reduced physical fitness, being overweight or obese, smoking, alcohol within the past 24 hours, excessive motivation (for example in pass fail tests), use of sports supplements use or illicit drugs.

(2) **Health factors** - previous heat illness, previous poor performance in a fitness test, previous collapse from physical exertion, recent or current illness (for example, a cold, fever or diarrhoea), medication (prescription or over the counter), dehydration.

(a) In the risk assessment, particular attention **should** be paid to the potential risk of heat illness resulting from physical exertion following recent vaccinations. For example, for COVID-19 vaccinations, personnel are recommended to keep to light duties for 72 hours if they experience any adverse symptoms.

(b) In the risk assessment, particular attention **should** also be paid to personnel at risk of exertional collapse due to sickle cell trait (ECAST), and the commander or manager **should** get medical advice relating to those considered at risk.

<sup>3</sup> Walsh NP et al. (2025). Research into Risks that increase Heat Illness: Final report. Army Recruit Health and Performance Research CCSN19A28, 2025: Four-fold increased risk with infection identified.

<sup>4</sup> DSA DG/SI/07/22 Death of a Service person following completion of a loaded march at Catterick, 24 November 2022.

<sup>5</sup> DSA DG/SI/01/1 Service inquiry into a death of a Royal Marine during an endurance march on Dartmoor Training Area, 28 May 2015.

<sup>6</sup> DSA DG/SI/03/22 Woodbridge Service Inquiry into the death of a soldier from 23 Parachute Regiment at MOD Woodbridge, July 2022.



(3) **Work factors** - inexperienced personnel, not acclimatised, long-term fatigue, lack of sleep, air travel within the past 24 hours, poor nutrition or diet, or a missed meal in the previous 24 hours.

(4) **Age and young persons** - a child's ability to thermoregulate (control their core body temperature) is not the same as, or as effective as, an adults. Therefore, young persons (those under the age of 18) may be at increased risk of heat illness and extra precautions **must** be considered in the risk assessment.

(5) **Sunburn** - sunburn increases the risk of heat illness. Minor sunburn can reduce the performance of the affected personnel, while severe sunburn may require personnel to be hospitalised. You will need to consider restricting the duties of personnel who are sunburned. So, preventing sunburn is vital.

Sunburn can be prevented by:

- (a) wearing appropriate clothing and headwear;
- (b) working in the shade; and
- (c) applying water-resistant sunscreen.

g. **Education and training.** Inexperienced personnel are typically more vulnerable to heat illness as a result of them:

- (1) being less aware of the causes, signs and risks of heat illness;
- (2) having less experience of the conditions which may give rise to heat illness; and
- (3) having less physical conditioning (for example, nutrition, training, and physical resilience).

h. **Hydration.** Adequate hydration is essential to maximise heat loss through sweating. Commanders or managers **must** make sure that personnel taking part in an activity have been briefed on the necessity to drink an adequate amount of water before, during and after the activity. The water **should** be cool (if possible) and from a safe source. Care **should** be taken to avoid overhydration and to maintain salt levels. There is more detailed hydration guidance in [Annex F](#).

i. **Body worn heat illness monitoring equipment.** Defence has been developing the use of 'physiological status monitoring' (PSM) technology to monitor the potential risk of heat illness through Project Salamander. Currently PSM technology is not widely available across Defence, however Project Salamander will determine when and where the PSM technology can be made available, its use in those circumstances would be strongly recommended as an additional control measure to put in place as part of a risk assessment. The use of PSM **will not** replace the need for personnel to still check for signs and symptoms of heat illness.



### Policy Statement 3

When planning Defence activities and conducting the risk assessment, a Met Office weather forecast and the work / rest tables **must** be used to determine the safe activity parameters.

When delivering physically demanding activities a QT34 monitor wet bulb globe temperature (WBGT) reading at the activity location (or that is representative of the activity location) **must** be used to dynamically risk assess and make sure that the activity is conducted within safe parameters.

When delivering other activities, a Met Office WBGT forecast or a QT34 monitor WBGT reading at the activity location (or that is representative of the activity location) **should** be used to dynamically risk assess and make sure that the activity is conducted within safe parameters.

35. Analysis of reported cases of heat illness has determined that the more serious cases have been caused during physically demanding military activities such as selection events, arduous and routine physical training, fitness tests, marching under load and other endurance events. There have also been numerous cases of Service personnel losing consciousness (including fainting) when exposed to prolonged periods of high temperatures for example during ceremonial duties.

36. When planning an activity and conducting the risk assessment, the commander or manager **must** consider the heat illness risk factors at policy statement 2 and use the work / rest tables (as set out below and in [Annex C](#)) to determine the safe activity parameters.

37. When using the work / rest tables to plan an activity in the UK six or more days in advance, a long-range Met Office weather forecast **should** be used to estimate the temperature or if within five days of the activity a more accurate Met Office WBGT forecast **should** be used (as set out below).

38. When delivering physically demanding activities where the risk of heat illness can reasonably be expected, a QT34 monitor WBGT reading **must** be taken at the activity location, or a location that is representative of the environmental conditions where the activity is taking place. The QT34 monitor WBGT reading **must** be taken immediately before the activity starts and whilst the activity is underway to make sure that the activity is conducted and remains within safe parameters. If necessary further risk assessments (dynamic risk assessments) **must** be carried out in accordance with Policy Statement 4.

39. When delivering other activities, where the risk assessment has determined the risk of heat illness is not reasonably expected, a Met Office WBGT forecast or QT34 monitor WBGT reading **should** be taken at the activity location, or a location that is representative of the environmental conditions where the activity is taking place. The Met Office WBGT forecast or QT34 monitor WBGT reading **should** be taken immediately before the activity starts and whilst the activity is underway to make sure that the activity is conducted and remains within safe parameters. If necessary further risk assessments (dynamic risk assessments) **must** be carried out in accordance with Policy Statement 4.

40. The Met Office WBGT forecasts and QT34 monitor WBGT readings **should** be kept with the risk assessments, along with an explanation of why a reading was not taken at the specific location (if appropriate) and retained in line with [Chapter 39](#) (Retention of Records) of JSP 375, Volume 1.

**Note:** It is important to remember that heat illness can still occur at lower ambient temperatures where excessive physical exertion, and / or the clothing and equipment that is being worn can cause the body to overheat.

### **Work / rest tables.**

41. [Annex C](#) contains tables which can be used to calculate the safe duration of activities and the balance of work and rest, based on specific factors (for example, acclimatisation, state of dress, work rate and WBGT temperature). Using the work / rest tables, plot the WBGT temperature in degrees Celsius (°C) against the work rate (easy, moderate, hard and very hard) which are categorised by the rating of perceived exertion (RPE). The work rate and the WBGT temperature when combined provides the **maximum** continuous exercise duration (in minutes) or alternative work rest schedules permitted for a four-hour period.

42. When an activity begins to exceed the **maximum** exercise duration times in the work / rest tables the responsible commander or manager **must** carry out a dynamic risk assessment and consider stopping or pausing the activity, applying additional control measures and, if required, elevating the risk through their chain of command for approval.

43. When the activity takes place at WBGT levels that are below 20°C, the work / rest tables at Annex C do not cover this range, therefore the risk assessment **should** focus on other control measures to mitigate the risk of heat illness, for example the heat illness risk factors at policy statement 2 **must** be considered and the work / rest tables used as guidance to inform the **maximum** exercise duration allowed.

### **Wet Bulb Globe Temperature (WBGT)**

44. The WBGT is a combined measure of the dry-bulb temperature (the air temperature), wet-bulb temperature (the temperature the air can be cooled to through the effect of evaporation) and globe temperature (a temperature reading that takes account of the effect of sunlight, air temperature and wind speed). It is measured in degrees Celsius.

### **Weather and WBGT forecasts**

45. When planning an activity in the UK, if it is six days or more in advance a long-range UK weather forecast temperature (°C) can be obtained from the [Met Office](#) (for example up to 30 days) or for longer periods the [UK climatic averages](#) can be used. These estimated forecasts can be used as a base line for the work / rest tables to determine the maximum exercise duration for the planned activity. More information on Met Office weather forecasts are explained in the [Met Office forecast guide](#).

46. When planning an activity in UK locations or overseas that is five days or less before the activity starts, a more accurate Met Office WBGT forecast temperature (°C) **should** be used to review the maximum continuous exercise duration determined from the work / rest tables. The Met Office WBGT forecast can be obtained from the Met Office Military Information Distribution System (MOMIDS), however a MOMIDS user account is required to be set up.

47. To set up a MOMIDS account an initial request **should** be made to the Met Office using the following group mailbox [momidsacrequest@metoffice.gov.uk](mailto:momidsacrequest@metoffice.gov.uk). The Met Office will then provide the new account holder with a MOMIDS account username and password.

48. Once the MOMIDS account is set up, the account holder (for example a nominated point of contact in a Unit) can share the access with those on Command positions, signing / approving the risk assessment, to access MOMIDS directly to obtain a self-service WBGT forecast on the day or up to five-days in advance of the activity.
49. MOMIDS covers the common areas across the UK (for example a military exercise on Salisbury Plain) and overseas locations (overseas locations vary but generally do not go out as far as five-days). The Met Office issues two forecasts per day, the early morning forecast output (suffixed AM), and the afternoon forecast (suffixed PM)).
50. If the location you require is not in the current list of MOMIDS locations, then contact the Met Office via [smdef@metoffice.gov.uk](mailto:smdef@metoffice.gov.uk) with the name, longitude and latitude in decimals of that location to request that the new location is added to the list. It is, however, advisable to apply for a MOMIDS account in plenty of time to make sure that the account can be set up well in advance of planning an activity. Further information on the functionality of MOMIDS is set out in [Annex C](#).
51. For planning overseas activities that are five-days or more in advance of the activity, the Joint Operational Meteorology and Oceanographic Centre (JOMOC) **should** be contacted to obtain a weather forecast for the location of the planned activity. The commander or manager **should** provide the JOMOC with details of the location and date of the activity, the security classification and the point of contact and JOMOC will discuss what Met Office services can be offered.
52. Urgent WBGT forecast requests for activities being delivered within a five-day or less period, can be actioned by using the MOMIDS account self-service function for UK locations or within 24 hours for overseas locations by the JOMOC team in exceptional circumstances.
53. The JOMOC can be contacted 24 hours a day on the following numbers.
- Military personnel:** 9360 58112  
**Civilian personnel:** (01923) 958112 (+ 44 (0)1923 958112 from overseas)  
**Email:** [jomoc@metoffice.gov.uk](mailto:jomoc@metoffice.gov.uk)
- QuestTemp34 (QT34) Monitor**
54. The QuestTemp 34 (QT34) is a mobile monitor that provides a WBGT reading. It is the **only** WBGT monitor approved by Defence. The QT34 monitor can be used to check the difference between the dry-bulb temperature and the wet-bulb temperature. When the two numbers are close, the humidity is high and the risk of heat illness is increased. This is because the higher humidity prevents sweat from evaporating. Further information on the QT34 monitor is set out in Annexes C and D.
55. Any organised sport or adventurous training **should** be conducted in line with the guidelines of the relevant governing body. If those guidelines do not specifically deal with heat illness, this policy **must** be followed.
56. To help commanders and managers plan activities that pose a risk of heat illness, they **must** be familiar with the Heat Illness Prevention (HIP) training available. Module 4 (see policy statement 6) will provide awareness of the WBGT. However, those using it **must** have training, as explained in [Annex D](#).

57. It is good practice for commanders and managers to review the data from previous occurrences to assist them when planning similar types of activities and to enable them to consider implementing the control measures that were previously successful for that activity.

## Young people

58. A young person's ability to thermoregulate (control core body temperature) is not the same as, or as effective as, an adults. So, young people (those under the age of 18, for example young recruits or apprentices) may be at increased risk of heat illness. The work / rest tables set out in [Annex C](#), apply only to risk assessments for people aged 18 and over, however they may be used as approximate guidance in risk assessments for those aged under 18. A risk assessment **must** still be carried out to assess and control the risk of heat illness in any activity involving young people (for example young recruits or apprentices) and that assessment **must** as a minimum consider the heat illness risk factors at policy statement 2.

59. Further guidance on health and safety considerations when working with young people is given in [Chapter 19](#) (Young persons) of JSP 375, Volume 1.

### Policy Statement 4

The commander or manager **must** review the risk assessment immediately before an activity starts to make sure it is still valid, that all the control measures are still in place and to re-assess the risk if necessary.

Where there are changes to the activity whilst it is underway or to the surrounding circumstances which could increase the risk of heat illness, then a dynamic risk assessment **must** be carried out.

As part of the dynamic risk assessment the commander or manager **must** consider pausing or stopping the activity, applying further control measures or elevating the risk.

60. All commanders and managers **must** have a good understanding of this policy in order to manage the risks associated with heat illness and to assist them in making sound judgements and decisions.

61. It is not possible to foresee all hazards, therefore the commander or manager **must** review the risk assessment immediately before an activity starts to make sure it is still valid and that the control measures are still in place.

62. Once an activity is underway, commanders and managers **must** 'dynamically' risk manage it and **must** carry out a dynamic risk assessment where any of the following factors could increase the risk of injury or illness:

- a. If any of the heat illness risk factors have changed or the control measures cannot be met.
- b. If anyone shows signs of heat illness.
- c. If there are changes to the activity whilst it is underway (for example duration of the activity).
- d. If there are changes to the physical environment (for example, a change of location or a change to the location).
- e. If there are changes to the surrounding circumstances such as a sudden change in the weather (for example an increase temperature, humidity and so on).

- f. If the clothing or equipment is not (or no longer) sufficient for the task or the environment.
- g. If an unexpected hazard arises.

**Note:** It may be necessary for the activity to be paused in order to carry out the dynamic risk assessment.

63. If a dynamic risk assessment is required the commander or manager **must** consider the following actions:

- a. **Stopping the activity** - The dynamic risk assessment may determine that the activity needs to be stopped. At this stage, the commander or manager needs to consult with their chain of command for a decision on how long the activity needs to be stopped for. Any decision(s) made in these circumstances **must** be in line with their Defence organisation's elevation process.
- b. **Applying further control measures** - Further control measures (for example, introducing alternative ways of working, removing layers of clothing and so on) could be put in place. If the risk that remains after applying further control measures is higher than the level of risk the commander or manager is authorised to accept, the risk **must** be elevated through their Defence organisation's elevation process.
- c. **Elevating the risk** - If the risk of an activity is higher than the level of risk the commander or manager is authorised to accept, the risk **must** be elevated in line with their Defence organisation's elevation process.

64. There are a very limited number of activities that need to continue without pausing, stopping, applying further control measure or elevating the risk. Examples include combat operations and other instances where any of these actions could cause a greater risk to life than continuing and it is not possible or proportionate to follow their Defence organisation's elevation process. When this is the case, then the commander or manager **must** make decisions relevant to these circumstances and then report their decisions at the earliest opportunity in line with their Defence organisation's elevation process.

65. If no further control measures are required then the activity can continue. However, if the activity has been paused or stopped, it **must** only re-start once the actions from the dynamic risk assessment have been implemented and the commander or manager gives their approval.

66. All decisions made in connection with the dynamic risk assessment actions above **must** be recorded in line with step 4 of the five-step risk assessment process. The recommended template for dynamic risk assessment is the [MOD Form 5010A](#) (please see [Guidance Notes](#)).

67. If the risk resulted in an occurrence, it **must** be recorded on the Defence organisations occurrence reporting system, this will assist with identifying trends and lessons learnt.



### Policy Statement 5

Commanders and managers **must** monitor the activity to identify and immediately treat any cases of heat illness.

All causes of collapse and suspected or confirmed heat illness cases **must** be reported and investigated in accordance with their Defence organisation's safety occurrence reporting procedures.

The Defence Accident Investigation Branch (DAIB) **must** be notified immediately of all heat illness cases which have resulted in hospitalisation or have been formally diagnosed by a medical professional. Additionally, the DAIB **must** be notified where there are four or more suspected cases of heat illness during the same activity.

68. Commanders and managers **must** monitor the activity whilst it is underway and liaise with junior commanders, safety and medical personnel to identify any signs of heat illness and to make sure that effective treatment is delivered immediately to any suspected heat illness casualties.

69. Heat illness casualties **must** be treated in accordance with the Medical Plan that was developed during the activity planning stage. Further direction on the treatment of heat illness is set out in JSP 950 [Leaflet 2-4-4](#), (Heat illness: Acute Treatment), further guidance on the treatment of heat illness casualties for commanders and managers is set out in [Annex A](#) (Commander's guide to heat illness prevention) and guidance for individuals is set out in [Annex B](#) (Individual's guide to heat illness).

70. All causes of collapse and suspected or confirmed (clinically diagnosed) heat illness cases **must** be reported and investigated in line with Defence organisation policy and Defence policy for safety occurrence reporting which is set out in [Chapter 16](#) (Safety occurrence reporting and investigation) of JSP 375 Volume 1.

71. Commanders and managers **must** make sure that they or their chain of command report all suspected or confirmed cases of heat illness within 48 hours and in line with their Defence organisation's occurrence reporting procedures. Cases **should** be reported and recorded as suspected until formally diagnosed as heat illness by a medical professional<sup>7</sup>.

72. As a minimum, reports **should** specify the time, location, QT34 monitor WBGT reading, weather forecast (if available), what they were doing, what clothing was being worn at the time and type of activity being undertaken. Personal details of the casualty **should** include their name, rank, service or staff number and a description of the illness or injury.

73. A rapid, local, easy-to-use alert mechanism, to make all local units performing similar activities aware of all cases of heat illness as they arise, **must** also be considered as part of the planning and the risk assessment process.

74. The Defence Accident Investigation Branch (DAIB) **must** be notified immediately of all heat illness cases that resulted in hospitalisation or diagnosed as heat illness by a medical professional. Additionally, the DAIB **must** be notified where there are four or more suspected cases of heat illness during the same activity, on their duty phone line – 01980 348622 – which is available 24 hours a day, seven days a week.

<sup>7</sup> Medical professional is defined as a person who holds a professional registration with a regulatory body for example the General Medical Council (GMC) or the Nursing and Midwifery Council (NMC).

75. Unit medical centres **must** be told about all suspected or confirmed cases of heat illness through the chain of command, to make sure appropriate medical follow-up action (see JSP 950 [Leaflet 2-4-4](#)), formal diagnosis and recording takes place.

76. For suspected heat illness cases a proportionate investigation **must** be carried out locally, in line with each Defence organisations investigation procedures, to identify lessons that can be learnt. Confirmed cases of heat illness **must** be investigated as follows;

77. For confirmed cases of heat illness that are classified as mild (where there is not cause for immediate concern):

- a. A Unit Investigation **must** be carried out.
- b. The Unit Investigation **must** use an appropriate investigation method to identify causal and contributory factors (the factors that contributed to the case) and the action needed to avoid those factors in the future.
- c. The actions **should** be tracked until the investigation has been completed.

78. For confirmed cases of heat illness that are as classified above mild:

- a. A Defence organisation non-statutory inquiry (NSI) **must** start, in line with the Defence organisation's investigation procedures;
- b. The Defence organisation NSI **must** use an appropriate investigation method to identify casual and contributory factors (the factors that contributed to the case and the action needed to avoid those factors in the future); and
- c. The actions **should** be tracked until the investigation has been completed.

#### **Policy Statement 6**

Those involved in planning or undertaking activities which involve risk of heat illness **must** receive suitable training.

79. All Defence organisations are responsible for making sure that commanders and managers can manage the risks associated with heat illness and react in line with this policy.

80. All commanders and managers have a duty of care, meaning that they are legally responsible for the health and safety of others and **must** be appropriately trained so that they are competent to consider heat illness as part of any Defence activity. They **must** have a sound understanding of this policy. Commanders and managers **must** be able to continuously manage the risk of heat illness and make sound judgments and decisions in all eventualities.

81. If the risk of heat illness could reasonably be expected then all personnel (military and civilian) **should** have a basic level of knowledge of heat illness and this heat illness prevention policy. The minimum requirement is for personnel to understand what causes heat illness, what the signs and symptoms are, and what they can do as an individual to help reduce the risk and what control measures to take if they notice signs of heat illness in themselves or others.



82. To help all personnel understand the causes and effects of heat illness, an introduction to heat illness prevention training (Module 1) is available on the Defence Learning Environment (DLE) and **must** be completed as follows:

- a. Module 1 training **must** be completed by all military personnel at the earliest opportunity (for example at Phase 1 training for new entrants) and then **at least** every two years thereafter for the rest of their career.
- b. Module 1 training **must** be completed by all civilian personnel that are taking part in any activity where a risk of heat illness could reasonably be expected and then **at least** every two years thereafter if they regularly take part in this type of activity.

**Note:** Examples of activities where the risk of heat illness could reasonably be expected, are physically demanding activities such as: military selection events, arduous and routine physical training, fitness tests, marching under load, other endurance events or during prolonged periods of high temperatures such as during ceremonial duties or operating in hot climates. However, it is important to recognise that many cases of heat illness occur at lower ambient temperatures where excessive physical exertion, and / or the clothing and equipment that is being worn causes the core body temperature to significantly rise and overheat.

83. Commanders, managers and those planning activities **must** assess the risks of heat illness and take action to reduce and prepare for those risks. To support this, a more detailed package of heat illness prevention training courses for commanders or managers are available on the DLE as Modules 2 and 3.

- a. Module 2 training **must** be completed by all commanders or managers in advance of them planning or supervising any activity where a risk of heat illness could reasonably be expected. Once completed, the training will be valid for two years, after which point the currency expires. The course would only need to be completed again if two years has expired and the commander or manager would be planning or supervising another activity where a risk of heat illness could reasonably be expected.
- b. Module 3 training is a standalone course to make sure acclimatisation for deployment is managed effectively. This module **must** be completed by all commanders or managers in advance of them planning or supervising deployments where a risk of heat illness could reasonably be expected. This module **should** also be completed by all personnel before deployment if a risk of heat illness could reasonably be expected.

**Note:** For modules 1, 2 and 3 the competence for military personnel these will be automatically recorded on the JPA system and for civilian personnel these can be manually recorded on the MyHR system.

84. Module 4 training has been developed to provide personnel with a better understanding of what the QT34 wet bulb globe temperature (WBGT) monitor is, how it works and how it can be used to monitor environmental conditions. This may assist commanders or managers when carrying out risk assessments. Module 4 is available on the DLE, it is not a mandatory course and **will not** replace the existing in-depth specialist training courses (for example, those completed by operators of the QT34 monitor) as set out in [Annex D](#).

85. Commanders, managers and those planning activities **must** be able to confirm that personnel are sufficiently trained and equipped for any activities where the risk of heat illness could reasonably be expected. As a minimum this can be achieved by checking personnel systems (for example, the Joint Personnel Administration (JPA) for service personnel and the MyHR system for civilian personnel) for HIP training competencies before any planned activity. Contractors will need to check on their own systems.

86. The training competencies for modules 1, 2 and 3 remain current for up to two years. There is no competency attached to Module 4, however once the course has been completed, it **should** be retaken at least every two years to maintain currency. For all of the modules, Defence organisations can increase the frequency of HIP training to suit the relevant Defence activity. However, any change to the frequency **must** be detailed in their SEMS and communicated to all personnel.

## Retention of records

87. Risk assessments and associated documents **must** be kept for at least three years after they expire, and in line with [Chapter 39](#) of JSP 375 Volume 1.

## Related documents

88. The following documents **should** be consulted in conjunction with this chapter.

- a. [JSP 815 - Defence Safety Management System](#)
- b. [JSP 375 Volume 1 \(GOV.UK link\)](#)
  - (1) Chapter 5 - First Aid
  - (2) Chapter 8 - Safety risk assessment and safe systems of work
  - (3) Chapter 16 - Safety occurrence reporting and investigation
  - (4) Chapter 19 - Young persons
  - (5) Chapter 39 - Retention of records
  - (6) Chapter 42 - Cold injury prevention
- c. [JSP 950 - Medical Policy](#)
- d. Legislation and guidance
  - (1) [The Management of Health and Safety at Work Regulations 1999](#)
  - (2) [HSE-INDG163](#) – Five-steps to risk assessment: a brief guide to controlling risks in the Workplace

## Part 2: Guidance

This part provides the guidance and good practice that **should** be followed and will help you to keep to this policy.

This part is made up of the following annexes which are available as separate documents on the JSP 375, Volume 1, Chapter 41 Defnet page.

Annex A - [Commander's guide to heat illness prevention.](#)

Annex B - [Individual's guide to heat illness.](#)

Annex C - [Work / rest tables and aide memoire \(summary guidance\) for using the QT34 wet bulb globe temperature \(WBGT\) monitor.](#)

Annex D - [Procurement, calibration and repair of the QT34 wet bulb globe temperature \(WBGT\) monitor and associated training.](#)

Annex E - [Heat acclimatisation for deployment to hot climates.](#)

Annex F - [Hydration guidance.](#)

Annex G - [Examples of policy compliance.](#)

Annex H - [Basic guidance for all personnel during extreme heat.](#)