

42 Cold injury prevention

This chapter is split into 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 or Defence policy.

Part 2: Guidance. This part provides the guidance and good practice that **should** be followed and will help you to 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 42 (Cold Injury Prevention) of JSP 375 Volume 1, [Defnet page](#) and on the [GOV.UK](#) website.

Annex A - Commander's guide to cold injury prevention.

Annex B - Individual's guide to cold injury prevention.

Annex C - Risk factors and control measures (Safe systems of work).

Annex D - Guide to hand and foot inspections.

Annex E - Non-Freezing Cold Injury (NFCI) Field Assessment Tool (NFAT).

Annex F - Employment of Defence Personnel requiring protection from cold.

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** be sent to COO-DDS-GroupMailbox@mod.gov.uk

Version No	Date of publication	Text Affected	Authority
1.0	Oct 20	Interim update post-handover of policy from DSA to D HS&EP	D HS&EP
1.1	Sep 22	Annual review and update	D HS&EP
1.2	Mar 23	Addition of training modules and minor revisions	D HS&EP
1.3	25 Nov 24	Annual review and revision.	DDS
1.4	17 Dec 24	Minor change to Policy Statement 3	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.

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.
Cold weather environment	Can be described as an environment where the combination of weather elements, such as low temperatures, wind, precipitation, moisture, and air pressure can create conditions that affect people, equipment and terrain to the degree that it increases the risk to personnel and to the operational output.
Commander	This is generally, a military person responsible for planning activities, supervising activities and making sure that 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 www.hse.gov.uk/competence/what-is-competence.htm for information on competence.)
Control measures	Measures that can be taken to reduce the possibility of a risk arising or to 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 before or while an activity is underway and builds on existing risk assessments.

Manager	A person responsible for managing or supervising staff, planning 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.

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, 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 **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) Volume 2, 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 the [JSP 375 Directive and Guidance](#).

Part 1: Directive

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

Introduction

‘Cold injury’ refers to a range of conditions, including hypothermia, freezing cold injury (FCI) and non-freezing cold injury (NFCI). The conditions may exist at the same time. Although hypothermia and FCI are more severe, NFCI is the most common cold injury.

1. Cold injury is a **serious issue** for Defence and it can occur throughout the year, not just in the winter months. Medical conditions resulting from cold exposure particularly non-freezing cold injuries (NFCI), can have severe consequences for both the health and operational readiness of military personnel. The loss of personnel due to cold injuries can disrupt mission capabilities, compromise team cohesion, and place additional strain on remaining personnel. Therefore, mitigating the risk of cold injuries is essential to safeguarding both the health of personnel and maintaining the operational output.
2. It is important that commanders, managers and individuals recognise the signs and symptoms of cold injury, 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 cold injury, and putting control measures in place).
3. The signs and symptoms of cold injury are varied, and each casualty will display symptoms differently. The following (non-exhaustive) examples are the typical signs and symptoms of cold injury, but other signs and symptoms may be seen.
 - a. Cold to touch.
 - b. Shivering.
 - c. Reduced level of consciousness
 - d. Unresponsive
 - e. Slurred speech.
 - f. Apathetic, confused or irrational.
 - g. Blue lips.
 - h. Slow, irregular or undetectable pulse.
 - i. Skin much paler than normal.
 - j. No feeling in the affected part.
 - k. Affected part feels cold and hard to the touch
 - l. Numbness or tingling.
 - m. Pain or swelling in hands or feet.

Note: further guidance on the categorisation of the cold injury conditions and first aid treatment is out in Annex A (Commander’s guide to cold injury prevention).

4. 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, Defence activities, 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 cold injury.

5. 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, with the aim of reducing the risk of cold injury to as low as reasonably practicable (ALARP). The direction and guidance in this chapter relates to assessing and managing the risk of cold injury as part of the standard risk-assessment process. If an individual Defence organisation chooses to introduce further direction or guidance, that direction or guidance **must** be recorded, communicated and followed within that Defence organisation.

6. This chapter focusses on cold injury but it is important to recognise that cases of heat illness can also occur at lower ambient temperature 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.

7. The guidance on preventing heat illness can be found in Chapter 41 (Heat illness prevention) of JSP 375. The direction and guidance for the medical community on treating heat illness and cold injury is in JSP 950 (Medical policy).

What is in this chapter

8. Part 1 contains the following.
 - a. A list of the cold injury prevention policy statements.
 - b. Full details of the policy statements.
9. Part 2 contains guidance which **should** be followed to keep to this cold injury prevention policy.
 - a. Annex A - (Commander's guide to preventing cold injury)
 - b. Annex B - (Individual's guide to preventing cold injury)
 - c. Annex C - (Risk factors and control measures)
 - d. Annex D - (Guide to hand and foot inspections)
 - e. Annex E - (Non-Freezing Cold Injury (NFCI) Field Assessment Tool (NFAT))
 - f. Annex F - (Guide to employment of Defence personnel requiring protection from cold environments)

Cold injury prevention policy statements

10. The following cold injury 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 cold injury is considered when planning those activities. Personnel taking part in these activities **must** know (by name) who the commander or manager is before the activity begins.

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

- (1) Medical plan
- (2) Environment
- (3) Individual
- (4) Clothing and equipment
- (5) Activity

c. **Policy Statement 3.** 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 cold injury, 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.

d. **Policy Statement 4.** Commanders and managers **must** monitor the activity to identify and immediately treat any cases of cold injury.

All suspected or confirmed cold injury 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 cold injury cases that resulted in hospitalisation and / or injuries that have been assessed by a medical professional as grade 3 or 4 on the [Cauchy Frostbite Scale](#). Additionally, the DAIB **must** be notified where there are four or more suspected cases of cold injury during the same activity.

e. **Policy Statement 5.** Those involved in planning or undertaking activities which involve any risk of cold injury **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 cold injury 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.

11. 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.
12. Cold injury is a significant hazard and the commander or manager **must** consider the risk of cold injury during the planning phase of activities under their area of responsibility.
13. 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 who to report any safety occurrences to.
14. 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.
15. As part of their appointed role the commander or manager **must** make sure that:
 - a. cold injury is considered when a Defence activity is being planned;
 - b. they know what the risk factors of cold injury are and that cold injury is considered as part of suitable and sufficient risk assessment(s);
 - c. they know what the signs and symptoms of cold injury are and what actions they need to take when these occur, including basic treatment and reporting;
 - d. control measures to reduce the risk of cold injury are identified, implemented and communicated to relevant personnel and are complied with;
 - e. once the activity has started, if there are any changes to circumstances (for example, weather conditions change rapidly), a dynamic risk assessment **must** be carried out;
 - f. cold injury is a significant hazard and **must** be considered during the planning phase before an activity starts. The risk of heat illness also needs to be considered during the planning phase as the state of dress, task, equipment load and exertion can lead to heat illness despite cold conditions; and
 - g. they have undertaken the necessary cold injury training in advance of them supervising or planning any activity where a risk of cold injury could reasonably be expected.

Policy Statement 2

The risk of cold injury **must** be considered in the risk assessment for all Defence activities in cold weather environments. The risk assessment **must** as a minimum consider the following cold injury risk factors and control measures.

- | | |
|-----------------|---------------------------|
| a. Medical plan | d. Clothing and equipment |
| b. Environment | e. Activity |
| c. Individual | |

16. 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 cold injury are reduced to as low as is reasonably practicable (ALARP) and are communicated to the personnel taking part in the activity.

17. The commander or manager may delegate the 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 risk assessment has been approved, it **must** be followed.

18. 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**.

19. 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.

20. Where the commander or manager have 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 **must** re-evaluate the risk assessment prior to commencement of the activity.

21. The risk of cold injury **must** be considered as part of the wider risk assessment for the activity. All exercises and deployments need to consider the risk associated with cold injury, including those in hot climates such as deserts, where temperatures can drop considerably at night. If a risk of cold injury 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 further control measures during the activity.

22. As part of the cold injury risk assessment, consideration **must** be given to the breathing of extremely cold air, which can have several effects on the lungs and respiratory system:

- a. **Airway Irritation:** Cold air, especially when it's dry, can irritate the airways, leading to bronchoconstriction (narrowing of the airways). This is particularly noticeable in people with asthma or other respiratory conditions, as cold air triggers inflammation and tightening of the muscles around the airways.

- b. **Cold-induced Bronchoconstriction (CIB):** In healthy individuals, prolonged exposure to cold air can cause bronchoconstriction, making breathing more difficult. This happens because cold air causes the airway lining to cool down and the moisture in the lungs to evaporate faster, leading to irritation and tightening.
- c. **Reduced Humidity and Drying of Airways:** Cold air has lower humidity, which means it lacks the moisture needed to humidify the airways. Breathing this dry air can cause the mucous membranes in the respiratory tract to become dry, leading to discomfort, coughing, and increased mucus production as the body tries to protect the lungs.
- d. **Vasoconstriction:** Cold air can cause blood vessels in the respiratory tract to constrict. This may reduce blood flow and oxygen exchange efficiency in the lungs, making it harder to breathe, especially during intense physical activity.
- e. **Increased Respiratory Rate:** Cold air can stimulate the body's respiratory centres, causing an increase in breathing rate. This can put extra strain on the respiratory system, particularly if the individual is exercising or working in the cold.

23. 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 **should** be kept for audit and investigation purposes, as set out in [Chapter 39](#) (Retention of Records) of JSP 375 Volume 1.

24. 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 five-step risk assessment process set out below.

- a. **Step 1 – Identify the hazard.** The hazard is a cold weather environment (15°C and less) where the effect of wind chill, altitude, and wet and damp conditions, may lead to heat loss from the body.
- b. **Step 2 – Decide who might be harmed and how.** The temperature, sun, wind, rain and so on, along with clothing and equipment, affects the rate of core (internal) and peripheral (skin level) cooling. For example, skin contact with metals or fluids with low freezing points can cause FCI in seconds. The intensity of the activity and the rate of work may combat cooling by increasing core body temperature, but it can burn up energy and increase the amount of nutrition and hydration required.

All personnel involved in the activity are at risk. Some are more at risk than others, depending on individual risk factors (for example, medical conditions or medication), so medical advice may be needed.

For physical activities, the 'Physical Opt-Out and Bad Day Policy' ([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 cold injury (Annex A) provides guidance on identifying risk factors, evaluating 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 for dealing 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 cold injury 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 cold injury 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 cold injury 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 before an activity starts to make sure it is still valid and that all the control measures are still in place. Once an activity has started, commanders and managers **must** 'dynamically' risk manage it.

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 temperature drops significantly, change in weather conditions such as wind, rain, snow or the duration of the activity has increased and so on), 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 single case of NFCI) or can be scheduled (for example, every <two hours> during the activity). Further guidance is included in the cold injury risk planning tool in the Commander's guide to preventing cold injury (Annex A).

25. 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.

26. 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.

27. 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.

28. The following risk factors and control measures illustrate how to consider the risk of cold injury in the five-step risk assessment process. The following cold injury risk factors and control measures **must** be considered as part of that process.

Risk factors and control measures

Medical plan	
<p>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. When developing the medical plan, the commander or manager should:</p> <ol style="list-style-type: none"> consider the level of medical cover (staffing) needed for the activity; consider the type and amounts of medical equipment needed for the activity; and consider how any cold injury casualties will be managed, including evacuation to a medical treatment facility appropriate to the level of injury. <p>Further medical guidance is given in Chapter 5 (First Aid) of JSP 375 Volume1, JSP 950 Leaflet 2-9-4 and in Defence organisation policy.</p>	
Environment	
Air temperature	The colder the air temperature, the greater the risk of cold injury. The risk of NFCI generally increases in temperatures of 15°C or lower, and the risk of FCI generally increases at temperatures of -0.55°C and lower. Breathing extremely cold air, can have several effects on the lungs and respiratory system.
Wetness	Wet clothing next to the skin increases heat loss.
Altitude	The temperature drops by about 1°C every 100m gain in height, and decreased oxygen levels at altitude increases the risk of cold injury.
Wind chill	Heat loss increases with wind strength. Travel in open vehicles creates a similar risk.
Individual	
Race	African and Caribbean personnel are two to four times more likely to suffer a cold injury due to their physiological response to cold (according to 'The effect of ethnicity on the vascular responses to cold exposure of the extremities' (MJ Maley, CM Eglin, JR House and MJ Tipton), published in the European Journal of Applied Physiology).
Sex	Females are generally more susceptible to cold injury than males.
Medical conditions, medication and illness	Some medical conditions, medications and illnesses (such as flu and fevers) can increase the risk of cold injury. It is recognised that there may be times when an individual does not feel well enough to take part in certain physical activities, where this is the case, they should inform the activity leader immediately and refer to the 'Physical Opt-Out and Bad Day Policy' set out in JSP 822 .

Alcohol	Consuming alcohol within 24 hours of cold exposure may increase the risk of cold injury, as alcohol affects judgement and causes vasodilatation (blood vessels widening as a result of their muscular walls relaxing).
Age	Thermoregulation (control of body temperature) weakens with age, but the risk of cold injury as a result of this only begins to rise after the age of about 50.
Lack of sleep and insufficient food or drink	Lack of sleep, poor hydration and insufficient nutrition (such as good-quality carbohydrates) may all increase the risk of cold injury.
Inadequate training	Individuals who have little, or no cold-weather training and experience are at greater risk of cold injury. Personnel need to be taught that when it is cold, tasks may be more difficult but they are not impossible and can generally be performed safely.
Inexperience	Those new to the military are at greater risk of cold injury, including as a result of emotional stress due to unfamiliar circumstances and surroundings.
Clothing and equipment	
Clothing	Clothing should be appropriate for the environment personnel are operating in (for example, is it waterproof and does it have the correct thermal efficiency to cope with harsh environments?). All clothing must be issued and sized prior to individuals taking part in the activity.
Equipment	Equipment should be appropriate for the environment in which it is being operated. Carrying and using heavy equipment can put extra strain on the body which may increase the chances of injury in cold climates or can result in additional exposure (for example if gloves need to be removed to operate any delicate or digital equipment).
Activity	
Stationary duties	Staying still (for example, when on sentry duty, in small compartments in vehicles, and in defensive fighting positions) increases the risk of cold injury.
Immersion	Being in cold water increases heat loss, more so if the water is moving or personnel are moving in it. Immersion will severely reduce the insulation provided by clothing.
Prolonged exposure	Risk varies between individuals but increases with the duration of exposure to cold. Personnel exposed to cold over several days are particularly susceptible, even if they take breaks to warm up.
Lack of shelter	Shelter is critical for protection against wind, rain, snow and so on, and for creating a warmer environment. Without shelter, even an improvised structure, the risk of cold injury increases.
Contact with metals and liquid	Direct skin contact with metals or fluids with low freezing points (such as fuel) can cause FCI in seconds.

Table 1 - Risk Factors and Control measures

Policy Statement 3

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 cold injury, 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.

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

30. 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. Once an activity has started, commanders and managers **must** 'dynamically' risk manage it through the completion of a dynamic risk assessment.

31. When delivering the activity, The commander or manager **must** carry out a dynamic risk assessment where changes to any of the following factors could increase the risk of injury or illness.

- a. If any of the risk factors in Table 1 have changed or the control measures cannot be met.
- b. If anyone shows signs of cold injury.
- 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 deterioration in the weather (for example an increase in wind chill, snow, rain 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.

32. 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, issuing more thermal efficient 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.
33. 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.
34. If no further control measures are required then the activity can continue. However, if the activity is paused or stopped it **must** only re-start again once the actions from the dynamic risk assessment have been implemented and the commander or manager gives their approval.
35. 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. When able to do so the actions **must** be formally recorded and the recommended template for doing so is [MOD Form 5010A](#) (please see [Guidance Notes](#)), but alternatives may be used.
36. 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 4

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

All suspected or confirmed cold injury 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 cold injury cases that resulted in hospitalisation and / or injuries that have been assessed by a medical professional as grade 3 or 4 on the [Cauchy Frostbite Scale](#). Additionally, the DAIB **must** be notified where there are four or more suspected cases of cold injury during the same activity.

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

38. Cold injury casualties **must** be treated in accordance with the Medical Plan that was developed during the activity planning stage. Further direction on the treatment of cold injury is set out in JSP 950 [Leaflet 2-9-4](#) (Medical Management of Cold Weather Injury), further guidance on the treatment of cold injury casualties for commanders and managers is set out in Annex A (Commander's guide to cold injury prevention) and guidance for individuals is set out in Annex B (Individual's guide to cold injury prevention).

39. All suspected or confirmed (clinically diagnosed) cold injury 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.

40. Commanders and managers **must** make sure that they or their chain of command report all suspected or confirmed cases of cold injury 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 cold injury by a medical professional¹. As a minimum, reports **should** specify the time, location, Met office 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.

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

42. The Defence Accident Investigation Branch (DAIB) **must** be notified immediately of all cold injury cases that resulted in hospitalisation and / or injuries that have been assessed by a medical professional as grade 3 or 4 on the [Cauchy Frostbite Scale](#). Additionally, the DAIB **must** be notified of all cold injury cases where there are four or more coincidental casualties. The DAIB **must** be contacted on their duty phone line – 01980 348622 – which is available 24 hours a day, seven days a week.

¹ 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).

43. Unit medical centres **must** be told about all suspected or confirmed cases of cold injury, through the chain of command, to make sure appropriate medical follow-up action (see JSP 950 [Leaflet 2-9-4](#)), formal diagnosis and recording takes place.

44. For confirmed cases of cold injury, a Unit Investigation **must** be carried out and 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. The actions **should** be tracked until the investigation has been completed.

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

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

46. 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 cold injury 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 cold injury and make sound judgments and decisions in all eventualities.

47. If the risk of cold injury could reasonably be expected then all personnel (military and civilian) **should** have a basic level of knowledge of this cold injury prevention policy. The minimum requirement is for personnel to understand what causes cold injury, what the signs and symptoms are, what they can do as an individual to help reduce the risk, and what control measures to take if they notice signs of cold injury in themselves or others. Further information and guidance for individuals is set out in [Annex B](#) - Individual's Guide to Preventing Cold Injury.

48. To help all personnel understand the causes and effects of cold injury, an introduction to cold injury 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 Phase 1 training for new entrants) and then **at least** every two years 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 cold injury could reasonably be expected and then **at least** every two years thereafter if they regularly take part in this type of activity.

49. Commanders, managers and those planning activities **must** assess the risks of cold injury and take action to reduce and prepare for those risks. To support this, a more detailed package of cold injury prevention training for commanders or managers is available on the DLE as Module 2.

50. Module 2 training **must** be completed by all commanders or managers in advance of them planning or supervising any activity where a risk of cold injury 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 cold injury could reasonably be expected.

Note: For modules 1 and 2 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.

Retention of records

51. 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

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

- a. [JSP 815](#) – Defence Safety Management System
- b. [JSP 375 Volume 1](#)
 - (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 41 – Heat illness prevention
- c. [JSP 286](#) – Defence Diving Manual Part 2
- d. [JSP 950 – Medical Policy - Volume 2](#)
- e. Legislation and guidance
 - (1) [Management of Health and Safety at Work Regulations 1999](#)
 - (2) [HSE-INDG163](#) – Risk assessment: a brief guide to controlling risks in the workplace
 - (3) NATO ATP-17 – Naval Arctic Manual

Part 2: Guidance

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

This part 2 is made up of the following annexes which are available as separate documents on the JSP 375 Volume 1, Chapter 42 Defnet page.

Annex A - (Commander's guide to preventing cold injury) gives general guidance for those planning and supervising activities. It also contains information on first aid for anyone who develops a cold injury.

Annex B - (Individual's guide to preventing cold injury) contains guidance for everyone in Defence who may be at risk of cold injury.

Annex C - (Risk factors and control measures) contains guidance on the control measures required as part of a safe system of work.

Annex D - (Guide to hand and foot inspections) contains guidance on regular hand and foot inspections, which play an important role in identifying problems early.

Annex E - (Non-freezing cold injury field assessment tool) is designed to be used during hand and foot inspections to help distinguish between a hand or foot with or at risk of FCI, and a hand or foot with or at risk of NFCl.

Annex F - (Guide to employment of Defence personnel requiring protection from cold environments) provides a structure for deciding whether particular Defence personnel need protection from cold at work, while minimising their risk of further injury.