



Ministry
of Defence

Individual's Guide to preventing Cold Injury

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Based upon JSP 375

(Management of Health and Safety in Defence),
Annex B to JSP 375, Volume 1, Chapter 42



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Cold injury includes whole-body cooling, i.e. hypothermia, and cooling of the extremities such as hands and feet, i.e. freezing cold injury (FCI) or non-freezing cold injury (NFCI). NFCI is the most common of these and mostly occurs in the UK during training Exercises.

How does it happen?

Hypothermia can develop slowly e.g. during a cold UK Exercise, or rapidly, e.g. during immersion or extreme cold. Hypothermia is also a risk to casualties with moderate to severe injuries in any climate.

Non-Freezing Cold Injury (NFCI) is caused by gradual, prolonged cooling of the hands or feet. It does not have to be freezing to get an NFCI; most cases occur in the UK during training.

Freezing Cold Injury (FCI) happens in sub-zero temperatures and includes frost nip and frost bite. Parts of the body most prone to freezing are the extremities and exposed areas, e.g. nose, ears, fingers and toes.



What can you do to prevent it?

Static duties/ cramped posture	If in a prolonged static position always try to insulate yourself from the ground. Keep moving as much as you are able to, be that your whole body or wriggling toes and fingers.
Wet clothing	Put on waterproofs before exposure to rain or snow. If clothing next to the skin becomes wet change into dry clothing as soon as possible.
Boots	Ensure boots are snug but not tight. Change out of wet boots or use dry socks & insoles. Use waterproof socks only when static or in harbour areas. Use gaiters.
Gloves	Carry spare gloves.
Buddy Buddy	Look out for your colleagues and raise the alarm straight away if you have any concerns.
Hand & foot inspections	Check your hands and feet at regular intervals. If you start to lose feeling in hands or feet refer to the NFCI Field Assessment Tool (NFAT) for guidance.
Medical conditions/ medications	Be aware that some medical conditions and medications increase the risk of cold injuries. Let your Unit Medical Officer know if you start to suffer symptoms in the cold.
Alcohol	Avoid alcohol for 24hrs before activity.
Drive to succeed	If you experience symptoms during training STOP and report it regardless of how important you feel the activity is. Cold injury caught early often recovers quickly and fully without requirement for prolonged medical restrictions.

Keep It **C**lean

dirty clothing tends to be packed down
which compromises insulation

Avoid **O**verheating

adjust layers to avoid overheating and sweating

Wear It **L**oose

loose, layered clothing traps air and provides good insulation

Keep It **D**ry

wet clothing leads to rapid heat loss

- F** kit fits correctly
- E** exercise **e**xtremities
- E** eat and drink plenty
- T** tight boots are **t**errible

First aid: Hypothermia

**Typical symptoms and signs of hypothermia are as follows.
Not all symptoms may be present.**

Mild

- Casualty says they feel cold
- Cold to touch
- Uncontrolled shivering
- Mild confusion, disorientation, or irritability
- Loss of manual dexterity (clumsiness)

Moderate or severe

- Slurred speech
- Lips may turn blue
- Shivering has stopped
- Apathetic, confused, irrational (may deny problem and refuse help)
- Reduced level of consciousness
- Slow and/or irregular pulse or undetectable pulse
- Unresponsive and may look dead

If anyone taking part in the activity shows any signs or symptoms of hypothermia, pause or stop the activity and then:

- remove the casualty from immediate danger;
- carry out the 'airway, breathing and circulation' (ABC) assessment; and
- assess the severity of hypothermia.

Mild hypothermia

Prevent further cooling

- Protect the casualty from the wind and rain
 - (move to shelter or shield them).
- Put a layer of insulation between the casualty and the ground.
- Remove wet clothing.
- Put any available dry, warm and windproof clothing on the casualty.
- Cover the casualty's head and neck.

Gently warm the casualty

- Give the casualty high-energy food such as chocolate.
- Huddle around the casualty.

Moderate or severe hypothermia

Handle the casualty very gently

- Keep the casualty horizontal, lying as flat as possible.
- Carefully check for signs of life, for at least 60 seconds.

Are there signs of life (breathing, a pulse)?

YES

NO

- When the casualty is dry and has been stable for at least 30 minutes, help them with gentle exercise.
- Transfer the casualty to a heated environment when possible.

CONSCIOUS: Treat the casualty as you would for mild hypothermia - prevent further cooling and gently warm.

UNCONSCIOUS: Gently place the casualty flat or in the recovery position, on top of an insulating layer between them and the ground if possible.

Are any of the following true?

- The conditions make it too unsafe to rescue the casualty.
- It is obvious that the casualty is dead and could not be resuscitated.
- The casualty was buried by an avalanche for more than 60 minutes and they have no pulse.

YES

Consider withholding or stopping CPR.

NO TO ALL

Immediately call for evacuation transport and start CPR.

- If continuous CPR is not possible due to difficult or dangerous conditions, consider:
 - o delaying CPR; or
 - o performing CPR intermittently.

Prevent further cooling and gently warm the casualty as for **mild hypothermia**, as long as it does not prevent effective CPR or delay transport.

The casualty can return to the activity when a clinical assessment finds that they have recovered.

Evacuate the casualty for emergency care (Civilian emergency services or Role 2/3 medical treatment facility (MTF))

REPORT THE SITUATION

in line with your Defence organisation's occurrence-reporting procedures.

Note: A single case is a warning that other personnel are at risk. A dynamic risk assessment **must** be carried out and any extra control measures that are identified **must** be put in place.

Use the NFCI Field Assessment Tool (NFAT) at Annex E as a guide for hand and foot inspections.

Suspect FCI if a hand or foot inspection identifies any of the following signs and symptoms.

- An area of skin is white and waxy looking with a clear border between white and pink skin.
- The casualty is not in pain and there is no feeling in the affected part.
- The affected part feels cold and hard to touch.
- Any skin that is warming up appears blistered and bruised

Does the casualty also show any of the signs and symptoms of hypothermia or FCI?

YES

Treat for hypothermia.

Note: Do not use any artificial heat, hot water or stoves. This will make the injury worse.

NO

Prevent further cooling

- Protect the casualty from the wind and rain (move to shelter or shield them).
- Put a layer of insulation between the casualty and the ground.
- Remove wet clothing.
- Put any available dry, warm and windproof clothing on the casualty.
- Cover the casualty's head and neck.

If the affected part were warmed, would there be a risk of it freezing again?

YES

Do not try to warm the affected area.

Move the casualty to a heated environment and get medical care for them.

Note: A single case is a warning that other personnel are at risk. A dynamic risk assessment **must** be carried out and any extra control measures that are identified **must** be put in place.

NO

Warm the affected part by placing it either under your hands on your lap or under the casualty's armpits.

- Do not apply direct heat.
- Do not rub the affected area (this could damage the tissue).
- Do not allow the casualty to smoke or drink alcohol.
- Do not use ointment (for example, Deep Heat).
- Do not allow the casualty to use the limb when it has warmed up, unless absolutely essential.
- Replace wet socks or gloves.

If the skin is blistered or discoloured, cover it with a light dressing. Give the casualty warm drinks (not alcoholic) or high-energy food such as chocolate.

REPORT THE SITUATION in line with your Military Command's or Defence organisation's occurrence-reporting procedures.

Carry out a hand and foot inspection using the NFCI Field Assessment Tool (NFAT) in Annex E.

You should suspect NFCI if a person is suffering numbness, tingling, pain or swelling in their hands or feet after prolonged exposure to cold or wet conditions.

Prevent further cooling

- Protect the casualty from the wind and rain (move to shelter or shield them).
- Put a layer of insulation between the casualty and the ground.
- Remove wet clothing.
- Put any available dry, warm and windproof clothing on the casualty.
- Cover the casualty's head and neck.



Gently warm the casualty

- Provide warm food and drink.
- Huddle with others around the casualty.
- Once the patient is dry, has had some food and has been stable for at least 30 minutes, encourage mild exercise.
- Re-warm hands and feet using available measures (body warmth, clothing, rubbing, hand warmers).

Do not immerse the hands and feet in water or hold them up to a flame.

When the casualty has warmed up, follow the management guidelines in NFAT.

REPORT THE SITUATION in line with your Military Command's or Defence organisation's occurrence-reporting procedures.

Note: Do not use any artificial heat, hot water or stoves. This will make the injury worse.

Note: A single case is a warning that other personnel are at risk. A dynamic risk assessment **must** be carried out and any extra control measures that are identified **must** be put in place.





Points of Contact:

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