1. The enclosed Standards Related Document, AMedP-7.2-1, Edition A, Version 1, CBRN FIRST AID HANDBOOK, which has been approved in conjunction with AMedP-7.2 by the nations in the Military Committee Medical Standardization Board, is promulgated herewith.

2. AMedP-7.2-1, Edition A, Version 1 is effective upon receipt.

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3. This publication shall be handled in accordance with C-M(2002)60.

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Branch Head P&G

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RECOGNITION OF A CBRN INCIDENT

### Indicators of an environmental or CBRN hazard include:

- Any symptoms involving incident response or reconnaissance personnel
- Multiple casualties with similar non-traumatic symptoms and signs
- Unusual taste, smell or mist
- Unexplained dead animals
- Unexplained symptoms including:
  - Altered vision
  - Headache
  - Chest tightness
  - Non-thermal burns
- Any unusual or unexplained symptoms, signs, illness or deaths

### Smells associated with chemicals

<table>
<thead>
<tr>
<th>Chemical</th>
<th>Smell</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlorine</td>
<td><em>Swimming pools</em></td>
</tr>
<tr>
<td>Cyanide</td>
<td><em>Bitter almonds</em></td>
</tr>
<tr>
<td>Hydrogen sulphide</td>
<td><em>Bad eggs</em></td>
</tr>
<tr>
<td>Lewisite</td>
<td><em>Geraniums</em></td>
</tr>
<tr>
<td>Phosgene</td>
<td><em>Freshly mown hay</em></td>
</tr>
<tr>
<td>Sulphur mustard</td>
<td><em>Garlic</em></td>
</tr>
</tbody>
</table>

### Chemical detection

- Chemical Agent Monitor
  - **H** - mustard (Red)
  - **G** - nerve agents (Yellow and Green)
- 3 colour detector paper
  - **Red** - mustard (H)
  - **Yellow** - nerve (G)
  - **Green** - nerve (V)

### Principles of CBRN casualty management:

- **Recognition**
- **Safety** (Six ‘C’s Confirm - Clear - Cordon - Control - Communicate - Contain)
- **Self / Buddy first aid**
- **Triage**
- **Casualty assessment** (‘Quick Look’)
- **Life saving interventions** (T1 casualties only)
- **Casualty hazard management** (Decontaminate and/or Isolate/Quarantine)
- **Supportive management** (includes critical care)
- **Definitive management** (includes specific antidotes & antibiotics, and surgery)
- **Rehabilitation**
CBRN INCIDENT IMMEDIATE ACTIONS

**Six Cs**

**CONFIRM**
- Put on Individual Protective Equipment (where available)
- Warn others nearby
- Identify possible routes of exposure (e.g. food, airborne, skin)

**CLEAR**
- Move upwind, if gas, vapour or airborne particles
- Move to a safe distance (outside any exclusion zone)

**CORDON**
- Establish hot and warm (decontamination) zone
- Establish a formal clean / dirty line (CDL)

**CONTROL**
- Stop any eating, drinking or smoking in contaminated area
- Control and monitor re-entry and exit to / from zones
- Limit movement downwind of hazard
- Protect the area for further assessment including forensics (exploitation)

**COMMUNICATE**
- Inform Command using METHANE report and/or CBRN1 incident report
- Warn local Medical Treatment Facilities and personnel

**CONTAIN** (also see Casualty Hazard Management references)
- Prevent secondary contamination, if persistent hazard
- Prevent secondary infections, if contagious biological agent

---

**METHANE REPORT**

<table>
<thead>
<tr>
<th>M</th>
<th>My call sign</th>
</tr>
</thead>
<tbody>
<tr>
<td>E</td>
<td>Exact location and wind direction</td>
</tr>
<tr>
<td>T</td>
<td>Type of incident</td>
</tr>
<tr>
<td>H</td>
<td>Hazards identified (C, B, R, combined or unknown)</td>
</tr>
<tr>
<td>A</td>
<td>Assessment (or Access): Scene / Casualty</td>
</tr>
<tr>
<td>N</td>
<td>Number of casualties: triage and type</td>
</tr>
<tr>
<td>T1</td>
<td>T2</td>
</tr>
<tr>
<td>E</td>
<td>Emergency treatment given and resources required (incl. decontamination)</td>
</tr>
</tbody>
</table>
## CONSIDERATIONS / BRIEF

**Safety**
- Hazard(s):
- PPE/IPE state?
- Work/Rest rate?

**Cordons**
- Hot zone?
- Exclusion zone?
- Downwind hazard?
- CDL marked?
- CDA?

**Command/Control Comms**
- I/C:
- Call signs/channels:
- Next report due:

**Assessment**
- Agent(s) detected:
- T1, T2, T3, D

**Treatment**
- See Cards 7-9

**Transport**
- AXP
- HLS

**Exploit/Recovery**
- SIBCRA?
- Recovery end state?
- Time to end state?

---

**Wind direction/speed:**

**Ambient temperature:**
CBRN TRIAGE (HOT ZONE)

Triage Categories

<table>
<thead>
<tr>
<th>T1</th>
<th>Immediate</th>
<th>Requires life-saving interventions (S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>T2</td>
<td>Delayed</td>
<td>Stretcher case threat not requiring S orcasualty incapacitated</td>
</tr>
<tr>
<td>T3</td>
<td>Minimal</td>
<td>Casualty and not incapacitated</td>
</tr>
</tbody>
</table>

---

1. Where resources permit, resuscitation maybe attempted on cases of witnessed respiratory arrest with early use of antidotes (e.g. atropine for nerve agent toxicity).
2. The application of a tourniquet mandates that the T1 triage category remains in place.

T3 – Minimal

WALKING? YES

OBEYING COMMAND? NO

T2 – Delayed

WALKING? NO

SINGNS OF LIFE / BREATHING? YES

OBEDING COMMAND? NO

DEAD

SINGNS OF LIFE / BREATHING? NO

CATASTROPHIC HAEMORRHAGE? YES

RESPIRATORY DISTRESS? NO, or RR < 10 or > 30

UNCONSCIOUS OR FITTING? NO, or 10-30

T1 – Immediate

RESPIRATORY DISTRESS? YES

UNCONSCIOUS OR FITTING? NO T1 CRITERIA

T2 – Delayed

T1 – Immediate

T2 – Delayed
'QUICK LOOK' ASSESSMENT

Casualty assessment in a CBRN-threat environment 'Quick Look'

Type of casualty (incident)?

- Trauma
- Chemical

- CRESS assessment
  - Conscious?
  - Respiration problem?
  - Eyes?
  - Secretions?
  - Skin?
  - Treat

If persistent agent & not wearing respirator, then apply respirator.

C-R(AB) assessment

- Catastrophic Haemorrhage?
  - Treat

C-AB assessment

- Casualty wearing respirator?
  - Yes
  - Respiration problem?
    - Treat
    - Breathing problem?
      - Treat
  - No
    - Airway problem?
      - Treat
      - Breathing problem?
        - Treat
    - Breathing problem?
      - Treat
<table>
<thead>
<tr>
<th>CBRN Medical Slate Card</th>
<th>CBRN Medical Slate Card</th>
<th>CBRN Medical Slate Card</th>
<th>CBRN Medical Slate Card</th>
<th>CBRN Medical Slate Card</th>
<th>CBRN Medical Slate Card</th>
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</thead>
<tbody>
<tr>
<td><strong>C</strong></td>
<td>Conscio sness</td>
<td>Con Isions</td>
<td>Canide</td>
<td>O iate (Mor ine)</td>
<td>Atro ine</td>
</tr>
<tr>
<td></td>
<td>Con Isions</td>
<td>Unconscious / Convulsions</td>
<td>Red ced nconscious s</td>
<td>A itated Con sed</td>
<td>Normal, reduced or agitated</td>
</tr>
<tr>
<td><strong>R</strong></td>
<td>Res iration</td>
<td>Increased or reduced / stopped</td>
<td>Increased or stopped</td>
<td>Red ced Sto ed</td>
<td>Increased</td>
</tr>
<tr>
<td></td>
<td>Increased or reduced / stopped</td>
<td>Increased or reduced / stopped</td>
<td>Increased or stopped</td>
<td>Red ced Sto ed</td>
<td>Increased</td>
</tr>
<tr>
<td><strong>E</strong></td>
<td>Pin oint ils</td>
<td>Normal / Large pupils</td>
<td>Pin oint ils</td>
<td>Bl rred ision</td>
<td>Normal</td>
</tr>
<tr>
<td></td>
<td>Pin oint ils</td>
<td>Normal / Large pupils</td>
<td>Pin oint ils</td>
<td>Bl rred ision</td>
<td>Normal</td>
</tr>
<tr>
<td><strong>S</strong></td>
<td>Secretions</td>
<td>Increased</td>
<td>Normal</td>
<td>ro t Tirst</td>
<td>Normal / Sputum</td>
</tr>
<tr>
<td></td>
<td>Secretions</td>
<td>Increased</td>
<td>Normal</td>
<td>ro t Tirst</td>
<td>Normal / Sputum</td>
</tr>
<tr>
<td><strong>S</strong></td>
<td>Sin</td>
<td>Sweaty</td>
<td>Pink → Blue</td>
<td>Normal / Blue</td>
<td>Flushed / Dry</td>
</tr>
<tr>
<td></td>
<td>Sin</td>
<td>Sweaty</td>
<td>Pink → Blue</td>
<td>Normal / Blue</td>
<td>Flushed / Dry</td>
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<td>Vomiting</td>
<td>Sdden onset</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Vomiting</td>
<td>Sdden onset</td>
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Pin oint ils a not e resent i ediatel i s in a sor tion or e e rotection orn. Bio-s ndro es incl de res irator c taneo s (s in) l adeno at ae orr a ic astrointestinal and ne rolo ical (central eri eral).
# CBRN Medical Treatment

## Priorities for Treatment

<table>
<thead>
<tr>
<th>HOT (First Aid)</th>
<th>WARM (MT)</th>
<th>INTERVENTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;C&gt; A a B</td>
<td>&lt;C&gt; A a B</td>
<td>Catastrophic haemorrhage control</td>
</tr>
<tr>
<td>Evac</td>
<td>Evac</td>
<td>Basic Airway management</td>
</tr>
</tbody>
</table>

*Emergency Medical Treatment by medical personnel only

### General First Aid Treatment Options

#### Catastrophic Haemorrhage Control

- Attempt to apply pressure dressing
- If limb - apply tourniquet (where available)
- If torso - manage as conventional catastrophic haemorrhage

Apply dressing / marking to protect and notify if potential contamination

(Expose to treat drill)

#### Airway Management*

- Basic airway manoeuvres
  - head tilt & chin lift (non-trauma)
  - jaw thrust (trauma)

Suction airway, if equipment available, or self-drainage

Place in recovery position

#### Antidotes (See agent-specific first aid)

#### Breathing

- RIBS* (team medic) assessment

Breathing support and ventilation, as resources allow

If sucking chest wound
  - apply appropriate dressing
If low oxygen level or blue
  - give oxygen, if available
If penetrating injury - consider tension pneumothorax
  - seek medical assistance immediately (medical skill required)
**AGENT-SPECIFIC FIRST AID**

### Nerve agent
- Remove from scene, and decontaminate any liquid contamination
- Clear secretions and vomit (suction airway, if equipment available)
- Administer Nerve Agent antidote immediate therapy
- Place in recovery (semi-prone) position

### Vesicant (Blistering agent)

*Immediate pain* - consider Lewisite / Phosgene Oxime / caustic agent  
*Delayed redness (6-12 hours)* - consider Sulphur Mustard  
- Remove from scene  
- Immediate decontamination  
- Monitor exposed for redness and irritation, especially eyes and airway  
- Report any breathing or swallowing difficulty, incl. hoarse voice / cough

### Pulmonary (choking) agent
- Remove from scene; avoid exertion  
- If respiratory distress AND hazard cleared, remove respirator  
- If liquid contamination or T1, remove clothing  
- Basic airway management including head tilt and chin life  
- If respiratory secretions, allow free drainage in recovery position  
- If cyanosed (blue), give oxygen, if available

### Cyanide (Blood agent)
- Remove from scene immediately  
- If breathing and symptomatic, give oxygen (if available)  
- Start CPR if cardiac arrest witnessed or within 10 minutes  
- Administer cyanide immediate therapy MedCM, where available

### Heat illness including heat stroke

*Heat stroke is an altered conscious level with an excessive core temperature (>40°C) and is a medical emergency*  
- Stop activity, and check for any use of atropine  
- Relax individual protective equipment state, if permissible  
- Strip, soak, fan and fluids (SSFF), if permissible  
- Rehydrate but avoid drinking large volumes (‘little and often’)  
- Record any altered level of conscious, confusion or agitation  
- Record core body temperature, where possible
BIOLOGICAL & RADIATION FIRST AID

Mental (psychotropic) incapacitant / delirium / atropine overdose

- If confused or agitated, remove any weapon system and reassure
- Avoid physical restraint due to risk of heat illness
- Manage in cool, calm & sheltered environment (manage as heat illness)

BIOLOGICAL CASUALTY MANAGEMENT

Assess risk of transmission (contagious disease)
- Consider isolation & contact tracing
Monitor vital signs and identify type of bio-syndrome
- Pulse rate, respiratory rate, temperature and level of consciousness

BIO-SYNDROMES

Respiratory
- Cough, chest pain, shortness of breath

Cutaneous (skin)
- Generalised rash, localised lesions

Gastrointestinal
- Vomiting, diarrhoea, abdominal pain

Lymphadenopathy
- Swollen lymph node (e.g. buboes)

Haemorrhagic
- Bleeding, bruising, non-blanching rash

Prodrome
- Flu-like symptoms, lethargy, fever, aches

Neurological
- Central:
  - Headache & neck ache, confusion, hallucinations, coma

- Peripheral:
  - Descending paralysis, weakness of eyelids, speech & swallowing difficulty

RADIOLOGICAL CASUALTY MANAGEMENT

Treat trauma first

Record any physical / personal dosimetry
Record the proximity and duration near to known source
Record the onset time of any nausea, vomiting and / or diarrhoea
Record any use of anti-sickness or stable iodine medication
<table>
<thead>
<tr>
<th>ID number</th>
<th>If known</th>
<th>e.g. AB1234</th>
</tr>
</thead>
</table>

**A**  
**Age of casualty**  
(adult / child (& age))

**T**  
**Time of wound / exposure or time of onset of symptoms**

**M**  
**Mechanism of injury or type of incident**

| **I**  
Injuries | **Intoxication** | **Infection** |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(including injury pattern &amp; observed injuries)</td>
<td>(type, route of exposure, &amp; contamination risk)</td>
<td></td>
</tr>
</tbody>
</table>

**S**  
**Symptoms and signs**  
(including toxidromes)

<table>
<thead>
<tr>
<th>Cat haem</th>
<th>Consciousness</th>
<th>Others:</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Resp</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>Eyes</td>
<td></td>
</tr>
<tr>
<td>Circ</td>
<td>Secretions</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>Skin</td>
<td></td>
</tr>
</tbody>
</table>

**T**  
**Treatment given:**

<table>
<thead>
<tr>
<th>Auto-injector</th>
<th>Atropine</th>
<th>Oxime</th>
<th>Anticonvulsant</th>
</tr>
</thead>
</table>

**D**  
**Decontamination status:**

(no contamination; fully decontaminated; wound contamination; internal hazard)