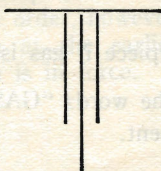


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**BRIEF NOTES**  
**ON**  
**WAR GASES and SPRAY**



**HOW TO RECOGNISE**  
**AND**  
**WHAT TO DO**

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**Every Canadian soldier must carry this in the  
haversack of his respirator.  
He must read it until he knows it by heart.**

500M-7-42 (5246)  
H.Q. 54-27-10-17  
H.Q. 70-44-61

## WAR GASES

GAS	HOW RECOGNIZED	FIRST AID
<b>Blister</b>	<p>Yellow or brown oily liquid giving off an invisible vapour. Produces brown or red colour on detectors.</p> <p><b>Vapour</b> causes coughing and hoarseness and may lead to pneumonia; pain and redness in the eyes followed by temporary blindness; redness in the skin followed by blisters some hours later.</p> <p><b>Liquid</b> IN THE EYES causes redness and immediate irritation followed by permanent blindness. ON THE SKIN redness (and usually itchiness) followed some hours later by blisters.</p>	<p><b>VAPOUR</b> Eyes—Wash with water for 10 minutes. LUNGS—Evacuate to medical services. SKIN—Wash with soap and water. Change or air clothing A.V. clothing gives protection.</p> <p><b>LIQUID</b> Eyes—Wash with water (from water bottle) for at least 10 minutes. SKIN—Personal decontamination. <b>Do NOT prick blisters</b> but apply field dressing.</p>
<b>Choking</b>	<p>Coughing, choking, difficulty in breathing. These gases are deadly. Phosgene smells like musty hay or corn.</p>	<ol style="list-style-type: none"> <li>1. Adjust respirator facepiece (yours and the casualty's).</li> <li>2. Evacuate out of area as a stretcher case. Do NOT walk.</li> <li>3. Keep warm and quiet for at least 24 hours. Give hot sweet tea.</li> <li>4. No alcohol. No smoking. No artificial respiration.</li> <li>5. Transfer to nearest medical post as quickly as possible.</li> </ol>
<b>Nose</b>	<p>Pain in chest, nose, teeth, throat and headache, sneezing, finally vomiting. Has a delayed action. Sometimes tear effect.</p>	<ol style="list-style-type: none"> <li>1. Adjust respirator facepiece.</li> <li>2. Give stimulants (alcohol).</li> </ol>
<b>Tear</b>	<p>Almost immediate discomfort in eyes.</p>	<p>Adjust respirator facepiece, wash eyes with water.</p>

**NOTE:— How to wash eyes:—**

1. Casualty must be lying.
2. Eyelids must be held widely apart (by you or better by a helper).
3. Slow steady stream from water bottle.
4. Tell casualty to "roll your eyes" (look up—down—in—out) while stream is flowing.

## PERSONAL DECONTAMINATION

1. Liquid Blister Gas on the skin causes blisters unless immediate action is taken. The liquid Blister Gas will take the form of either LARGE or SMALL drops. The LARGE drops will penetrate the clothing and cause a blister underneath, the SMALL drops will NOT penetrate the clothing. Therefore, if hit with LARGE drops, the clothing will have to be attended to in addition to the skin, whereas, in the case of small drops, this will NOT be necessary.
  
2. Every man must know, therefore, whether he has been hit by LARGE or SMALL drops. This is indicated by the appearance of the drop on Detectors Gas Sleeve. LARGE drops tend to run or elongate whereas SMALL drops remain as compact drops. (LARGE drops run, SMALL drops do NOT run.)
  
3. Personal Decontamination MUST be done thoroughly in a definite sequence, which is divided into two parts:—
  - (a) PART I—Must be done automatically by every man *immediately* he has been hit by liquid blister gas (either LARGE or SMALL drops or both) without waiting for orders. It can be done on the move, if necessary.
  
  - (b) PART II—Will not be carried out by the individual until he has been ordered to do so by his local commander because it is necessary to halt to do it.

## 4. Sequence of Personal Decontamination is:—

## PART I

- C—Cotton Waste** With cotton waste, swab exposed parts of the skin. Do NOT spread the drops.
- O—Ointment** Squeeze ointment into palm of hand. SPREAD it as in "lightly washing hands" before applying. APPLY to exposed parts of body — alternating hands and face. RUB each part vigorously for 30 seconds. NEW OINTMENT from tube for new part of body treated.
- E—Eyeshields** Prepare fresh Eyeshield for use and put it on in place of old one. Throw away old Eyeshield if contaminated.

## PART II

- C—Clothing and Equipment** (a) Swab off boots with grass, leaves, etc.  
 (b) Remove cape and swab off free liquids in the same way. Replace cape and retain until a fresh one can be procured.  
 (c) Swab steel helmet in the same way.  
 (d) Apply ointment on both sides of the contaminated parts of the clothing. Rub ointment on skin underneath contaminated parts of clothing.  
 (e) Swab off excess liquid from equipment or weapons and apply ointment. Rub ointment into both sides of web. Re-oil metal parts if necessary.
- (If the cape is rolled and not worn)
- D—Detectors** Swab off — mark the spots with a pencil — if too many, put on fresh detector.
- O—Ointment** Swab off ointment from hands with cotton waste and rub in fresh ointment vigorously for not less than 30 seconds.

5. Care must be taken during PART II not to place rifles, equipment, etc., on ground that is contaminated.
6. The only difference between the action for LARGE and SMALL drops is that in the case of LARGE drops the sequence is COECDO, whereas, in the case of SMALL drops, it is COEDO, the clothing stage being omitted.

## GAS WARNING SYSTEM

1. Every man is responsible for protecting himself against gas. In order, however, to enable him to gain protection at the earliest moment, a gas warning system is in force.

## GAS RATTLE

2. The sounding of the Rattle or the shout of "GAS" denotes all forms of gas attack with TWO exceptions. These exceptions are:—
- (a) Blister Gas sprayed from aircraft.  
 (b) Blister Gas released from air-burst missiles. (Air-burst bombs or air-burst shell.)
3. On hearing the Rattle or the shout of "GAS", all ranks will:—
- (a) Hold the breath, i.e. STOP BREATHING.  
 (b) Adjust the facepiece.  
 (c) Carry on with duty.

If Blister Gas has been used in shells or other projectiles and the individual has been splashed, he will adjust his facepiece and then carry out personal decontamination at the first opportunity. The reason for this is that the explosion of the projectile will shatter some of the liquid Blister Gas into a very fine mist which may be breathed in and cause severe internal injury which would be more injurious than a blister on the skin

4. It is the duty of the local commander to "test for gas" frequently once the Rattle has sounded. When he is satisfied that the danger has passed and that gas is no longer present in his vicinity, he will:—

- (a) Remove his facepiece.
- (b) Verbally pass the words "GAS CLEAR".

All personnel hearing these words will then individually:—

- (a) Test for gas.
- (b) Remove facepiece if gas is NOT present.
- (c) Pass along the words "GAS CLEAR" if gas is NOT present.

#### VERBAL WARNING "SPRAY"

5. This warning denotes the presence of Blister Gas liquid when it has been released either:—

- (a) As aircraft spray.
- (b) From air-burst missiles.

6. If it has fallen (there will be drops on the detectors and clothing) the word "SPRAY" is shouted. The action of every individual within hearing is:—

- (a) Examine Detectors Gas Sleeve for size of drops.
- (b) Carry out personal decontamination.

7. If a LOW spray attack has been made, the enemy aircraft making the attack will be engaged by controlled small arms fire *BEFORE* examining Detectors or carrying out personal decontamination.

## YOUR RESPIRATOR

The respirator will give complete protection to eyes, nose, throat and lungs against the War Gases, IF you take care of it and know how to use it.

1. Water destroys the chemicals in the container so that it will no longer protect you.
2. Adjust and remove your facepiece as taught in respirator drill. This prolongs its life.
3. Anti-dim the eye-pieces *after* use and *before* you replace your facepiece in your respirator haversack. It will be too late to start anti-dimming when gas is detected or the gas alarm is sounded.
4. *Hold* your breath until you have your facepiece properly adjusted. **DON'T TAKE A DEEP BREATH FIRST. SIMPLY STOP BREATHING.**
5. Always test for gas *yourself* before removing your facepiece.
6. Be sure the head harness is properly adjusted so that the facepiece fits.
7. If you smell gas or any smell you don't recognize, don't wait for the gas alarm. Put your facepiece on at once. Remember several gases can be used together so you may not recognize the smell.
8. If you are not sure, you are not safe — See your **Gas Instructor.**

## RECOGNITION OF WAR GASES

1. Some gases can be SEEN as a cloud or as a liquid. Some may be SMELLED. Others can *not be seen or smelled.*
2. Protection by the respirator must be obtained if the individual has any feeling of choking, irritation of the throat, nose, eyes or any unusual smell.
3. Strange liquids or unknown solids or powder on the ground and hostile smoke will be treated as War Gases until proved otherwise.