

802 words

MEMORANDUM

Subject: Bioterrorism

Distribution: Councils

Directors of Volunteer Services

Executive Directors

National Brigade Officers

Provincial Commissioners

Provincial Medical Officers

Provincial Nursing Officers

Provincial Training Officers

From: National Medical Officer

INTRODUCTION:

Given current, past, and possible future world events, it is possible our Brigade members will provide relief services and work in areas that may put them at risk. As with all First Aid services rendered we must ensure that the environment they are providing services in is safe. This not only includes freedom from physical hazards such as gas, fire, electrical shock and debris, but must now also include an assessment of risk from chemical, biological, radiological, and nuclear terrorism. Before our Brigade members are deployed, senior officers must assess risk from the above and ensure that our members are protected. This may include immunization against common agents such as tetanus and Hepatitis B, as well as consideration of protective head and foot wear, protective clothing and respirators.

PREVENTATIVE MEASURES:

Health care workers should have an up-to-date immunization for tetanus every 10 years. This can be obtained from their family doctor, Brigade Medical Officer, or local community public health clinic.

Consideration should also be given to having vaccination against Hepatitis B. Hepatitis B vaccination consists of a series of three injections over a 6 month period. Blood testing for confirmation of immunity should be done following the initial series and every 5-10 years to ensure immunity still exists. The vaccine is available from their family doctor or can be purchased at a reduced cost from certain Councils and taken to their family doctor, Brigade Medical Officer, or other clinic for administration. See: Fact Sheet-Hepatitis B.

PROTECTIVE MEASURES:

As with assessing the scene prior to rendering First Aid services, an assessment must also be made of potential biological hazards and a potentially hazardous atmosphere.

Consideration must be given not only to protective clothing, but respiratory protection needs and decontamination strategies after exiting the scene. Consultation should be made with other emergency first responders, law enforcement, and public health officials as to what potential agents may be present and what type of protective clothing and respirators are necessary prior to rendering aid at any given scene.

See: [Interim Recommendations for the Selection and Use of Protective Clothing and Respirators Against Biological Agents.](http://www.bt.cdc.gov/DocumentsApp/Anthrax/Protective/10242001Protect.asp)

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The use of non-approved gas masks is not recommended. Not only may they be ineffective for the potential agent involved, but improperly fitted and/or maintained gas masks may be dangerous. Gas masks require special filters and require maintenance. Several Israelis died of asphyxiation from wearing ill-fitting gas masks in the Gulf War.

SUSPECTED BIOTERRORISM:

Brigade members, while rendering service, may notice a cluster of infectious disease or an unusual disease manifestation. These cases must be reported to their senior Brigade officer as well as local public health officials immediately. Many biological agents used in terrorism begin with cold and flu symptoms. Cases of severe, unexplained febrile illness or previously healthy patients presenting with signs of sepsis or respiratory failure should also be reported to local public health officials. A bioterrorist attack could be invisible and silent, and thus difficult to detect at first. It is only through due vigilance that acts of bioterrorism can be detected, the right treatment given and further deaths prevented.

The following is a list of some agents that can be used in bioterrorist acts:

A. Biological (Bacterial):

- Anthrax
- Brucellosis
- Cholera
- Plague
- Tularemia
- Q Fever

B. Biological (Viral):

- Smallpox
- Venezuelan Equine Encephalitis

Biological (Viral) cont.:

Hemorrhagic Fevers:

- Filoviridae – Ebola and Margurg viruses
- Arenaviridae – Lassa fever, Argentine and Bolivian hemorrhagic fever
- Bunyaviridae – Hantavirus, Congo-Crimean hemorrhagic fever
- Flaviviridae – Yellow fever, Denge hemorrhagic fever

C. Biological Toxins:

- Botulinum
- Staphylococcal Entertoxin B
- Ricin
- T-2 Mycotoxin (toxins produced by fungi)

D. Chemical Toxic Nerve Agents:

Choking Agents:

- Phosgene
- Chlorine

Nerve Agents:

- Tabun (GA)
- Sarin (GB)
- Soman (GD)
- GF
- VX

Blister Agents or Vesicants:

- Sulfur Mustard
- Lewisite
- Nitrogen Mustards

Blood Agents:

- Hydrogen Cyanide

Incapacitating Agents:

- BZ

Organophosphorous Compounds:

- Pesticides – malathion and parathion

E. Chemical Incapacitating Agents (by category):

- Vomiting Agents
- Tear (riot control) Agents
- Central Nervous System Depressants
- Central Nervous System Stimulants

See: Fact Sheets – on common agents.

PATIENT CARE:

Since the spread of certain bioterrorist agents can occur through coughing and/or respiratory droplets, it is very important to ensure Brigade patient care providers follow universal precautions when treating the ill. This includes hand washing prior to and following patient contact, the use of gloves for all patient care, and minimizing the spread of respiratory secretions by having patients turn their head when being examined and covering their nose and mouth when sneezing and coughing.

SUMMARY:

The attached Fact Sheets may be shared with Brigade personnel.

Additional information on bioterrorism can be obtained from the following web sites:

www.bt.cdc.gov

www.hc-sc.gc.ca

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