

Title	IMDG Code 2016 / SUPPLEMENT / MFAG / Table 17
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Note	Incorporating Amendment 35-10

TABLE 17

ORGANOPHOSPHATE AND CARBAMATE INSECTICIDES

Organophosphorus and carbamate insecticides cause disturbances in the transmission of nerve impulses to target organs such as muscles and glands by inhibiting the enzyme acetylcholinesterase.

Signs and symptoms may include:

- Headache, nausea, dizziness, fatigue
- Blurred vision, pinpoint pupils
- Confusion
- Vomiting, abdominal cramps and diarrhoea
- Sweating, salivation, watering of the eyes, and increased nasal and lung secretions
- Muscle twitching, weakness, tremor, convulsions
- Tightness in the chest, wheezing, slow pulse, respiratory and cardiac arrest.

Symptoms usually develop during exposure or within 12 hours after contact. The acute intoxication stage usually does not last longer than 48 hours unless exposure has been prolonged or the insecticide has been ingested. Recovery from exposure to carbamate insecticides usually occur within 24 hours.

Treatment for EYE CONTACT in all cases of exposure, regardless of symptoms

- **IMMEDIATE** washing of the eye with copious amounts of water.

Further advice on eye treatment: See Table 7

Treatment for SKIN CONTACT in all cases of exposure, regardless of symptoms

- **IMMEDIATE** washing with soap or shampoo and copious amounts of water for at least ten minutes while removing contaminated clothing, rings, wristwatches, etc.
- The casualty should shower thoroughly.
- Chemical protective gloves should be worn by those attending the exposed individual to prevent self-contamination.

Further advice in cases of skin burns: See Table 8

- Contaminated clothing should be kept in properly labelled bags until washing.
- Remove the casualty to the ship's hospital.
- **RADIO FOR MEDICAL ADVICE if symptoms develop.**

Treatment for INHALATION in all cases of exposure, regardless of symptoms

(toxic effects may be expected particularly after inhalation of dust and mist)

- Remove the casualty from the polluted atmosphere, have him rinse his mouth and give one glass of water to drink.
- Remove clothes and shower thoroughly.
- **RADIO FOR MEDICAL ADVICE if symptoms develop.**

Treatment for INGESTION in all cases of exposure, regardless of symptoms

- Have the casualty rinse his mouth thoroughly with water.
- **RADIO FOR MEDICAL ADVICE**

SIGNS & SYMPTOMS

Blurred vision, headache, nausea, fatigue or dizziness

TREATMENT

- Observe in a place of safety.
- **RADIO FOR MEDICAL ADVICE**
- If the casualty becomes free of symptoms, no further action is required.

SIGNS & SYMPTOMS

Vomiting, cramp-like abdominal pains, excessive sweating and salivation, tightness in the chest or twitching of the muscles

TREATMENT

- **RADIO FOR MEDICAL ADVICE**
- Inject 1 mg atropine intramuscularly. If the skin and mouth have not become dry within 30 minutes, give a further dose of 1 mg atropine intramuscularly. In casualties severely poisoned with organophosphorus insecticides, very large doses (10-15 mg) of atropine may be required.
- **CAUTION:** Overdosage of atropine may lead to fever, restlessness, hallucinations and disorientation, followed by depression, respiratory arrest and death. If atropine toxicity is suspected, discontinue further treatment with atropine.

SIGNS & SYMPTOMS

Respiratory difficulty with excessive lung secretions, paralysis with complete loss of muscle function, slow pulse, or unconsciousness

TREATMENT

- Administer controlled ventilation with oxygen at a flow rate of 8 litres per minute and heart compression as warranted.
- If a medically trained individual is available, atropine should be given intravenously as follows: 1-2 mg repeated every 15 minutes until lung secretions have dried up.

Further advice See Tables 2 and 3

- Transfer to shore hospital is URGENT

FOLLOW-UP

- A patient who has had significant exposure or any symptoms related to exposure should be kept warm in bed and closely observed for 48 hours and **RADIO MEDICAL ADVICE OBTAINED.**
- Since atropine has a short-action, vomiting, cramp-like pains, excessive sweating and salivation or tightness of the chest may reappear after initial improvement with atropine therapy.
- If these symptoms recur, repeat injection of atropine as described above. In very severe poisoning this may be necessary for 24-48 hours.
- Some organophosphorus insecticides may damage the nerves in the limbs after the casualty's recovery from acute poisoning. The muscles controlled by those nerves may become weak and paralysis with complete loss of muscle function may occur.
- **RADIO FOR MEDICAL ADVICE AND TRANSFER THE CASUALTY TO A SHORE HOSPITAL AS SOON AS POSSIBLE.**