

TOPICS
of classes of Medicine of Extreme Situations
for **fourth-year students of Medical Faculty for International Students**
in the 7th semester of the 2020/2021 academic year

Class №	Topic №, hours	Topic name, education issues (questions)
LECTURES		
1.	T.3.1 – 2h	“Tasks of military toxicology. Toxicology of extreme situations (disasters) “
2.	T.3.2 – 2h	“Modern methods of treatment in case of acute poisoning. General principles of antidote and symptomatic therapy in case of poisoning with highly toxic substances (HTS). Combined chemical damage. Incendiary substances “
3.	T.3.4 – 2h	“Poisoning and highly toxic substances with neurotoxic effect (nerve agents)”
4.	T.3.10 – 2h	“Toxicological characteristics of emergency chemically hazardous substances (ECHS), potent toxic substances (PTS), and technical fluids (TF) that are widespread in the national economy and in the armed forces. Principles of diagnosis and treatment. Syndromological characteristic”
5.	T.2.1 – 1h (SSP)	“Characteristics of the damaging factors in case of nuclear explosion”
6.	T.2.2 – 2h (SSP)	“Basics of the organization and carrying out (conduct) of radiation and chemical exploration (reconnaissance)”
7.	T.3.12 – 2h (SSP)	“Toxicological characteristics of poisons and toxins of plant and animal origin”
GROUP CLASSES		
1.	T.3.3 – 3h T.3.6 – 2h	<p>“The main pathological syndromes of acute poisoning: clinical features, diagnosis, treatment guidelines”</p> <ol style="list-style-type: none"> 1. The principles of diagnosis and the main pathological syndromes of acute poisoning. 2. Modern methods of treatment of acute poisoning. 3. Antidote therapy. 4. Symptomatic therapy. <p>“Poisonous substances with psychodysleptic action”</p> <ol style="list-style-type: none"> 1. Classification of HTS with psychodysleptic action. Physicochemical and toxic properties of LSD and BZ. 2. The mechanism of toxic effects of LSD and BZ. 3. Diagnosis of the lesion. 4. The content and organization of providing of medical care at the place of accident (damage focus) and in hospital. 5. Spices. The clinical description (picture). The consequences of consumption.
2.	T.3.5 – 5h	<p>“Chemical warfare agents and highly toxic substances with nerve action”</p> <ol style="list-style-type: none"> 1. Physico-chemical properties. 2. Ways of entry into the body. Toxicity. 3. The mechanism of toxic effects and the pathogenesis of intoxication. 4. Diagnosis of the lesion. The clinical description (picture) of the lesion and the features of its entry into the body. 5. Prevention and treatment of poisoning. 6. The content of the medical care for affected people at the place of accident (damage focus) and in hospital. 7. HTS with convulsive action - carbamates. Paralytic HTS - botulinum toxin, saxitoxin, tetrodotoxin.
3.	T.3.8 – 3h	<p>“Chemical warfare agents and highly toxic substances with pulmonotoxic and irritating effect”</p> <ol style="list-style-type: none"> 1. The main forms of lesion in the respiratory system: inflammation in the

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	T.3.9 – 2h	<p>airways (acute laryngitis and tracheobronchitis) and lung parenchyma (toxic pulmonitis), as well as toxic pulmonary edema (toxic adult respiratory distress syndrome).</p> <p>2. HTS with suffocating action. Physical and chemical properties of phosgene, diphosgene. Methods of combat use. Toxicity.</p> <p>3. The mechanism of toxic effects and pathogenesis of intoxication</p> <p>4. Diagnosis, complications and consequences of the lesion.</p> <p>5. Treatment of toxic pulmonary edema.</p> <p>6. The content and organization of medical care for affected people at the foci and in hospital.</p> <p>7. Toxicological characteristics of sternites and lacrimators.</p> <p>8. The mechanism of action of irritant HTS. Clinic and diagnosis of lesions. Urgent care. Treatment.</p> <p>“Chemical warfare agents and highly toxic substances with general toxic effect”</p> <p>1. Physico-chemical properties of hydrocyanic acid. Methods of combat use. Toxicity.</p> <p>2. The mechanism of toxic action, the pathogenesis of intoxication.</p> <p>3. Diagnosis of the lesion.</p> <p>4. Antidote treatment.</p> <p>5. Medical and tactical characteristics of chemical contaminated foci formed by cyanides. The content and providing of medical care at the place of accident (damage focus) and in hospital</p> <p>6. Physico-chemical properties and toxicity of carbon monoxide. The mechanism of toxic action.</p> <p>7. Diagnosis of poisoning.</p> <p>8. Prevention and treatment.</p>
4.	T.3.7 – 3h T.3.13 – 2h	<p>“Chemical warfare agents and highly toxic substances with cytotoxic effect”</p> <p>1. Physico-chemical properties of inhibitors of protein synthesis and cell division (mustard gas, ricin), thiol poisons - compounds of arsenic (lewisite) and thiol poisons - toxic plastic exchange modifiers (dioxin). Methods of combat use. Ways of entry into the body. Toxicity.</p> <p>2. The mechanism of toxic effects and pathogenesis of intoxication</p> <p>3. The clinical description (picture) of the lesion and the features of its manifestation in various pathways of HTS.</p> <p>4. Differential diagnosis of skin lesions due to mustard gas and lewisitis.</p> <p>5. Antidote treatment of the lesion.</p> <p>6. The content of medical care for affected people at the place of accident (damage focus) and in hospital.</p> <p>“Clinical manifestations and diagnosis of affected people by HTS of animal and plant origin. Emergency care and treatment”</p> <p>1. Poisonous plants, clinic and diagnosis of lesions.</p> <p>2. Poisonous mushrooms, clinic and diagnosis of lesions.</p>
5.	T.3.13 – 1h T.3.11 – 4h	<p>“Clinical manifestations and diagnosis of affected people by HTS of animal and plant origin. Emergency care and treatment”</p> <p>3. Poisonous insects, poisonous snakes, amphibians, clinic and diagnosis of lesions.</p> <p>4. The volume of medical care in case of these lesions at the place of accident (damage focus) and in hospital. Prognosis of outcome.</p> <p>“The description (picture) of poisoning with emergency chemically hazardous substances (ECHS), potent toxic substances (PTS), and technical fluids (TF) that are widespread in the national economy and in the armed forces. The providing of emergency medical care. The volume of medical care at the place of accident</p>

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		(damage focus) and in hospital” 1. The clinical picture of lesions due to widespread emergency chemically hazardous substances (ECHS) and potent toxic substances (PTS). 2. The clinical picture of poisoning with widespread technical fluids. 3. The providing of emergency medical care. 4. The volume of medical care in case of these lesions at the place of accident (damage focus) and in hospital. Prognosis of outcome.
6.	T.2.5 – 2h	“Means (devices) of radiation reconnaissance (exploring), radiometric and dosimetric control” 1. Radiation exploration (reconnaissance) at the stages of medical evacuation. Technical means (devices) of radiation reconnaissance (DP-5B, DP-64, IMD-1r). Destination, structure and use (applying). 2. Radiometric control at the stages of medical evacuation. 3. Control of personnel exposure of soldiers (troops), wounded and sick people at the stages of medical evacuation. Technical means (devices) of radiation control (DKP-50, ID-1, ID-11). Destination, structure and use.
	T.2.6 – 3h	“Chemical reconnaissance and chemical poison indication (detection)” 1. Organization of chemical intelligence in the troops and at the stages of medical evacuation. 2. Technical means of chemical reconnaissance and indication of chemical warfare agents (AP-1, GSP-11, VPHR). Destination, structure and use (applying). 3. Methods of indication of toxic substances.
7.	T.2.6 – 1h	“Chemical reconnaissance and chemical poison indication (detection)” 1. Detection of chemical warfare agents in air, on the ground, in water, food products using VPHR.
	T.2.7 – 4h	“Special clearing (decontamination)” 1. Organization of special clearing. 2. Partial special clearing. Equipment (means) used for partial special processing. 3. Partial special processing at the stages of medical evacuation. The place for the partial special clearing of the medical unit. 4. Complete special clearing. The special clearing department of a single medical detachment.
	T.2.8 – 1h (SSP)	“Basics of assessing the chemical environment” 1. The concept of the chemical focus.
Graded test (with mark) of the discipline “Medicine of extreme situations)		

Notice!

SSP- Self Study Program;

HTS- High Toxic Substance.

Head of the training section -
deputy head of the military department

Lieutenant Colonel of MS



K. Leskevich