

**MEDICAL UNIVERSITY - SOFIA
MEDICAL FACULTY**

Department "Social medicine and health management"

Section "Medicine of disastrous situations"

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APPROVE:

Chief of Department:

**STUDY PLAN - PROGRAM
"MEDICINE OF DISASTROUS SITUATIONS"
FOR STUDENTS OF DENTAL MEDICINE
SECOND COURSE**

Total – 30 hours

Lectures – 15 hours

Practical classes – 15 hours

Graduating with mark based on continuous assessment

**Sofia
2011**

I. AIM

The students of dental medicine, as a result of the medicine of the disastrous situations study, should get knowledge about:

The biological effects of the different striking factors in cases of disastrous situations;

The diagnostics, sorting out, medical aid and treatment of traumatic and radiation damages as well as of intoxication with highly toxic poisonous substances (industrial, agricultural poisonous substances, military poisonous substances), the most common epidemic diseases in cases of catastrophes;

The organization, planning and management of the health care system in case of disastrous situations, etc.

The content and character of the theoretical and practical preparation of the students of dental medicine in the course of Medicine of disastrous situations are made accordingly to their professional preparation and to the tasks, which they have to do in the health-care system in extreme circumstances. The study is organized in 30 hours, from which 15 hours are lectures and 15 hours are practical exercises and seminars.

The three main parts of the Medicine of the disastrous situations are presented:

Organization and management of the medical provision of the population in disastrous situations.

Organization and management of the medical provision of the population in radiation accidents.

Organization and management of the medical provision of the population in cases of intoxication with highly toxic poisonous substances.

II. METHODOLOGY

FORMS OF THE STUDY:

lectures,

practical exercises,

seminars.

The specific character of the study content of the discipline „Medicine of the disastrous situations" requires paying special attention to the methods, which increase the cognitive activity of the students: solving problems (tasks); situation task, etc.

Control and evaluation:

The traditional methods of oral examining and tests on different cognitive levels are used.

The study of Medicine of the disastrous situation ends with the forming of a mark, based on continuous assessment.

III. THEMATIC PLAN (lectures)

1. Common characteristic of the disastrous situations. Organization of the protection of the population - 2 hours.

2. Organization of the medical provision of the population in disastrous situations. Plan and management of the Medical provision of the population - 4 hours.

3. Organization and management of the medical provision of the population in case of radiation accidents:

Exposure of the population from the natural and man-made sources of ionizing radiation - 1 hour.

Pathogenesis of the radiation injuries - 2 hours.

Biological effects after internal contamination with radionuclides - 1 hour.

Basic principles of the radiation protection and handling of exposed individuals with ionizing radiation - 1 hour.

4. Organization and management of the medical provision of the population in case of chemical contamination from high-impact poisonous substances:

Toxicology as a science, studying the laws of interaction between the living organism and the poison. Toxic, suffocating and reflector poisonous substances - 4 hours.

PRACTICAL EXERCISES

1. Organization and management of the medical provision of the population in disastrous situations.

Organization of the medical provision of the population in floods and in case of earthquakes-2 hours.

Assessment of the medical situation in case of an accident in a big chemical object-2 hours.

2. Organization and management of the medical provision of the population in radiation accidents.

Assessment of the radiation risk and basic principles of the radiation safety - 2 hours.

Assessment of the radiation situation in case of major nuclear accident - 2 hours.

Radiation injuries - 2 hours.

3. Organization and management of the medical provision of the population in case of chemical contamination from high-impact poisonous substances:

Medical provision of the population in case of intoxication with chlorine and ammonia-2 hours.

Medical provision of the population in case of intoxication with phospho-organic compounds, hydrocyanogen and with aromatic hydrocarbons-3 hours.

HEAD OF SECTION

"Medicine of Disastrous Situations":

Associate professor doctor II. Mihailova, PhD

SYNOPSIS
"MEDICINE OF THE DISASTROUS SITUATIONS"
for students of dental medicine

1. General characteristic of the disastrous situations. Definition, criteria and classification.
2. Earthquakes- general characteristic.
3. Characteristic of the major chemical accidents.
4. Floods - general characteristic.
5. Organization of protection of the population in disastrous situations. Civil defense in Republic of Bulgaria and European Union.
6. Organization of protection of the population in disastrous situations. Civil defense and coordination on international level outside EU.
7. Medical provision of the population in case of disasters and accidents. Purpose, tasks and composition.
8. Medical forces and resources in case of disasters and accidents.
9. Medical triage - definition, main aims, principles, types.
10. Organization and scope of the first medical aid.
11. Organization of the sanitary-anti-epidemic provision.
12. Health control.
13. Main parameters and units in the dosimetry of the ionizing radiation and radiation protection. Maximum acceptable doses and dose limits in case of irradiation from technological sources of ionizing radiation. Main principles of the normalizing.
14. Special features of the absorbed dose for the population from the natural background radiation and human technical activities.
15. Radio-ecology. Migration of the technological radionuclides in the nature.
16. Pollution of the foods from vegetable and animal origin with radionuclides. Means and methods for their render harmless.
17. Assessment of the radiation situation in radiation accidents. Measures for protection and prevention.

18. Principles of the biological impact of the ionizing radiation. Theories.
19. Special features of the biological impact of the ionizing radiation on molecular level and on cellular level.
20. Special features of the biological impact of the ionizing radiation on tissue level.
21. Deterministic and stochastic radiobiological effects. Cancerous and genetic risk.
22. Special features of the biological impact of the incorporated radionuclides (I – 131, Cs – 137, Sr – 90).
23. Acute radiation sickness - classification, clinical picture and treatment. Prevention and treatment of the radiation damages.
24. Basic concepts in toxicology. Principles of the treatment of the acute poisoning.
25. Phospho-organic compounds-toxicity and ways of penetrating in the organism. Pathogenesis and pathomorphology of the poisoning.
26. Clinical picture, diagnosis and differential diagnosis of the poisoning with phospho-organic compounds. Prevention and treatment.
27. Hydrocyanogen. Clinical picture, diagnosis, prevention and treatment.
28. Toxicology of the carbon monoxide.
29. Toxicology of the chlorine.
30. Toxicology of the ammonia.
31. Toxicology of the phosgene. Special features in poisoning with nitric-oxides.
32. Toxicology of the lachrymose substances.
33. Toxicology of the sneezing substances.
34. Toxicology of the organic solvents.

LIST OF THE MAIN TEXTBOOKS

Medicine of catastrophes - edited by reader (docent) doctor V. Popzaharieva, "Knowledge"OOD, St. Z.1995.

Handbook of the acute poisoning - professor A. Monov, Medicine and physical culture, Sofia, 1987.

Medicine catastrophe -edited by prof. V. Riabochkina, prof. G. Nazarenko, "INI" Ltd, Moscow 1996.

New public health care system, edited by professor V. Borisov and collective, publisher Aquagraphycs OOD, Sofia, 1998.

Pressing and urgent medical aid in case of acute poisoning- reader (docent) doctor A. Xubenova, Sofia-Moscow 2000.

Guide on medicine of the disastrous situations (catastrophes), edited by reader (docent) V. Dragnev and collective, Sofia, 2004.

HEAD OF SECTION

**"Medicine of Disastrous Situations":
Associate professor doctor Il. Mihailova, PhD**