

Ministry of Public Health of Ukraine  
“Ukrainian Medical Stomatological Academy”

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METHODICAL INSTRUCTIONS  
FOR INDEPENDENT WORK OF STUDENTS DURING PREPARATION  
TO PRACTICAL (SEMINAR) CLASSES AND IN CLASS

Academic subject	Safety of Vital Functions. Bioethics
Module No 1	Safety of Vital Functions. Bioethics
Topic	Ensuring the safety of human life
Year of study	I
Faculty	Dental, Medical
Number of academic hours	2

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### **1. Relevance of the topic**

Many environmental factors, social and economic conditions, level of culture etc. may influence the human organism either positively or negatively only as the result of achievement of some quantitative threshold. A specific study object of therapeutic medicine is a sick person. Philosophical category that reflects a condition of a sick person is such concept (category) as "the disease". It is important that therapeutic medicine study disease neither of a collective, nor of a group of people but individually, i.e. a particular disease.

### **2. The aims of the training course:**

To have general knowledge of the topic studied;

To understand, to remember and to use the knowledge received;

To learn the knowledge about healthy life-style, methods and means to control abuse of drugs, toxic substances, alcohol, tobacco, methods of their application into the practice of public health;

To form the professional experience by reviewing, training and authorizing it.

### **3. Materials for the before-class work and self-preparation work;**

3.1 Basic knowledge, experience, skills necessary for studying the topic in connection with other subjects:

	To know	To be able to
Previous disciplines	Basics of healthy life-style as mean to preserve and strengthen health of individual and whole population. Hazardous and harmful consequences of drugs, alcohol, tobacco abuse.	Recommend and apply into practice of public health the basics of healthy lifestyle, methods and means of personal hygiene and tempering of the organism. Detect signs of drugs, alcohol and tobacco abuse among patients and service personnel, carry out health-improving and preventive measures.

### **4. Tasks for independent work during preparation for the lesson.**

#### **4.1. A list of the main terms, parameters, characteristics that a student should take when preparing for the class**

Term	Definition
1. <u>Health</u>	is a state of complete physical, mental and social welfare, not only absence of diseases or physical handicaps
2. <u>Healthy lifestyle of the person</u>	is a big complex of methods and means of life, biologically and, socially directed and expedient, which correspond to the human requirements and abilities. The person has to follow them to provide formation, preservation and strengthening of the health, reproductive ability and active longevity.
3. <u>Healthy life-style of the population</u>	is a lifestyle, which provides integration of complete biological and social adaptation of each individual with maximum possible self-expression of people, nation, class, social group in specific conditions of life, and causes and provides further social development.

#### **4.2. Theoretical questions to the class:**

1. Human Health as a biomedical and social category.
2. The spiritual, mental, physical, social aspects of human health
3. Health and pathology. Valeology and sanology, definition, nature and subject of their study.
4. The concept of lifestyle, its features in modern conditions.
5. Definition and types of bad habits.
6. The mechanism of the harmful effects of alcohol on the human body.
7. The mechanism of the harmful effects of smoking on the human body.
8. The mechanism of the harmful effects of drugs on the human body.

## 1. The contents of the topic:

### Health and its components.

Population health on Earth in past times was characterized by epidemics. Significance of population health problem has recently increased as a result of intensive anthropogenic denaturizing of environment because the state of people health has changed sufficiently and new regularities of people pathology spread and character has appeared. Demographic processes have changed the course of their running.

In order to define the health one must consider the following "fundamentals":

1. there is no absolute health;
2. individual and population health are inseparable;
3. health is not characterized by only one factor but by a complex of characteristics;
4. definition of health is impossible without estimate of correlation between an individual and the environment;
5. health rating is impossible without load, required tests etc.

Thus, indeed, different meanings of the concept "health" have the right for existence, but application of each of them is constrained by the purpose of its use.

Therefore, some concepts of "health" of different content are distinguished:

First — it is general pathological (or philosophical) concept of health.

General pathological health is an interval within the limits of which quantitative variations of psycho-physiological processes are able to hold live system on the level of functional optimum (optimal area, within which organism doesn't come out to pathological level of self-regulation).

Second — population health, i.e. health of a group of people, community, population. Population health is a conditionally statistic concept, which is rather fully characterized by demographic factor complex, the level of physical development, disease incidence and frequency of premorbid states, disablement of certain group of population.

Third — individual health or health of an individual person.

At the same time individual health should be considered from two viewpoints:

First viewpoint — theoretical, as the highest possible optimum for a person, which is to be aspired to ideally, but which is actually very difficult to be achieved.

Individual theoretical health is a state of full social, biological and psychological well-being, when functions of all organs and systems of human organism and environment are balanced; any diseases, disease states and physical states are absent.

Another viewpoint is practical, as the actual characteristic of health level of a definite person. Individual real health is a state of organism at which it can valuably fulfill its social and biological functions.

There is health complex approach as to a statistical average, which may be characterized by following theses:

1. State of health is defined in groups with identical socio-economic conditions.
2. "Normal" state of health is a state of those people who form 95% of confidence interval of population.
3. Confidence interval is considered also as an optimal area, within which organism doesn't move to pathological level of self-regulation.

Three basic groups of health rate are used for health characterization:

First group — medical (physical) indices.

Second group — indices of social well-being.

Third group — indices of mental health.

First group of medical indices includes:

- 1) morbidity rate;
- 2) death-rate (common and infantile);
- 3) physical development;
- 4) disablement.

Second group of social well-being indices includes:

- 1) demographic situation;

- 2) state of environment;
- 3) way of life;
- 4) medical care level;
- 5) social and hygienic factors.

Third group of mental health indices includes:

- 1) mental disease morbidity;
- 2) occurrence frequency of neurotic states and psychopathies;
- 3) psychological microclimate.

Also it should be noted; that World Health Organization (WHO) has made a list of social well-being criteria. Such list includes:

- 1) percent of national produce, which is spent on health protection requirements;
- According to WHO global average- medico-sanitary care spending is 8% of global gross domestic product.

- 2) availability of medico-sanitary first aid;

There are such national programs in Ukraine as: "Children of Ukraine", "Family planning", "Genetic monitoring", "Pancreatic diabetes", "Elderly people health", interindustrial program "Health of Nation" is developed.

- 3) safe water-supply embracement of population;

4) percentage of individuals who were immunized:- against six most widely spread among population infectious diseases like: diphtheria, whooping cough, tetanus, measles", poliomyelitis, tuberculosis.

5) percentage of womankind that are served by qualified personal during pregnancy and childbirth;

- 6) percentage of children that were born with insufficient body weight (below 2500 g);

- 7) life expectancy;

- 8) level of population sanitary education.

### **Healthy life-style and personal hygiene**

According to the official definition of the WHO (Statute, 1946) "Health is a state of complete physical, mental and social welfare, not only absence of diseases or physical handicaps".

According to the definition of specialists in other medical sciences "Health is the interval, within quantitative fluctuations of which, psychological and physiological processes are able to maintain the living system at the level of functional optimum, with self-regulation mechanisms functioning without physiological stress and failure".

From the point of view of new subject — valeology — "Health is the process (methods and means) of preservation, development of biological, physiological functions, optimal working capacity and social activity of the person if this person's life is maximally active".

Healthy lifestyle and usage of methods and means of personal hygiene are the basis to maintain and strengthen the health of individual and population in the whole.

Healthy lifestyle of the person is a big complex of methods and means of life, biologically and, socially directed and expedient, which correspond to the human requirements and abilities. The person has to follow them to provide formation, preservation and strengthening of the health, reproductive ability and active longevity.

Healthy life-style of the population is a lifestyle, which provides integration of complete biological and social adaptation of each individual with maximum possible self-expression of people, nation, class, social group in specific conditions of life, and causes and provides further social development.

Methods and means of healthy lifestyle maintenance include subjective and objective conditions and factors, which depend on health of individual and society as a whole.

Subjective methods and means include:

- adherence to personal hygiene rules — correct conditions of labour and rest, sleep and activity, eating patterns;
- regular maintenance of clean body;
- regular physical training, usage of methods and means for the organism tempering;
- absence of harmful habits — drugs, toxic substances, alcohol, smoke abuse;

- standard of personal culture.

Objective methods and means include:

- endowment of a person resulted, from level of education, profession, presence and type of work, level of salary; presence of family and number of family members; living conditions;
- cold and hot water-supply in the residential premises; for some professions — in industry, public eating establishments — bath-houses, saunas, pools;
- psychological and hygienic microclimate during interaction with society, work collective, family etc.;
- full-value, sufficient, balanced, varied nutrition;
- correspondence to -hygienic requirements of domestic and occupational clothes, footwear, personal protective equipment in-industry;
- correspondence to hygienic standards of work hardness, intensity, complexity, factors of occupational environment.

Drug abuse (or narcomania, from Greek narka — stupor, numbness; mania — madness) is persistent and morbid propensity of the person to drugs (opium, morphine, cocaine etc.) usage of them to feel excited, intoxication, which lead to disorders of mentality, deep personality changes and functions of internals. Drugs may cause pleasant psychological state even after single use, and psychological and physical dependence after multiple use.

Toxic mania (from Greek toxicon — poison, mania — madness) is a disease resulted from abuse of any substance which causes short-time subjective attractive psychological state. Essence of toxic mania is a poisoning and need for further poisoning. Substances with different chemical structure and pharmacological activity are used create general psychological and physical effect — euphoria, personality changes, behavioral disorders and social degradation. This term encloses all forms of pharmaceutical and non-pharmaceutical substances abuse.

Alcohol abuse (Alcoholism) is a disease connected with systematic abuse of alcohol drinks which lead to psychological or physical disorders. As a result of alcohol abuse the alcohol intoxication is developed which is accompanied with emotional, motor, speech excitement, disappearance of self- control and critical assessment of situation. Frequent, excess alcohol abuse to receive euphoria effect may result in pathological passion accompanied by psychological and neurological disorders.

### **Tasks for self-check:**

Choose the correct answer:

1. The term "HEALTH" according to the official definition of the WHO mean:

- A. is a state of complete physical, mental and social welfare, not only absence of diseases or physical handicaps
- B. is an interval within the limits of which quantitative variations of psycho-physiological processes
- C. is a conditionally statistic concept, which is rather fully characterized by demographic factor complex
- D. is a state of those people who form 95% of confidence interval of population
- E. considered as an optimal area, within which organism doesn't move to pathological level of self-regulation

2. Tempering means:

- A. subjective and objective conditions and factors, which depend on health of individual and society as a whole
- B. the process of preservation, development of biological, physiological functions
- C. increasing of the organism resistance to influence of fluctuations of water and air temperature, air humidity, atmospheric pressure
- D. the actual characteristic of health level of a definite person
- E. state of full social, biological and psychological well-being, when functions of all organs and systems of human organism and environment are balanced; any diseases, disease states and physical states are absent

3. Complex character of tempering:

- A. gradual increasing of intensity and duration of influence of tempering factor

- B. procedures have to be done regularly according to the present scheme
- C. individual regime and its correspondence to biological rhythm of the organism
- D. physical activity and working capacity after sleep
- E. purposeful connection of all organs and systems of the organism and influence of some environment factors during tempering

4. Toxicomania is:

- A. disease resulted from abuse of any substance which causes short-time subjective attractive psychological state
- B. disease connected with systematic abuse of alcohol drinks which lead to psychological or physical disorders
- C. inhalation of substances with fume which causes both pleasant psychological state and the organism intoxication
- D. increasing psychological and emotional resistance
- E. is persistent and morbid propensity of the person to drugs

5. Alcohol abuse is:

- A. increasing psychological and emotional resistance
- B. is persistent and morbid propensity of the person to drugs
- C. disease resulted from abuse of any substance which causes short-time subjective attractive psychological state
- D. inhalation of substances with fume which causes both pleasant psychological state and the organism intoxication
- E. disease connected with systematic abuse of alcohol drinks which lead to psychological or physical disorders

**7. Literature**

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The methodical guidance has been compiled by Lienkova O.O.