

MINISTRY OF HEALTH OF THE REPUBLIC OF UZBEKISTAN
THE CENTRE OF DEVELOPMENT OF MEDICAL EDUCATION
TASHKENT MEDICAL ACADEMY

FOOD POISONING AND PREVENTION

Study guide

TASHKENT -2014

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"APPROVED"

General director of the Science
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Director of the Centre for the
Development of Medical
Education Ministry of Health
Republic of Uzbekistan

_____ Alimov MH
"___" _____ 2014year

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FOOD POISONINGS AND THEIR PREVENTIVE MAINTENANCE

Study guide

*for 3rd year students of medical and medical-pedagogical faculties of higher
medical educational institutes*

TASHKENT -2014

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Instructor's Manual is designed for 3rd year students of medical and medical-pedagogical faculties as additional sources of information during the development of the discipline "General hygiene with ecology" in the "Hygiene of food".

Discussed and approved by the Academic Council of TMA " " 2014. Protocol №__

Secretary of the Scientific Council of TMA

Toshkentbaeva U.A.

CASE - TECHNOLOGY

FOR TRAINING TOPIC: Food poisonings and their preventive maintenance

1. CASE

1. Abstract pedagogical

Course of study: Hygiene with ecology, MH

Category: Hygiene of food

Subject: Food poisonings and their preventive maintenance

Training level: Student

Course: 3rd year medical and medical-pedagogical faculties

Aim of this case study: form students' knowledge of food poisoning, the role of risk factors in the hygienic occurrence of the most important forms of food poisoning, the deepening and expansion of knowledge on activities to prevent food poisoning, student learning tactics behavior of GPs in the outbreak of food poisoning.

Planned learning outcomes: the results of the work with a case, students gain knowledge of: food poisoning, their classification, etiological factors and the most important signs of food poisoning different groups, reasons for the deterioration of food, prevention of food poisoning.

Planned educational results:

By results of job with Case the students get knowledge:

- About food poisonings
- Their classification
- Etiological factors and major attributes of food poisonings of various groups
- Reasons promoting damage of foodstuff
- Basic principles of rendering of the first medical aid in the center of a poisoning
- Measure of preventive maintenance of food poisonings

students acquire skills:

- Make tentative diagnosis of food poisoning on objective grounds
- Select the right tactics in the outbreak of food poisoning

-To recommend adequate measures to prevent food poisoning different groups
This case reflects a real situation in conditions of a primary link of public health services. Object case is the patient the man.

Of the case Sources of information:

General:

1. Rumyantsev G.I. Hygiene ". M.- 2001, 2008
2. General hygiene and ecology. Study guide for practic lessons. L.A.Ponomareva, E.K. Kazakov, L.K. Abduqodirova, B.E.Tuhtarov, I.K.Dravskix, S.A.Sharipova, X.A.Sadullaeva. - T.-2011
3. Iskandarova Sh.T., Inogamova V.V. Hasanov M.I. Guide to practical training on general hygiene. Tashkent.- 2013 (electronic version).

Additional:

1. Bolshakov A.M. General hygiene. M.- 2010
2. Melnichenko P.I., Arkhangelsk V.I., Kozlov T.A. and others. Hygiene with the basics of human ecology. M.- 2010
- 3.SanN and R of Uzbekistan 2000-2013.

Internet sites: [http:// www.zionet.uz/](http://www.zionet.uz/), <http://www.gigiena.uz.>, [http:// www.hygiene.net](http://www.hygiene.net)

The characteristic case agrees typological to attributes:

This case falls into the category of desk, story. He is a short, structured, to a question, contains a set of facts.

According didactic goals case relates to illustrating the problem, solution and training analysis and evaluation, stimulating thinking in a real situation in a hovercraft and GWP. Case can be used in the disciplines - Therapy, Infectious Diseases, Emergencies, Hygiene with ecology.

CASE - TECHNOLOGY

FOOD POISONINGS AND THEIR PREVENTIVE MAINTENANCE

INTRODUCTION

A feed of the population which are not appropriate to the requirements, showed to a balanced diet, results in occurrence and more and more to wide circulation of diseases, is direct or indirectly connected with quality of a feed(meal) - alimentary of diseases (alimenta - food). According to the recommendations The world organization of public health services is accepted to allocate the following groups **alimentary of diseases:**

1. Diseases connected with a lot of to eat:

- 1.1. Disease caused by too high power value of diets - alimentary obesity
- 1.2. Diseases, for which a superfluous feed is a risk factor (atherosclerosis, ischemic illness of heart, diabetis illness)

2. Diseases connected to a insufficient feed:

- 2.1. Diseases caused by power insufficiency (alimentary distrophia, alimentary marasm)
- 2.2. Diseases caused by qualitative inferiority of a feed (PPI - proteinum-power insufficiency, kvashiorcor, delay of growth, gypovitaminosis and avitaminosis)

3. Diseases connected to sanitary trouble of foodstuff - Food poisonings

Concept about food poisonings

The food poisonings - are sharp, less often chronic diseases arising as a result of the use of food, adverse in the sanitary attitude, i.e. containing some kinds of microorganisms, them toxinum or chemical toxical of substance. The food poisonings more often carry group character, but can also by single instance.

In a basis classification of food poisonings is fixed etiological and pathogenetical principles. The classification of poisonings and major measures of their preventive maintenance is below given.

1. MICROBIAL.

1.1. Toxic infections.

Major factors of transfer: meat, subproducts, bird products, milk.

Major measures of preventive maintenance: veterinary supervision in animal industries, sanitary supervision at all stages kil, cut extinguishing, storage, transportation, preparation and realization of food, sufficient thermal processing.

1.2. Intoxication.

A. Botulism:

Major factors of transfer: tinned products, smoked fish, gammon.

Major measures of preventive maintenance: correct processing of products before canned of food, sour environment, careful thermal processing.

B. Staphylococcal intoxication:

Major factors of transfer: meat, milk and dairy products, confectionery products, fish canned food in oil.

Major measures of preventive maintenance: carriers sanitation, personal hygiene, observance of a mode of thermal processing, storage and terms of realization of food.

C. Micotoxical:

Major factors of transfer: peanuts, cereals, legumes, milk, eggs.

Major measures of preventive maintenance: agricultural activities, compliance storage products

D. Mixed doubles: the mixed form of poisonings.

2. NOT MICROBIAL.

1. Food poisoning poisonous in nature:

A. Mushrooms:

Major factors of transfer: Amanita phalloides, stitch, toadstools, blewits white mushroom yellowing pale.

Major measures of preventive maintenance: ordering of the tax, sorting and sale of mushrooms, precise knowledge of inedible mushrooms.

B. Poisonous plants (including weeds):

Major factors of transfer: heliotrope trihodesma gray, milestones poisonous,

datura, belladonna.

Major measures of preventive maintenance: agricultural activities, health literacy of the population.

C. Poisonous bodies of animals and fishes:

Major factors of transfer: roe schizothorax, barbel, adrenals, pancreas

Major measures of preventive maintenance: increase sanitary literacy of the population.

2. Poisoning with products, poisonous under certain conditions.

Major factors of transfer: raw beans, kernels of stone fruit, sprouting potatoes

Major measures of preventive maintenance: increase sanitary literacy of the population.

3. Poisoning with impurity of chemical substances:

Major factors of transfer: any products.

Major measures of preventive maintenance: control the use of pesticides, food additives, proper storage of food, increase sanitary literacy of the population.

3. UNEXPLAINED ETIOLOGY .

Gaffs diseases (yuksov, sartlan diseases).

Major factors of transfer: a fish in the separate periods of year.

Major measures of preventive maintenance: prohibition of use a fish at the first cases of diseases, increase sanitary literacy of the population.

General Practitioner (GP) - this is the first health care worker who is called a hotbed of food poisoning; from the knowledge of the doctor in this field depends on the speed of recovery of the patient, and the quality of the investigation of food poisoning. In this regard, the general practitioner should not only be able to make a preliminary diagnosis of food poisoning, but also to hold the first prophylactic measures in the hearth, and to begin work on the investigation of food poisoning.

In case of food poisoning the doctor is obliged to provide first aid to the patient, to investigate the circumstances leading to poisoning, remove the remains of the suspected food to send to the CSES emergency notification about food

poisoning (locality, address, date and place of food consumption, the number of victims, including children under 14 years of age who were hospitalized, the severity of the disease, the number of deaths, the suspect product, the measures taken, signature). In laboratory studies directed CSES for the remains of suspected food, vomit and washings, blood and feces of the patient.

Situation №1. To the doctor clinic in the summer camp after a quiet hour approached children with complaints of nausea and vomiting, fever, abdominal pain, loose stools. When collecting history revealed that the children ate for dinner rice soup, empanadas and garnish buckwheat, fruit compote. The study in the dining room of the camp revealed the following:

The empanadas were prepared from cooked meat, which is then cooked stuffing. Filling pancakes and crepes are ready to heat treatment during cooking were not exposed. A member of the dining room had a felon on his hand, minced meat and the whole process of making pancakes held exactly it.

Questions and tasks:

1. What range of common and dangerous diseases, accompanied with the above complaints?
2. What groups of food poisoning need to make a differential diagnosis and to determine the most probable their causes?
3. What actions should make GPs in the outbreak of poisoning? Make and justify the research plan.
4. Which additional actions with the necessary goal is to produce a GP for a final diagnosis?
5. What do I need to send to the CSES for research?
6. Identify prevention of food poisoning outbreak

Situation №2.

To the doctor health of the enterprise workers appealed on the following events: vomiting, sharp abdominal pain, headache, general weakness of the phenomenon, weak pulse, diarrhea without mucus and blood.

They treated at the end of the day, some of the workers seek care already returned home from work. Total locality addressed with similar complaints 18 people. Physician NFM all seeking help hospitalized. All patients had breakfast at home and had dinner in the canteen. Up to 15-16 hours. all felt good, no no complaints. All patients had dinner with 11-30 to 12-00 hours. Lunch consisted of the following dishes: salad of pickled cabbage, potato soup meat, fried meat with buckwheat porridge, stewed fruit. This set of 230 workers had been released. All patients except those meals as a snack eaten beef jelly. Almost all of the portions of half-eaten jelly remained unsatisfactory due to palatability: jelly jelly was semi-liquid consistency, footy, tasted bad. Jelly was made in the dining room of offal, stored in the refrigerator, where previously lay raw offal. Assess the situation, answer the questions.

2. GUIDELINES FOR STUDENT

2.1. INSTRUCTIONS FOR INDEPENDENT WORK IN ANALYZING AND SOLVING PRACTICAL SITUATION

List of situation analysis

Stages	Hints and tips
1. Familiarization with case	Please check with Case. Reading, Do not try to analyze the situation.
2. Familiarization with a given situation	Again read the information, select the paragraphs that seemed important to you. Try to describe the situation. Determine that it is important and what is secondary.
3. Diagnosis of the situation analysis	At the decision of a problem allocate the basic and minor importance. Problem: Determine the cause of the food poisoning, policy-making behavior of GPs in the outbreak of poisoning, the development of preventive measures in the outbreak. In analyzing the situation №1 and №2, answer the

	<p>following questions:</p> <ul style="list-style-type: none"> • What is the range of common and dangerous diseases, accompanied with the above complaints? • What groups of food poisoning need to make a differential diagnosis and to determine the most likely causes of their occurrence? • What actions should make GPs in the outbreak of poisoning? Make and justify the research plan. • Which additional actions with the necessary goal is to produce a GP for a final diagnosis? • What do I need to send to the CSES for research? • Identify prevention of food poisoning in the outbreak?
4. Selection and justification of the methods and means of addressing	List all the possible ways to solve this problem in this situation. Diagnose, resolve the problem. If necessary, use graphic organizers.

2.2. Fill in the table of the decision of a problems

Problem:	The reasons of occurrence of a problem situation	Actions on an output from a problem situation
1. What is the range of common and dangerous diseases, accompanied with the above complaints?		
2. What groups of food poisoning need to make a differential diagnosis and		

to determine the most likely causes of their occurrence?		
3. What actions should make GPs in the outbreak of poisoning? Make and justify the research plan.		
4. Which additional actions with the necessary goal is to produce a GP for a final diagnosis?		
5. What do I need to send to the CSES for research?		
6. Identify prevention of food poisoning in the outbreak?		

2.3. Instructions for group work to analyze and solve practical situation

Stages of job	The recommendations and advice
To the harmonization of the situation and the problem.	Discuss and agree on various representations of the group members about the situation, the problem of the sub-problem.
Analysis and assessment of ways and means to solve the problem, the choice of priority ideas to solve the problem.	Discuss and evaluate the options proposed ways and means to solve the problem. Select priority, in your opinion, the idea of decision problems.
Develop mutually acceptable	Develop a mutually acceptable solution to the

<p>solution to the problem and the detailed development of its implementation.</p>	<p>problem and the detailed development of its implementation.</p> <p>Quest: On the basis of analysis of the sick children should establish a preliminary diagnosis, to make the necessary hygienic methods of diagnosis, make an informed decision for further management of patients</p>
<p>Presentation Training</p>	<p>Arrange the results of work in the form of an oral presentation on behalf of the group. Discuss and decide the question of who will represent the results of the group work: the leader of the entire group or division of functions between the participants (supplementary reports), depending on the tasks undertaken by them in the course of analyzing and solving problems.</p> <p>Prepare visual material in the form of posters, slides or multimedia.</p> <p>When preparation of reports, primarily mark the approximate outline of what you say, do not go into the details!</p>

Rules of job with case

2.4. Criterion of estimation and parameters of job with case

(For auditory and outside of an auditory of job with case)

Criterion and parameters of estimation outside of an auditory of job with case)

The list of the students	Substantiation of the basic problem max 66	Choice of ways both means of the analysis and decision of a problem max 46	Detailed development of measures on realization of the decision max 106	General number (max 206) *
1.				
2.				
№				

*20 balls - "excellent", 10 balls - the "good",

4 – 6 balls - "satisfactory", less 4 balls - "unsatisfactory".

2.5. Criterion and parameters of an estimation auditory of job with case

Group	Activity of the members of group 16 балл	Presentation of the submitted presentation 4 numbers	Completeness and clearness of presentation 4 numbers	Total sum of the typed numbers 10 numbers
1.				

2.				
3.				

*8 – 10 balls - "excellent", 6 - 8 balls - the "good",
 4 – 6 balls - "satisfactory", less 4 balls - "unsatisfactory".

Rules of job of small groups:

1. The students for the decision of situations should have the certain knowledge.
2. The small groups should have the concrete tasks for the decision of a situation.
3. The small groups should have sufficient time for the decision of a situation.
4. It is impossible to limit opinion of the students of small groups. The given technology will allow to find the decision of the basic problem.

3. VARIANT OF CASE STUDIES

TEACHER - CASELOG

1. Which circle common and dangerous diseases, accompanied with the above complaints?

In practice, acute abdomen can occur for the following diseases:

- infectious diseases
- With food poisoning
- The symptoms of appendicitis and others. Surgical Pathology

2. What groups of food poisoning need to make a differential diagnosis and to determine the most likely causes of their occurrence?

1. With poisoning
2. The cause of this disease was a violation of the technology making pancakes and violations of sanitary and hygienic requirements for working in the dining rooms.

3. What actions should make GPs in the outbreak of poisoning?

In case of food poisoning the doctor is obliged to provide first aid to the patient, to interview the patient or relatives about the circumstances leading to poisoning.

4. What additional actions with the necessary objective should make GPs for definitive diagnosis?

GPs shall remove the remains of the suspected food to send to the CSES emergency notification about food poisoning (locality, address, date, place of food consumption, the number of victims, including children under 14 years of age who were hospitalized, the severity of the disease, the number of deaths, the suspect product, the measures taken, signature).

5. What do I need to send to the CSES for research?

In laboratory for the study of SES sent the remains of suspected food, vomit and washings, blood and feces of the patient.

6. Define prevention of food poisoning.

- Quality food supply
- Proper transport food
- Proper storage
- Heat treatment of food products
- Proper cooking process
- Timely implementation of ready meals

4. CASE - TECHNOLOGY TRAINING WORKSHOP

4.1. Model technology training

Subject	Food poisonings and their preventive maintenance
Number of hours - 2 hours	Number of students: 12-14 people
Form a training session	Workshop to broaden and deepen the knowledge, skills working out tactics of GPs in the outbreak of poisoning
Plan Workshop	1.Introduction to training session 2.Actualization Knowledge 3.Work with a case in the mini - Group 4.Presentation of theDiscussionresults,the

	<p>evaluation and selection of the best options strategies</p> <p>5. Conclusion. Evaluation of groups and students, the degree of achievement of lesson</p>
<p>Purpose of the lesson: to form students' knowledge of food poisoning, the role of hygiene risk factors in the occurrence of the most important forms of food poisoning, the deepening and expansion of knowledge on activities to prevent food poisoning, student learning tactics behavior GPs in the outbreak of food poisoning.</p>	
<p>Objectives teacher:</p> <ul style="list-style-type: none"> - to form students' knowledge of food poisoning - the role of hygiene factors in the occurrence of the most important forms of food poisoning - deepening and broadening of knowledge on activities to prevent food poisoning - student learning tactics behavior of GPs in outbreak of food poisoning 	<p>Learning outcomes:</p> <ul style="list-style-type: none"> - acquire knowledge: food poisoning, their classification, etiological factors and clinical signs of food poisoning different groups - identify the reasons for the deterioration of food - developing prevention of food poisoning. <p>students acquire skills:</p> <ul style="list-style-type: none"> -stavit tentative diagnosis of food poisoning by objective indicators -select correct tactics in the outbreak of food poisoning -rekomendovat adequate prevention of food poisoning different groups.
Teaching Methods	Case studies, discussion, practical method
Teaching offer	Case, guidelines
	Individual, front, group work

Learning environment	Audience with the technical equipment adapted for use in
The monitoring and evaluation	Seeing blitz poll, presentation, evaluation

4.2. FLOW CHART OF THE LESSON, BASED ON THE CASE

Stage and content work	Activity	
	Teachers	Student
Preparation step	Explains assignment case - stage and its influence on the development of professional knowledge. Distributes the materials of the case and introduces the algorithm analysis of the situation (Guidelines for students). Gives task independently analyze and record the results in the "Leaf analysis of the situation"	Listen Myself examine the contents of the case and are individually filled with leaf analysis of the situation.
I stage. Introduction to the training session (10-15 min)	1.1. Called the subject class, plan, its goals, objectives and planned learning outcomes. 1.2. Introduces the mode of operation in the lesson and evaluation criteria (Instructions for students)	Listen Lead the corresponding entries
II stage. Core 60 min	2.1. Justifies the statement of the problem and the choice of the situation - relevance. Conducts a quiz in order to activate students' knowledge on the topic. 2.2. Divides the students into groups. Reminiscent of the content and objectives of	to answer questions, discuss, ask clarifying questions. Divide into groups

	<p>the case. Introduces (recalls) with the rules of the group and the rules of debate.</p> <p>2.3. Gives the task, specify the correct perception of the job.</p> <p>2.4. Coordinates, advises, directs the learning activities.</p> <p>Evaluates the results of individual work: Sheets situation analysis.</p> <p>2.5. Presentations on the results of the work done by the decision of the case, discussion. Discussion Organizer: ask questions, remarks, resembles the theoretical material</p> <p>2.6. Organizer - GP algorithm of actions in a given situation (application №1-2)</p> <p>2.7. Reported his solution of the case.</p>	<p>Discuss, conduct a joint analysis of individual problems, determine the most important aspects of the situation, the main problems and their solutions, process and refine Solutions represent solutions to the problem 10-15 min. Questions after the presentation, choose the best option. Develop a unified system, the discussion</p>
<p>III Summary of lessons, analysis and evaluation of 20 minutes</p>	<p>3.1. Summarizes the results of training activities, announces assess individual with teamwork. Analyzes and evaluates the group notes the positive and negative aspects.</p> <p>3.2. Emphasizes the importance of case - stage and its influence on the development of the future specialist</p>	<p>Listen. Can a self-assessment and estimation Express their opinion</p>

The task №1

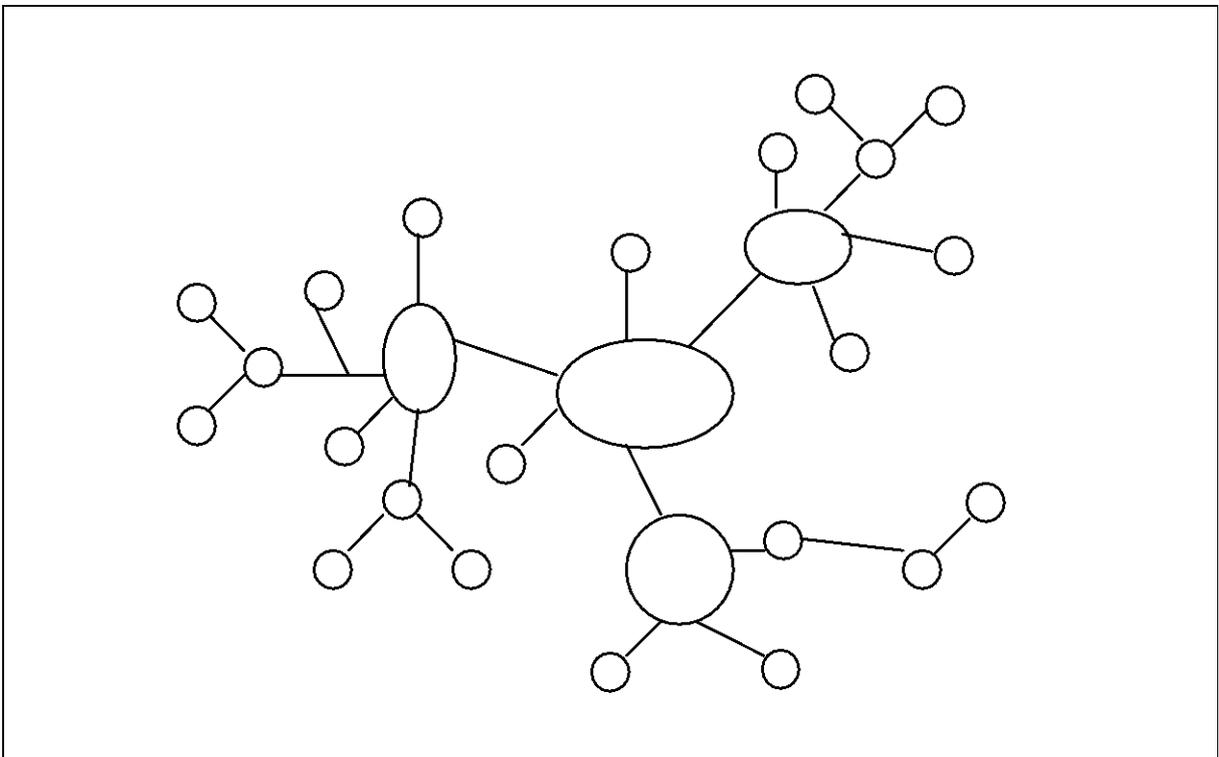
At decide of a problem situation use graphic organayzers.

GRAPHIC ORGANIZERS (CLUSTER)

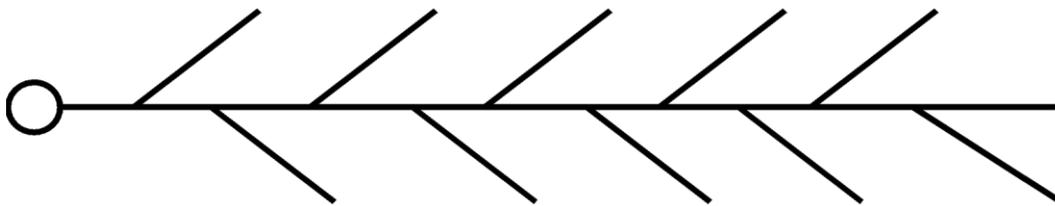
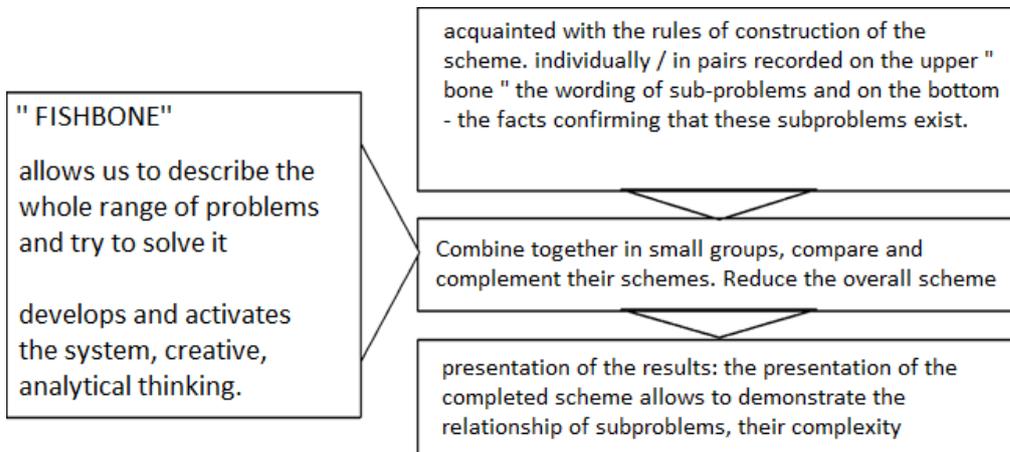
Rules for compiling the cluster

1. Write down everything that comes to mind. Do not judge the quality of ideas: just write them down.
2. Do not pay attention to spelling and other constraints on the letter.
3. Do not stop writing until the time runs out. If the idea of suddenly stop coming to your mind, then paint with on paper, until you will have new ideas.
4. Try to build as many links. Do not limit the number of ideas, their flow and communication between them.

GRAPHIC ORGANIZERS



2. Scheme "Fishbone"



5.CONTROL QUESTIONS.

1. Meaning of nutrition for health.
2. The Concept of hygiene and dietary requirements.
3. Hygienic characteristic physiological nutritional standards.
4. The concept of nutritional diseases, their classification
5. Food poisoning. Their classification.
6. Issues of prevention of food poisoning.
7. Tactics GPs in the outbreak of poisoning.