

regardless of race with them. The more ideal the mask "lays down" along the contour of the face, the more attractive and beautiful it is.

Results and discussion. The aim of the study was to study fundamental knowledge about the proportions of the human appearance, which allow many specialists to correct serious defects that are both innate and acquired character.

Modern injection, hardware and operational techniques allow human to fill the missing volumes, tighten down tissues and do more, in order to adjust facial features. But the surgery changes which is fitted perfectly to the one person, can be looked absolutely ridiculous on the face of another one.

Measurement of the facial features of different people should be done in order to make sure that after all the principle of the golden ratio is applicable in plastic surgery, to find out whether proportions with age change and what percentage of persons corresponds to the golden ratio. Beauty is laid in harmony; harmony is laid in proportions. It is necessary to correctly use the secret of the golden ratio, to calculate the ratio of those or other parts of the face to each other, and to create perfect beauty.

Conclusions.

1. "Golden Ratio" is the division of the whole into two unequal parts, in which the bigger part refers to the whole, as from the smaller to the bigger.

2. The person and the human body are fitted into the model of the golden ratio (a mathematical formula that reveals the secret of ideal proportions).

3. Applying the rule of the golden ratio in the aesthetic surgery of the face and body, the surgeon can achieve the ideal proportions and the most harmonious and attractive result.

4. In nature, the coincidence of all parameters is quite rare. But this does not mean that people who have not the ideal proportions are ugly. On the contrary, the "defects" sometimes give them a special unforgettable charm.

USING THE METHODS OF NETWORK PLANNING IN PHARMACY

Dashutyna I. F.

Scientific supervisor: assoc. prof. Nemtsova A. A.
National University of Pharmacy, Kharkiv, Ukraine
dashutita@gmail.com, anemtsova_2017@ukr.net

Introduction. The method of network planning allows you to manage processes in areas of activity that are directly related to the planning, organization and control of complex works performed in a short time. In pharmacy, it is advisable to use it in the planning of the network of pharmacies and wholesale pharmaceutical bases, the organization of complex multi-stage technological processes, etc.

Aim. Use the method of network planning to solve the problem of organizing a new pharmacy at the optimal time and develop recommendations on the action schedule.

Materials and methods. The report considers the construction of a non-closed network model in the form of an oriented graph of a set of events and actions. During the construction of the model, the time of execution of each action is used and the time resources are determined. Any oriented graph consists of a set of vertices and arcs, the sequence of which creates a route. In the closed route, the first and last vertices coincide. Otherwise, the route is not closed. The method of network planning includes several stages. First, you need to develop a statement of the problem, which indicates the purpose of the planned action, determine the means of their implementation and executors. Then, a list of actions is made in the form of a table, in which the names of the actions, executors, execution time, etc. are indicated. Time of execution of actions is estimated by experimental or normative data. For actions planned for the first time, execution time is determined expertly. The average execution time t_{av} in this case is determined by the formula

$$t_{av} = \frac{3t_{min} + 2t_{max}}{5}$$

where t_{min} and t_{max} are the minimum and maximum runtime.

At the third stage, a network graph is constructed in the form of an oriented graph that reflects the relations of precedence and following between individual actions. The main elements of the network graphics are actions, represented by arrows, and events, denoted by circles. The event is understood as the

result of the action done. Then follow the steps of calculating time parameters, analyzing reserves, optimizing the network schedule and assessing the feasibility to execute action at a given time.

Using the methods of network planning allows to improve the quality of planning of action and to identify the most important (critical) action and resources for their provision. This is achieved by visualizing the consistently executed and interrelated actions.

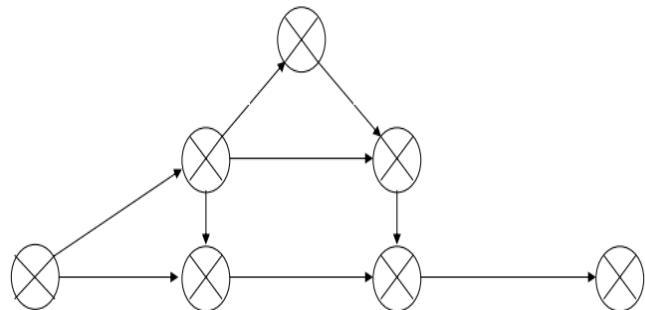
Results and discussions. In this report, author used the method of network planning to solve the problem of rational arrangement of a new pharmacy in an apartment previously used for other purposes. The task provides for the implementation of eight types of actions, the information on which is presented in Table 1.

Table 1. Initial information on the planned actions.

Action	Content of the action	Previous actions	Lead time, weeks
A	Project preparation	-	5
B	Choosing a pharmacy manager	-	6
C	Preparation of documents for pharmaceutical activities	A	4
D	Selecting a contractor	A	3
E	Preparation of documents for reconstruction permits	A	1
F	Registration of reconstruction permit	E	4
G	To carry out reconstruction	D, F	14
H	Registration of permit for pharmaceutical activities	B, C	12
I	Purchasing and installing pharmacy equipment	G, H	2

The network graph has the form

Calculations showed that for five actions A, E, F, G, AND there is no time reserve, so their implementation is critical, the time taken to implement them (26 weeks) cannot be shortened. Without prejudice to the overall timing of the action, it is possible to postpone the start of actions: B (forming a pharmacy management) for 6 weeks, C (preparation of documents for pharmaceutical activities) for 3 weeks, D (contractor selection) for 2 weeks, H (issuance of permits for pharmaceutical activities) for 3 weeks. The rest of the actions cannot be carried over time.



The results of calculations of the network parameters are given below.

Table 2. Basic Networking Parameters.

Action	Working time, weeks					
	Realization	Early start	Early end	Late start	Late end	Reserve
A	5	0	5	0	5	0
B	6	0	6	6	12	6
C	4	5	9	8	12	3
D	3	5	8	7	10	2
E	1	5	6	5	6	0
F	4	6	10	6	10	0
G	14	10	24	10	24	0
H	12	9	21	12	24	3
I	2	24	26	24	26	0

All calculations were made in the MS Excel application. The network graph is built in the graphical editor Paint.

Conclusions. The method of network planning is advisable to use when planning work schedules, schemes for implementing complex multistage technological processes, etc.

SYSTEMATIZATION OF ANTIOXIDANTS AND VITAMINS

Diachkova A. R.

Scientific supervisor: prof. Strizhachenko A.V.

National University of Pharmacy, Kharkiv, Ukraine

ein25423stein@gmail.com

Introduction. Free radical and peroxide reactions are integral parts of such important biological processes as, for example, electron transport in the respiratory chain, synthesis of prostaglandins and leukotrienes, proliferation and differentiation of cells, metabolism and synthesis of catecholamines, phagocytosis, metabolism of some xenobiotics. There is a powerful antioxidant system in the body, for example enzymes (catalases, peroxidases, superoxide dismutases) and "radical traps" (vitamins A, C, E, glutathione, sulfur compounds, biogenic amines, essential microelements). The state of the cell depends on the ratio of intensity of the processes and processes of the antioxidant system (these processes are mutually balanced in the healthy body).

Aim. Systematization of antioxidants and vitamins.

Materials and methods. Medicinal preparations, statistical methods of information processing.

Antioxidants – are substances of different chemical nature that inhibit or block the processes of free radical oxidation in the human body. Antioxidants are enzymatic (enzymes are synthesized by eukaryotic and prokaryotic cells) and nonenzymatic. The most known antioxidant enzymes (AOF) are the catalyst proteins (superoxide dismutase (SOD), catalase and peroxidase).

The AOF is the most important (internal) part of the body's antioxidant system. Due to AOF, each cell is normally capable of destroying excess free radicals, but with an overabundance of unbound free radicals, an external part of the antioxidant system, antioxidants that obtained with food, plays an essential role in protecting of body from oxidative stress.

The most well-known non-enzyme antioxidants are ascorbic acid (vitamin C), tocopherol (vitamin E), β -carotene (provitamin A) and lycopene (in tomatoes). They also include polyphenols: flavin and flavonoids (it often found in vegetables), tannins (in cocoa, coffee, tea), anthocyanins (in red berries).

Antioxidants are classified into two broad divisions, depending on whether they are soluble in water (hydrophilic) or in lipids (lipophilic). In general, water-soluble antioxidants react with oxidants in the cell cytosol and the blood plasma, while lipid-soluble antioxidants protect cell membranes from lipid peroxidation. These compounds may be synthesized in the body or obtained from the diet. The different antioxidants are present at a wide range of concentrations in body fluids and tissues, with some such as glutathione or ubiquinone mostly present within cells, while others such as uric acid are more evenly distributed. Some antioxidants are only found in a few organisms and these compounds can be important in pathogens and can be virulence factors.

The relative importance and interactions between these different antioxidants is a very complex question, with the various metabolites and enzyme systems having synergistic and interdependent effects on one another. The action of one antioxidant may therefore depend on the proper function of other members of the antioxidant system. The amount of protection provided by any one antioxidant will also depend on its concentration, its reactivity towards the particular reactive oxygen species being considered, and the status of the antioxidants with which it interacts.

Some compounds contribute to antioxidant defense by chelating transition metals and preventing them from catalyzing the production of free radicals in the cell. Particularly important is the ability to sequester iron, which is the function of iron-binding proteins such as transferrin and ferritin. Selenium and zinc are commonly referred to as antioxidant nutrients, but these chemical elements have no antioxidant action themselves and are instead required for the activity of some antioxidant enzymes.