

An individual-typological (constitutional) approach to nutrition and adequate choice of food products with positions of academic and traditional medicine. Publication 1: Constitutional Approaches to the Body, Causes of Illness and Food Choices in Western Medical Tradition

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Individual and typological (constitutional) approach to food and the adequate choice of foodstuff from positions of the academic and traditional medicine.

Publication 1: Constitutional approaches to an organism, etiologies and the choice of foodstuff in the western medical tradition

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RESUME

The analysis of European (pro-academic and academic) medicine experience regarding the accounting of constitutional features of patients and at the choice of foodstuff since the most ancient times so far is carried out. It is shown that empirically saved up data array has in some cases experimental justification and clinical confirmation, however it is still not systematized and isn't reasonable from a position of evidential medicine. There is no uniform evidence-based classification of constitutional types, the corresponding conceptual framework and terminology. The data confirming using of the constitutional type of patients in the academic medical practice for purpose (choice) of foodstuff in the 18-21st centuries aren't revealed in available literature.

Keywords: traditional medicine, adequate food, constitutional types, temperament types, compatibility of foodstuff.

SUMMARY

The analysis of the experience of European (pro-academic and academic) medicine in terms of taking into account the constitutional characteristics of patients at various stages of medical care and when choosing food products from ancient times to the present. It is shown that the empirically accumulated data set has in some cases experimental justification and clinical confirmation, however, it has not yet been systematized and substantiated from the standpoint of evidence-based medicine. There is no unified scientifically grounded classification of constitutional types, the corresponding conceptual apparatus and terminology. There are no data in the available literature confirming the use of the constitutional type of patients in academic medical practice for prescribing (choosing) food products in the 18th – 21st centuries.

Key words: traditional medicine, adequate nutrition, constitutional types, types of temperament, food compatibility.

Adequate nutrition is the basis of human life and is one of the most important factors contributing to a decrease in the risk of developing alimentary-dependent diseases, providing active longevity, participating in the formation and implementation of the body's adaptive potential [28, 44, 55, 62-64]. By the decree of the President of the Russian Federation V.V. Putin dated 07.05.2012 No. 598 "On improving the state policy in the field of health care" [38] The Government of the Russian Federation was instructed (as priority tasks) to ensure "the implementation of measures to promote a healthy lifestyle of citizens of the Russian Federation" and to approve the "Action Plan for the implementation of the Fundamentals of State Policy RF in the field of healthy nutrition of the population for the period up to 2020" [38, 40, 55]. Analyzing the regulatory documentation (ND) in this area [55], we found that today the experience of traditional medicine (TM) is practically not taken into account in the formation of a policy of healthy nutrition. Moreover, despite the undoubted increase in the number of people striving for a healthy lifestyle, the number of patients with overweight and chronic diseases is steadily increasing [2, 22, 42, 62, 63]. In our opinion, this is largely due to the wrong choice of food, more precisely, the use of incompatible products. Here we mean not only products that are incompatible with each other for some reason, but also incompatible with the individual constitutional characteristics of a person, with the season, time of day, gender, state of enzyme systems and existing pathology. despite the undoubted increase in the number of people striving for a healthy lifestyle, the number of patients with overweight and chronic diseases is steadily increasing [2, 22, 42, 62, 63]. In our opinion, this is largely due to the wrong choice of food, more precisely, the use of incompatible products. Here we mean not only products that are incompatible with each other for some reason, but also incompatible with the individual constitutional characteristics of a person, with the season, time of day, gender, state of enzyme systems and existing pathology. despite the undoubted increase in the number of people striving for a healthy lifestyle, the number of patients with overweight and chronic diseases is steadily increasing [2, 22, 42, 62, 63]. In our opinion, this is largely due to the wrong choice of food, more precisely, the use of incompatible products. Here we mean not only products that are incompatible with each other for some reason, but also incompatible with the individual constitutional characteristics of a person, with the season, time of day, gender, state of enzyme systems and existing pathology. this is largely due to the wrong choice of food, more precisely, the use of incompatible products. Here we mean not only products that are incompatible with each other for some reason, but also incompatible with the individual constitutional characteristics of a person, with the season, time of day, gender, state of enzyme systems and existing pathology. this is largely due to the wrong choice of food, more precisely, the use of incompatible products. Here we mean not only products that are incompatible with each other for some reason, but also incompatible with the individual constitutional characteristics of a person, with the season, time of day, gender, state of enzyme systems and existing pathology.

Several millennia ago, for example, in traditional Chinese medicine (TCM) it was already known that not everything useful that was eaten brings benefits to the body, but only what the body was able to assimilate [24, 25, 51, 53]. However, the majority of Western certified nutritionists (in accordance with the official policy of their countries), as before, continues to count the amount of proteins, fats, carbohydrates, calories, dietary fiber, biologically active substances (BAS) [35-40, 48] practically without taking into account the most important nutritional characteristics used for thousands of years in traditional medical systems of the world (TMS): constitutional type of a person, optimal season, energy, heat and taste characteristics of each food product and many others [23-25, 51, 52].

From our point of view, it is very expedient to generalize the experience of traditional medicine (TM) in terms of constitutionally determined choice of food products and develop practical recommendations for the formation of seasonal and constitutional dietary recommendations, both for various nosological forms and syndromes, and for a practically healthy person. In our opinion, the idea of constitutional prevention, put forward in the first third of the twentieth century by T.I. Yudin [59], which has not yet found practical application in modern medical technologies, but is perfectly implemented in TM today. We plan to devote a series of articles to all these questions, in the first of which we considered it expedient to systematize the experience of the so-called. "Western" medicine in terms of taking into account the patient's temperament and constitution when choosing food products and nutritional tactics from ancient times to the present day. We consider it necessary to note that homeopathic constitutional types were not included in the scope of this study and, from our point of view, deserve a separate study.

The purpose of this work (publications 1) is an analysis of the experience of European (pro-academic and academic) medicine in terms of taking into account the temperament and constitutional characteristics of patients when choosing food products.

Materials and methods

The objects of the study were bibliographic sources of a high degree of reliability: ND (laws and by-laws), thematic monographs, reference and encyclopedic publications, domestic and foreign scientific periodicals (peer-reviewed publications). When performing the work, the following research methods were used: analytical, informational, historical, descriptive, evaluative.

Research results

Attempts to classify the genus *Homo sapiens* by body structure, temperament, behavior, predisposition to various diseases and other characteristics date back to ancient times both in European medicine [5, 6, 26, 47, 54], and in Eastern: Tibetan [51], TCM [11, 30], Ayurveda [23, 52]. Constitutional types of people were noticed long before the emergence of scientific medicine and were very accurately conveyed in the works of ancient art of different peoples. For example, the Egyptians already have examples of images of constitutional types of a person: one of the masterpieces of Egyptian art of the Memphis period - the statue of Sheikh-El-Beled (more than 27 thousand years BC) is considered a unique example of a pycnic constitution in terms of accuracy. Asthenic constitution and *typus degenerativus* (according to J.

Each epoch formed ideas about the constitutional types of a person in accordance with the natural science and biomedical concepts that were relevant for their time, using available research methods [47]. Today, in academic medicine, a constitution (from Lat. *Constitutio* - establishment, organization) is understood as a set of relatively stable morphological and functional (including mental) properties of a person due to heredity, as well as long-term and / or intense environmental influences [17, 56, 58]. Under constitutional signs mean such indicators of structure, function and behavior, which from day to day, or even over the course of several years, do not change significantly. They define "persistent" differences between people. Some traits of character and temperament also persist throughout life, so they are constitutional. Temperament (from the Latin *temperamentum* - the proper ratio of parts) today is understood in medicine as the characteristic of an individual in terms of the dynamic characteristics of his mental activity, that is, the pace, rhythm, intensity of individual mental processes and states [17, 54, 56, 58].

Today 3 systems of explanation of the essence of temperament are generally accepted: humoral (Hippocrates, Galen); constitutional (E. Kretschmer, W. Sheldon); associated with the functioning of the central nervous system (I. Pavlov and his followers) (table. 1).

Table 1

Main historical approaches to the classification of temperaments

Types theories	Humoral	Constitutional		Physiological			
Soderburning and the essence theory	Affiliation due to relative predominance in organism one of 4 liquids: blood, mucus, bile, black bile	Performance properties - parameters - mental mechanisms from buildings and functioning organism		Dependence of temperament on the type of nervous systems			
Introduce lords	Hippocrates - Galen	E. Kretschmer	W. Sheldon	I.P. Pavlov, B.M. Teplov, V.D. Nebylitsyn			
Types temperaments	Phlegmatic person Choleric Sanguine melancholic	Cyclo-mick Ixotimic (viscous) Schizotimic	Viscerotonic Somatotonic Cerebrotonic	Strong		Weak	
				Balanced		Unequal hanged	
				Mobile, active - sanguine	Inert - phlegmatic person	Choleric	Melancholic

Official medicine proceeds from the fact that diverse ideas about the constitution and their corresponding classifications have made a certain contribution to the theory and practice of medicine, however, in accordance with academic ideas, they all have common disadvantages: one-sidedness and the desire to connect such complex characteristics of the organism as reactivity and resistance, with few and often arbitrarily chosen morphological or functional features [17, 29, 58]. However, in order to analyze the literature on constitutional food selection, we found it useful to take a short excursion into the history of ideas about types of temperament and constitution.

V-IV c. BC e. Of the two medical schools that flourished in V century BC e. (Cnidus and Koskoy), the latter became especially famous in connection with the name of Hippocrates, who pointed out that the onset and course of the disease depend on the properties of the organism, and revealed several types of constitution (good and bad, strong and weak, greasy, moist, etc.) [eighteen]. Hippocrates (c. 460 BC - between 377 and 356 BC) closely studied the human body, its natural properties - "physis" and environmental conditions. According to the humoral theory formulated by him (from Latin *humor* - moisture), the human body (and all

animals) is built of 4 basic elements: fire, earth, air and water. They correspond to 4 basic fluids (moisture) in the human body: yellow (light) bile, black bile, blood and phlegm, which determine physiological processes. Essential fluids are passed from one living thing to another through the semen and are supported by food and drink. Their sources in the body, according to Hippocrates, are: for blood - the heart, for phlegm (mucus) - the brain, for yellow bile - the liver, for black bile - the spleen [15].

Hippocrates not only gave a clear description of some typical constitutional features, for example, asthenic constitution, but also pointed out an unfavorable prognosis of consumption in habitus phthisicus and favorable - for persons with broad breasts [17, 18]. Hippocratic medicine distinguished many causes of diseases, most often seeing them in an inappropriate lifestyle that does not correspond to the temperament, in inappropriate nutrition, in climatic and many other (even telluric-cosmic) factors [8, 15, 18]. Moreover, already in ancient times it was unambiguously emphasized that all effects on the body are reflected in different ways on different people [6-8].

Hippocrates clearly distinguished several types of patient's temperament, and the essence of the disease, from his point of view, consisted in an incorrect mixture of four main body juices: blood, mucus, yellow bile (from the liver) and black bile (from the spleen), which corresponded to four special "qualities" - heat, cold, dryness and humidity. Incorrect mixing of juices ("dyscrasia") caused diseases, correct ("eucrasia") - health [6-8, 18, 31-33]. Moreover, with a slight violation of the correct mixing, not a disease was obtained, but only certain features of the individual constitution of a person, a special temperament. And the predominance of this or that juice determined the temperament of people: sanguine, phlegmatic, choleric and melancholic [6-8, 32, 33].

Thus, according to Hippocrates (Table 2), the general behavior and temperament of a person depend on the ratio of four juices (fluids) circulating in the body - blood, bile, black bile and mucus (phlegm, lymph) [6-8, 33, 54]:

1. The predominance of bile (Greek χολή - hole, "bile, poison") makes a person impulsive, "hot" - choleric.
2. The predominance of mucus (Greek φλέγμα - phlegm, "phlegm") makes a person calm and slow - phlegmatic.
3. The predominance of blood (Latin sanguis - sanguis, sangua, "blood") makes a person mobile and cheerful - a sanguine person.
4. The predominance of black bile (Greek μέλαινα χολή - melenā hole, "black bile") makes a person sad and fearful - a melancholic.

The ideas about the constitutional types of the ancient Greek philosopher and physician Empedocles of Agrigent (c. 487 - c. 430 BC) are very interesting. He was the first of the Greek philosophers to develop the doctrine of the four temperaments. In hylozoic natural philosophy, Empedocles proposed a scheme for constructing the world from four eternal and unchanging primary substances, elements, or "roots": fire, air, water and earth, including active and passive principles, and driving forces - love (attraction forces) and enmity (repulsive forces) [13, 26, 27, 45].

According to Empedocles, representatives of the element of Fire (will) are overwhelmed with vital energy (prana). The symbol of fervor in ancient times was considered as high external and internal activity - expansion (diastole), expansion, interaction, and it had a decisive influence on choleric temperament. With Fire (modern: fire signs of the zodiac - Leo, Sagittarius and Aries) were associated with rapid diseases, seizures, exacerbations and inflammatory processes (Table 2).

The element Air (mind) was associated with nerves, external passivity, but internal activity. Therefore, it was believed that a sanguine temperament forms expansion, but causes a lack of interaction. Representatives of air signs (Aquarius, Libra and Gemini) often suffer from lung diseases, neuroses, vegetative-vascular dystonia [26, 27, 45] (Table 2).

The element of Water (feelings) has been associated with fluids within the body, the endocrine system and gastric juice. The predominance of external activity and internal passivity determines active interaction in the absence of expansion and expansion, is a melancholic temperament. Characterized by edema, metabolic disorders, diseases of the digestive system and genitourinary disorders (Table 2).

table 2

Correspondence between types of temperament and types of the nervous system				
The author of the theory	Types of temperament and nervous system			
Hippocrates Galen	Sanguine The predominance of blood (Latin sanguis - sanguis, sangua, "blood") makes a person mobile and cheerful	Phlegmatic Predominance of slime (Greek. φλέγμα - reflux, "sputum") does human calm and slow	Choleric Predominance of bile (Greek χολή - hole, "bile, poison") makes impulsive person, and "Hot"	Melancholic The predominance of black bile (Greek μέλαινα χολή - melenā hole, "black bile") makes a person sad and fearful
Empedocles	Element Air (mind) Nerves, external passivity, internal activity. Extension, but absence of interactions. Diseases of lungs, neuroses, vegetative vascular dystonia. Symbol active (male) elements	Element Earth (ego) Everything is dense in the body. External internal passivity: absence of enlargement and interaction, cold. Trend To salt deposition and hypertrophied overgrowth of bones. Passive symbol (female) elements.	The elements Of fire (will). Overflowing with life energy (prana). High outer and inner activity - expansion (diastole), expansion, interaction. Fast flowing disease, attacks, exacerbations and inflammatory processes. Symbol active (male) elements	Element Water (the senses). Body fluids, endocrine system and gastric juice. Predominance of external activity and internal passivity, active interaction at absence of expansion and extensions. Swelling of metabolic disorders substances gastrointestinal diseases and genitourinary disorders. Symbol passive (female) element.

I. Kant	Is different quick change of emotions with their small depth and strength	Is different slowness, calmness and weakness of external expressions of feelings	Is different irascibility and fervor, impetuosity	Is different depth and the duration of the experience
A. Foulmer	Sensitive, fast, but few intense reaction and characteristic disproportion between sensitivity alive and weak motor reaction	With active, slow and moderate reaction	With active, with a quick and intense reaction	Sensitive, with reaction slow, but intense. Emotionality is combined with special inclination. To pessimistic surrounding evaluation
E. Kretschmer	Cyclothymic	Ixotimic		Schizotimic
W. Sheldon	Viscerotonic		Somatotonic	Cerebrotonic
I.P. Pavlov	Strong			Weak
	Balanced		Unbalanced	
	Mobile	Inert	Mobile	
	Active, lively	Calm, sedentary	Excitable, rampant	

Poems I Earth (ego) is connected with everything dense in the body. External and internal passivity is characteristic: lack of expansion and interaction, the personification of cold and phlegmatic temperament. In turn, fire and air were considered a symbol of the active (male) element, and earth and water were considered a passive (female) element. There is a tendency towards salt deposition and hypertrophied growth of bones [26, 45] (Table 2).

Empedocles explained the level of mental abilities, characterological characteristics of the personality and the inherent disease by the uniformity of a mixture of four elements or the predominance of some over others in it, their size, connection and their mobility. All properties of bodies, incl. psychic, were derived from mixing in various proportions of the four elements. It was the proportion and nature of their interaction in a person that explained the level of mental abilities and personality traits [13, 26, 45].

2 c. AD Ancient Roman physician, naturalist and anatomist Claudius Galen (Galenus Claudius, approx. 130 - c. 200 years) for the first time introduced the concept of habitus (from the Latin "habitus" - appearance, appearance, physique) as a set of signs and features of the external structure of the body, characterizing the structure of the body, the external appearance of the individual [9]. Galen's doctrine, or the doctrine of predisposition, also bore quite definitely the character of constitutional pathology, which in many respects adjoined the humoral pathology of Hippocratic medicine. Hippocratic-Galenian humoral pathology with its doctrine of dyscrasias and diathesis, undergoing various changes, persisted for a long time. The ancient solidary pathology, for its part, also developed a number of concepts (status strictus and laxus), which later turned into concepts of tone and atony, etc., which played an important role in the development of the doctrine of the constitution [18].

Today, habitus is understood as a person's appearance: features of constitution, posture, skin color, facial expressions, etc., by which one can judge his state of health, existing diseases, or predisposition to any diseases [29, 58].

Middle Ages. During the Middle Ages, the problem of differential diagnosis of constitutional types did not receive significant development. The ideas of Hippocrates and Galen remained almost unchanged for many centuries: until the 18th century, following Hippocrates, they distinguished sanguine, choleric, phlegmatic and melancholic constitutions [18, 29, 58].

Only at the beginning of the XI century. Avicenna in the "Canon of Medicine" and in the "Book of Knowledge", commenting on ancient philosophers (and doctors), was able to creatively develop certain aspects of the doctrine of temperament and character. Avicenna's "Mizoj" is not a repetition of the temperaments of Hippocrates and the prototype of the nature of Tibetan-Chinese medicine [1]. This is an independent, qualitatively new teaching about the dynamic nature of a person who is in close connection with the environment in the broad sense of the word. He not only linked the behavioral features of people with different temperaments to the juices of the body, but also for the first time discovered the connection between temperament and the activity and properties of the nervous system [1, 45, 49, 50].

XVIII - XIX centuries. During this period, attempts were made, based on the accumulated facts indicating the significance of the individual characteristics of the organism in the occurrence and course of infectious and other diseases, to establish the morphological or functional characteristics of the organism, typical for large groups of people and determining their response to the influence of pathogenic factors. Moreover, in most cases, the types of constitution were determined by the characteristics of individual organs and systems [18, 29, 58].

The oldest of the main systems of views on the factors that determine the manifestations of temperament in behavior, humoral theories linking temperament with the properties of body fluids (Hippocrates) in the 18th century, finally received their development. The psychological characteristics of the four types of temperament according to Hippocrates were systematized by I. Kant (Anthropology, 1789) [12], who mixed the traits of temperament and character, and considered the qualitative characteristics of blood to be the organic basis of temperament (Table 2):

1. Sanguine temperament is characterized by a quick change of emotions with their low depth and strength. Choleric - ardor, irascibility, impetuosity of actions.

Melancholic - the depth and duration of the experience.

Phlegmatic - slowness, calmness and weakness of the external expression of feelings.

Russian scientist S.G. Zybelin at the end of the eighteenth century. described in detail the emotional and mental makeup of the main body types (mainly corresponding to the types of temperaments according to Hippocrates) and its importance in pathology. At the same time, he recognized that external factors play a certain role in the formation of the constitutional type [17, 29].

French philosopher Alfred Foulmer [1838-1912] (known as the author of works on the psychology of peoples) at the end of the XVIII century. made additions to the classification of Hippocrates based on the study of the intensity and speed of reactions, highlighting four

human type [cit. by: 45] (tab. 2):

1. People are active, with a quick and intense reaction (choleric people).
2. People are sensitive, with a quick, but little intense reaction (closer to sanguine people) and a characteristic disproportion between lively sensitivity and weak motor response.
3. People are active, but with a slow and moderate reaction (phlegmatic).
4. People are sensitive, with a slower but intense reaction (melancholic). Their emotionality is combined with special impressionability, a tendency to pessimistic assessment of the environment.

Of practical interest are the correlations of types of people with styles of their behavior described by A. Foulrier (Table 2). This is especially true for choleric and phlegmanoid types: choleric people ignite instantly, they have a need to waste energy, they can hardly endure circumstances that impede their vital activity, and phlegmatic people have a comparative sluggishness of actions. In representatives of the sanguine type, according to Foulrier, there is a disproportion between lively sensitivity (emotionality) and a weak motor reaction. In melancholic people, the same emotionality is superimposed on a special impressionability and prolonged internal processing of an emotionally colored event [34, 45, 57].

The idea of P.F. Lesgaft (1837-1909) that the manifestations of temperament are ultimately based on the properties of the circulatory system, in particular, the thickness and elasticity of the walls of blood vessels, the diameter of their lumen, the structure and shape of the heart, etc. [18, 32]. According to Lesgaft, choleric temperament corresponds to a small lumen and thick walls of blood vessels, sanguine - to a small lumen and thin walls, melancholic - to a large lumen and thick walls, phlegmatic - to a large lumen and thin walls. The caliber of the vessels and the thickness of their walls determine the speed and strength of blood flow,

XX century. In the twentieth century, a wide variety of principles began to be used to draw up classifications of the constitution. and criteria. Extreme points of view have emerged in the interpretation of the concept of "constitution". Gradually, facts began to accumulate, convincingly showing that the development of diseases cannot be explained by the influence of pathogenic agents alone [56]. All other things being equal, different organisms may behave differently when exposed to pathogenic factors, including if constitutional differences are significant.

In the first third of the twentieth century, chemical theories of temperament came into vogue, directly deriving from ancient humoral concepts. According to the theory of the Japanese psychologist T. Furukov and W. McDougall, sensitivity to stimuli, mood and the rate of mental activity are determined by the chemical composition of blood. If in Europe, for the typological interpretation of temperaments, they continued to develop the theory of Empedocles associated with the signs of the zodiac, then in Japan the blood group was taken as the basis for the classification at that time. According to the results of Nomi J., it is the blood group that determines the individual characteristics and character of a person [cit. by: 45]:

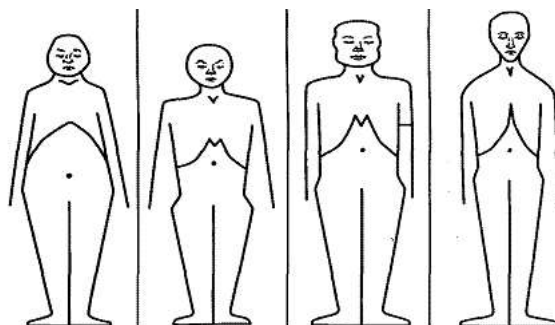
I - leadership, the ability to fight to the end, perseverance and perseverance in achieving the goal; the ability to choose a direction for moving forward, self-confidence, emotionality; weaknesses - fussiness, jealousy, ambition to the point of soreness.

II - the ability to work with people, benevolence, patience and sensitivity; preferred: harmony, calmness and order; weakness - excessive stubbornness, inability to relax.

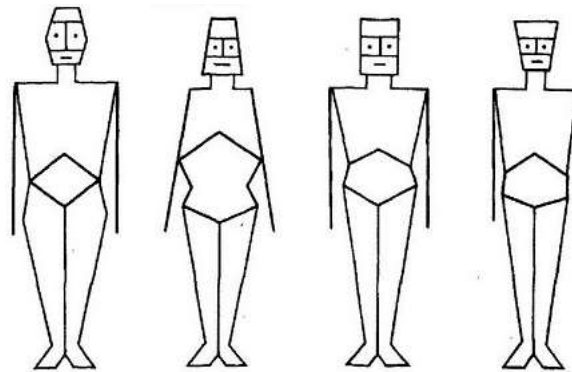
III - the ability to adapt to the situation, flexibility (plasticity), good imagination; obvious, undisguised individualism, a tendency to willful actions; weakness - an excessive desire for independence.

IV - calmness, poise, tact, justice in relation to others; the ability to evoke reciprocal love and disposition; weakness - indecision (they can hesitate for a long time and hardly make final decisions), periodically - hypertrophied sharpness in relation to others.

The German psychopathologist E. Kretschmer (1888-1964) proposed a morphological theory of temperament, defining it through the main constitutional body types and exaggerating the role of constitutional features as factors of personality mental development [20, 21, 32, 33]. Based on the examination (calculations of the ratio of body parts) of about 200 patients, he identified the main types of body structure: clearly expressed - asthenic (or leptosomal, or psychosomatic), pycnic, athletic, and less definite - dysplastic (Fig. 1, Table 4) ...



Rice. 1. Scheme of constitutional types according to E. Kretschmer: from left to right - dysplastic (mixed type), pycnic, athletic, leptosomatics.



Rice. 2. Scheme of body types (classification of constitutional types) according to K. Sego: from left to right - respiratory, digestive, muscular, cerebral.

Table 3

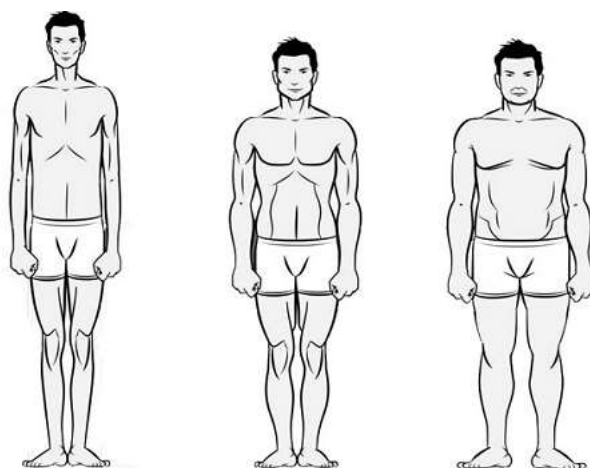
The relationship of extreme types of constitutions (according to Kretschmer) with mental illness (according to Kraepelin)				
Constitution type	Morphological signs	Temperament	Individual peculiarities	Main features
Asthenic	Long and narrow chest long limbs, elongated face, weak muscles	Schizoid (schizotimic)	Are located mainly along the "psychoaesthetic" scale: from excessive vulnerability, affectivity and irritability up to insensitive coldness and stupid, "wooden" indifference	Closure, care in interior peace, inconsistency reactions, external incentives, contrasts between convulsive impetuosity and constraint of action
Picnic	Wide stocky round breast, figure, head, protruding belly	Cycloid (cyclothymic)	Are located along "Diathetic" scales, those from constantly increased, merry moods in manic subjects until constantly reduced, sad and gloomy state of mind in depressed	Conformity reactions incentives, openness, skill merge With the surrounding environment, naturalness, softness and roundness movements

E. Kretschmer correlated the identified types of constitutions with mental illnesses (according to Kraepelin): manic-depressive psychosis and schizophrenia, and then established a connection between the pycnic type of constitution and manic-depressive psychosis, and leptosomal with schizophrenia (Table 3) and established certain connections (in full, however, not confirmed) between body types and some mental illnesses (schizophrenia, epilepsy, manic-depressive psychosis) [32, 33, 45]. For example, asthenics are characterized by irritability, isolation, coldness, i.e. the so-called schizoid temperament. Picnics are fun, sociable, energetic, and have a so-called cycloidal nature. The first, according to E. Kretschmer, more often get sick with schizophrenia, the second - manic-depressive psychosis (Table 3).

According to Kretschmer, the same features of temperament that are leading in mental illness can be found (if they are less pronounced) in healthy people, i.e. the difference between illness and health is only quantitative: any type of temperament is characterized by psychotic, psychopathic and healthy variants of the mental structure. And each of the main mental (psychotic) diseases corresponds to a certain form of psychopathy (cycloid, schizoid), as well as a certain "character" (temperament) of a healthy person (cyclothymic, schizotimic). Subsequently, he identified seven temperaments, which he correlated with three main groups [20, 21] (Tables 1, 2, 4, Fig. 3):

1. Cyclothymic, based on a pycnic constitution (hypomanic, syntonik, phlegmatic).
2. Schizothymic, based on the leptomasomic constitution (hyperesthetic, schizothymic proper, anesthetic).
3. Viscous (viskose temperament) - on the basis of an athletic physique - a special type of temperament, characterized by viscosity, difficulty switching and a tendency to affective outbursts, most prone to epileptic diseases.

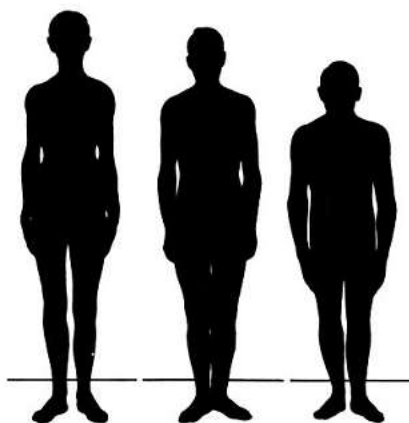
E. Kretschmer considered the main properties of temperament to be sensitivity to stimuli, mood, rate of mental activity, psychomotor skills, the individual characteristics of which are ultimately determined by the chemistry of blood [20, 21, 32]. I.P. Pavlov, criticizing Kretschmer's classification, emphasized that his types characterize only patients and cannot be extended to healthy people [18, 31-33, 41].



Rice. 3. Correlation of types of constitution according to W. Sheldon and temperaments according to E. Krechmer: from left to right - ectomorphic (thoracic) / leptosomal, mesomorphic (muscular) / athletic, endomorphic (digestive) / pycnic.

In connection with the rapid development of genetics, a number of authors considered the constitution solely as a set of hereditary properties and identified it with the genotype. Such views, developed, in particular, by J. Tandler and WL Johannsen, formed the basis for one of the modern concepts of general etiology - constitutionalism (overestimating the role of the constitution in pathology), according to which the vast majority of diseases arise as a result of inherent in the body internal defects [17, 29]. In the first third of the twentieth century, the task was to study the gene structure of each constitutional type. It was assumed that knowledge of this formula would make it possible to quite accurately talk about various types of reaction to the environment, to "biological harmfulness" (for example, in schizoids, progressive paralysis has a dementic form, in cycloids - an expansive form),

On the contrary, Sigaud (S. Sigaud, 1908, 1914) believed that the constitution is formed mainly in the process of ontogenesis (formed mainly in childhood) and depends on the training of organs and systems. He distinguished 4 types of constitution, or physique (Fig. 2, Table 4): cerebral (cerebral), respiratory (respiratory), muscular (muscular) and digestive (digestive) [17, 18, 29, 56].



Rice. 4. Constitutional types according to M.V. Chernorutsky: from left to right - normosthenic asthenic, hypersthenic

The respiratory type is characterized by a sharp development of the chest in length with an acute epigastric angle, a long neck, well-developed maxillary and frontal sinuses, a hexagonal face shape. The digestive type has a wide short chest with an obtuse epigastric angle, a voluminous abdomen, a well-developed lower third of the face, and a short neck. The muscular type is distinguished by well-developed muscles, a wide chest, a proportional physique, a high shoulder girdle, and a square face. The cerebral type has a large skull with a highly developed frontal part of the face, a thin, delicate figure, short limbs, and poor muscle development (Fig. 2). People of this type are "suppliers of outstanding personalities" [56].

With Kretschmer's constitutions, the body types of Seago were correlated as follows: the asthenic type (according to Kretschmer) corresponded to the respiratory type of Seago, the pycnic type - corresponding to the digestive type, and the athletic type - to the muscular type (Table 4).

The morphological theories of temperament, like the theory of E. Kretschmer, also includes the concept of the American psychologist W. Sheldon [17, 32-34]. He distinguishes three main types of somatic constitution ("somatotype"): endomorphic, mesomorphic and ectomorphic (Fig. 3, Tables 2, 4). The correspondence of types of temperament to somatotypes according to W. Sheldon is presented in table. 5.

Periodically, there is a return to morphological theories, and in the 21st century the practical problems of determining the human somatotype are discussed again, but from the standpoint of modern anthropology. In this case, the main problem is only the optimization of its further development as a science [43].

A.A. Bogomolets (1881-1946), in his idea of the constitution, attached the main importance to the state of the physiological system of connective tissue, the properties of which, in his opinion, determine the biochemical characteristics of the organism, its reactivity and resistance. In accordance with the histological principle, he proposed to distinguish 4 types of constitution [3, 4, 18, 45, 57]:

1. Asthenic - with a thin delicate connective tissue. It is characterized by the predominant development of loose connective tissue with the ability to be highly reactive and resistant.
2. Fibrous with a predominance of dense fibrous connective tissue.
3. Pastose, characterized by a predominance of loose "edematous" connective tissue, which is prone to delay liquids.
4. Lipomatous, in which there is an abundant development of adipose tissue.

V.N. Shevkunenko (1929) distinguished two constitutional body types: dolichomorphic (perfect) and brachymorphic (imperfect) [17, 18]. The nomenclature of constitution types proposed by M.V. Chornorutsky (1928): asthenic, normosthenic and hypersthenic [17, 18, 57] (Fig. 4, Table 4).

Table 4

Morphofunctional properties characteristic of people of different body types (constitutions), and recommended foodstuffs

The author of the theory		Body type (constitution)				
S. Seago: 4 types of constitution		Digestive (digestive)	Muscular (muscular)	Thoracic (respiratory, respiratory)	Cerebral (cerebral)	
M.V. Chornorutsky: 3 types		Hypersthenic	Normosthenic	Asthenic		
E. Kretschmer, morphological theory temperament	4 types physique	Picnic	Athletic	Leptosomal		Dysplastic (intermediate)
	7 temperament Tov in 3 groups	Cyclothymic (hypomaniac, syntoniac, phlegmatic)	Ixotimic Viscous (viskose temperament)	Schizotimic (hyperesthetic, actually schizotimic, anesthetic)		
W. Sheldon:	3 temperament that	Viscerotonic	Somatotonic	Cerebrotonic		
	3 types somatic constitution	Endomorphic	Mesomorphic	Ectomorphic		
Embryologically:		Predominant development internal germ layer. Endoderm forms internal organs	Predominant development of secondary germ layer. Mesoderm forms muscle tissue	Predominant development of external embryonic layer. Ectoderm forms skin and nervous the cloth		
Indicator						
External signs:	Physique and ratio sizes	Dense, strong, To inclination completeness. Predominance horizontal sizes above vertical	Proportional. Average growth	Growth high. To Addition completeness is missing. Predominance vertical sizes above horizontal	Thin tender figure, weak development muscle	
	Peculiarities additions	Rounded forms, short limbs and neck, broad protruding stomach, tendency to fat deposition, moderate fullness	Good developed skeleton musculature (strong muscular body type), big humeral width belts, minor sediments subcutaneous fat	Weak deposition fat, subcutaneous narrow chest cell, long limbs (graceful, body type), oval face shape	Big scull With strongly developed frontal part of the face	Disproportionate parts body, traits at eu-nuchoidism men or at masculinism women
	Skeleton bones	Wide	Wide	Narrow		
	Shoulders	No wider than hips	Wider hips	Slightly wider than hips		
	Limbs	Relatively short	Relatively average	Relatively long	Compare tall short	
	Angle between lower ribs	Blunt	Straight	Spicy		
	Hair	Fatty, thick, dark, wavy, or light	Soft, thin, straight, often tones, inclined To and fallout early gray hair	Tough, dry, not graying for a long time		
	Leather	Smooth, dense, cool, pale oily often	Light, soft, warm. Susceptible to annoyance inflammation. There are pimples moles, freckles.	Rough, dry, cool, prone to cracking		
	Functional cash properties:	Lung volume	Relatively small	Relatively big		
		Muscle strength	Big	Small		
		Physical activity	Low	Moderate	Very high	

Endurance		Small	Average	Big		
	Chair	Regular, oily, formalized	Regular, more often liquid	Dry, obstructed. Addition To		
	Speech	Slow monotonous	Clear, abrupt	Fast, verbose, intermittent		
	Dream	Deep, long lasting. Difficulties awakening	Deep, medium duration With	Short, intermittent, shallow. Are characteristic difficulties falling asleep insomnia With and		
Most likely diseases and syndromes		Diabetes mellitus and other illness exchange substances stroke, cardiovascular diseases: myocardial infarction, atherosclerosis, hypertensive disease, coronary spasm, gallstone disease, diseases biliary paths, manic depressive psychosis (cycloid type of mental constitution)	Myocardial infarction, atherosclerosis coronary blood vessels, diseases respiratory tract, joints, neuralgia	Diseases lungs, tuberculosis, ulcerative stomach disease and duodenal intestines, chronic colitis, decline functions adrenal glands, addison's disease, neuroses, arterial hypotension		
Some conjugate psychological personality traits		Loves comfort, cornfort, delicious food. praise. Reaches out for people in heavy minute, appeals help	Loves Adventures. Emotionally stale. It has craving for action in a difficult moment, acts on your own, not advises, does not seek help	Uncommunicative. Emotionally restrained. Has traction to loneliness v heavy minute, in internal experiences, withdraws into itself		
Orientation, values		Oriented on the family, communication	Oriented on the active: image life, risk	Oriented on the intellectual activity (reflections) own inner world and		
Prevailing emotions and character traits		Greed and envy. Boredom, numbness depression. Stubbornness slowness, fatigue, painful attachment anything To	Aggressiveness, irritability, jealousy, inclination outbursts of anger To	Fear, uncertainty, anxiety, concern, failure to focus, impatience		
Character		Communicative, good-natured, frank	Vigorous, domineering, secretive cutting,	Closed, vulnerable, sensitive		
The nature of the movements		Smooth	Energetic coordinated	Angular		
Food, beverages, appetite	Appetite	Slowly emerging, stable. a little, but pleasure	Good. Maybe eat a lot. With	Reduced. It has need there is often, but little by little.		
	Food preferences	Sharp, bitter, astringent food	Loves: sweet, bitter, astringent the taste. Not tolerates: acute and hotter	Sweet, sour, salty food. Very love hot drinks		
	Need in water	Low	Increased	Changeable		
	Featured food products for of each type constitution [products, 2016]	Fruit, berries: cranberry, greenery, melons, herbs: eggplant, cabbage, onion, bitter pepper, radish Fats, oils: oil corn. Cereals: millet, buckwheat, barley Legumes: - Meat, poultry: - A fish, seafood: - Eggs, milk: eggs Dried fruits, honey, nuts: honey	Fruit, berries: oranges, pears, apples greenery, melons, herbs: green melon, green, cucumber, pumpkin, garlic Fats, oils: oil creamy unsalted sunflower, Cereals: rye, wheat, rice, barley, Legumes: beans, soy, beans Meat, poultry: - A fish, seafood: - Eggs, milk: sour cream, baked milk, Dried fruits, nuts: walnuts raisins, honey, prunes,	Fruit, berries: apricots, oranges, cherry, plum, greenery, melons, herbs: artichokes, eggplant, green peas, melon, onions, peppers sweet, cucumbers, tomatoes, turnip, garlic Fats, oils: oil sunflower Cereals: oats, wheat, rice, Legumes: beans, Meat, poultry: - Fish, seafood: seafood, Eggs, milk: milk products, unsalted cheese Dried fruits, honey, nuts:		

Table 5

Correspondence of types of somatic constitution to types of temperament according to W. Sheldon

Constitution type	Morphological signs	Temperament	
		A type	Characteristic
Endomorphic	External outlook soft, rounded. The development of the bone and muscular systems is weak	Viscerotonic	Love To comfort, sensual aspirations, relaxation, slow reactions
Mesomorphic	Rigidity and angularity appearance. Athleticity, strength. Predominance bone muscular system	Somatotonic	Love of adventure, inclination to take risks, thirst for muscular action, activity, courage, aggressiveness, cruelty, harshness of behavior
Ectomorphic	Grace, fragility. Absence pronounced musculature	Cerebrotonic	Little sociability, lethargy tendency to isolation and loneliness, increased reactivity

Asthenics are characterized by high growth, harmony and lightness in the structure of the body. Hypersthenics are characterized by massiveness, have a relatively long body and short limbs. Normasthenics occupy an intermediate position between asthenics and hypersthenics. Functional indicators in extreme body types, according to MV Chernorutsky, have quite definite differences: asthenics have lower blood pressure, relatively high vital capacity of the lungs, weaker gastric motility and intestinal absorption capacity compared with hypersthenics [17, 45, 57].

Bryant (Bryant, 1913) divided people into carnivores, omnivores, herbivores. In the former, all organs are adapted, mainly, to protein, meat food, and their appearance resembles characters from Botticelli's paintings, herbivores - as if they have descended from Rubens' paintings - are strong, short-necked fat men [cit. by: 56]. Belov I.A. (1924), Pende (1922), based on the concept of humoral influences on the structure and functions of organs, identified the types of constitution according to the state of the endocrine glands: hypovegetative and hypervegetative [18, 45, 56].

Examples of determining the constitutional types of a person (in addition to the morphological approach that uses the features of the physique) are classifications based, in particular, on the features of the functioning of a particular system of the body, for example, the classification of Eppinger and Hess (Eppinger and Hess, 1910). Opposing the two divisions of the autonomic nervous system, they proposed dividing people into vagotonics and sympathicotronics. The theory of vagotonia and sympathicotonia was based on erroneous ideas about the absolutely opposite physiological significance of the sympathetic and parasympathetic systems [56].

The theoretical and experimental substantiation of the leading role of the central nervous system in dynamic features of behavior was first given by I.P. Pavlov (Tables 1, 2). Fundamental studies on animals made it possible to obtain objective characteristics of nervous processes (strength, balance and mobility of excitation and inhibition) and to single out 4 main types of higher nervous activity. Manifestations of these types in the behavior of I.P. Pavlov put in direct connection with the ancient classification, and they largely coincided with the types of human temperament according to Hippocrates: strong, balanced, mobile (sanguine); strong, balanced, inert (phlegmatic); strong, unbalanced, unrestrained (choleric); weak (melancholic) [17, 18, 41] (Table 2).

It turned out that in animals with extreme types of higher nervous activity (strong, unbalanced and weak), experimental neurosis was much easier to obtain than in other types. It is the type of higher nervous activity that determines the form of neurosis and its clinical course, and there is some reason to believe that in the extreme types of the nervous system, some mental illnesses are more easily developed among people [45, 56, 57]. The same rule can be extended to the nature of the occurrence of a number of somatic diseases.

M.V. Chernorutsky (see above) showed that peptic ulcer, hypertension, bronchial asthma and rheumatism are much more common among people of a strong unbalanced or weak type [18, 45, 57]. And I.P. Pavlov proposed to distinguish two more types in people (according to the obvious predominance of the first or second signaling systems): artistic and mental [17, 41]. In a practical assessment of the typology according to I.P. Pavlov should bear in mind that it was constructed in relation to the higher nervous activity of animals, therefore, it can be applied to humans with very significant reservations [31-33].

XXI century. At the beginning of the current century, the selection of the so-called. constitutional markers - relative and constant (absolute). Relative markers - somatotype and type of higher nervous activity (temperament) - are the subject of conditional expert assessments. Absolute markers are set objectively and reliably. These include blood groups, histocompatibility antigens, finger patterns, and the dominant hand [56].

In accordance with modern concepts, close interaction of neuroendocrine and immune mechanisms form the biological basis of human psychotypes, which determine his dominant type of behavior, the ability and strategy of adaptation, as well as the likelihood of manifestation of constitutionally determined risk factors [19, 60]. These issues are in the sphere of interests of psychoneuroimmunology (psychoimmunology, or psychoendoneuroimmunology) - an interdisciplinary science whose professional interests include: psychology, neurology, immunology, physiology, pharmacology, molecular biology, infectious diseases, endocrinology and rheumatology.

The advances in molecular genetics and immunology make it possible to concretize the mechanisms of constitutional predisposition to various forms of pathology. A relationship was found between serological markers of the constitution and a tendency to certain diseases. For example, a predisposition to atherosclerosis, hypertension, myocardial infarction among people with blood group A is detected to a greater extent than carriers of group O. In patients with duodenal ulcer, vegetative-vascular dystonia, blood group O is more common than with group A. Among centenarians, group O is more common, which is associated with the presence of certain agglutinogens as physiological autoantigens (this makes it possible for the body's immune system to develop the maximum intensity of the immune response against certain exogenous pathogens). Therefore, the owners of blood group O, who do not have agglutinogens, are in an advantageous position in terms of immunity, incl. anti-infectious and antineoplastic. However, they showed a reduced production of a number of steroid hormones in the blood plasma, which may indicate reduced steroidogenesis and pressure resistance, and, consequently, a tendency to develop

related diseases [56].

From the standpoint of evidence-based medicine, at the moment there are no grounds for an unambiguous classification of constitutional types of a person, which is of practical importance in academic medical practice. Although, there are already some foreign works in which, as one of the factors influencing the onset and development of diseases in adults, along with the lifestyle, the nature of nutrition, a change in the embryo development program, the possibility of an inadequate response if the prenatal environment is different from the postnatal, taken into account among the most important - the mother's constitution [61].

At the same time, it should be noted that in the 21st century there has been a clear tendency for the academic community to study the experience of traditional medical systems in terms of an individual-typological (constitutional) approach to treatment (at all stages of medical care) and nutrition of both patients of medical institutions and practically healthy people.

Temperament, constitutional type and food. Available evidence of constitutional appointments (selection) of food products, i.e. the use of food as a medicine belongs to ancient (Hippocrates, Galen) or medieval (Avicenna, Odo iz Mena, etc.) European medicine [1, 6-8, 14, 15].

In the modern medical literature devoted to the issues of constitutional differences of patients from the standpoint of academic medicine, in the available literature, we have not found scientifically substantiated data on the compatibility of food products with individual typological (constitutional) characteristics of a person.

In the psychological literature of a popular scientific nature [46] and on numerous thematic Internet sites [16] there is fragmentary information (without reference to primary sources) about the "suitable" food for various temperaments and constitutional types, adopted in the "Western" medical tradition and modern psychology. The results of this study in this part of it are rather statistical than scientifically proven. Summarized data are presented by us in table. 6, which is the result of an information and analytical study of an array of information that does not yet have scientific substantiation, and is of an exclusively cognitive nature.

Table 6

Recommended foods for different types of temperament					
No. p / p	A type Temperamenta		Healthy	Harmful	Notes (edit)
	modern	V antiquities			
one	choleric		<p>Fractional power plan. Protein food. In terms of volume, first courses should prevail (more liquid). Warm or cold soups (okroshka, fruit soup). Raw greens salads. Foods with cooling properties are more suitable.</p> <p>Fruits, berries: melon, grapes, especially black, figs, sweet apples, pears, plums, pomegranates, figs, pineapple, lemons in tea, Vegetables, herbs, melons, herbs, mushrooms: rhubarb, olives, mushrooms, green peas, lettuce, Brussels sprouts and cauliflower, asparagus, zucchini, cucumbers, turnips, young potatoes, spinach, carrots (preferably in salads), watermelon (not daily), limited - tomatoes, sauerkraut and other sour vegetables ...</p> <p>Fats, oils: unsalted butter, olive, soy</p> <p>Cereals and cereals: any porridge, especially semolina and oatmeal, pasta, noodles, barley, rice, buckwheat, wheat bread (limited, but more often than rye)</p> <p>Legumes: peas, beans, beans (not lentils) Meat, poultry: lean meat, lamb, goat meat, beef, chicken, especially chicken, turkey, goose, occasionally pork.</p> <p>Fish, seafood: sea, lake and river fish high in omega-3 fatty acids, herring</p> <p>Eggs, milk: dairy products, especially cheese and cottage cheese, warm milk (in the evening), Dried fruits, honey, nuts, seeds: seeds (pumpkin and sunflower), nuts (in limited quantities), raisins, prunes, honey for tea</p> <p>Spices and herbs: coriander, cinnamon, dill, celery, onion, garlic (in moderation, preferably with oil and / or as part of food - in vinaigrette, stew, cutlets). According to L. Kolesnikova: garlic, chili peppers, onions, vinegar, celery (leaves and petioles), anise, paprika, cinnamon, wormwood, mint, lavender, nutmeg, thyme [Kolesnikova, 2016</p>	<p>Fast food. Excess consumption of coffee and chocolate. Everything sharp dishes, spices. Meat, poultry: fatty meat Eggs, milk: fermented milk products, lactic fat Sweets: any</p>	<p>He is seriously passionate about his work, and works for wear and tear, is subject to rapid physical and emotional exhaustion.</p> <p>Likes snacks, bad moods, or bad conversations. Needs to develop a habit of eating rationally - with full meals. Snacks only fruit or vegetable (seasonal). Long-term diets can not stand. To reduce body weight, physical exercise should be used, preferably regular.</p> <p>Taking into account the national characteristics of temperament, according to L. Kolesnikova, to choleric people include Spaniards [Kolesnikova, 2016]. Spanish cuisine is famous The Mediterranean diet "with an abundance of meat food. Used as meat spices: rosemary, chili, garlic. Vegetable dishes - Paella and Gazpacho require saffron, garlic, celery. Spicy oils and vinegar infused with herbs are used as dressings for salads. Desserts (eg Catalan cream) contain themselves cinnamon.</p> <p>Spain is famous for cheeses with herbs and paprika, aromatic wines and liqueurs with mint, lavender, anise, sausages with garlic and other spices [Kolesnikova, 2016].</p>

		Bilious - hot and dry	Vegetables, rice, white meat of young animals, ripe and oily fruits. Lots of liquid. Moderate amount of spices.	Lots of wine, spirits and any intoxicants drinks (very harmful, because the fibers of choleric are very tense and need rest). Acids, pickles, pickled "Spoiled" meat, onion garlic, sharp dishes. Glandular and iodide medicines. Lot spices.	During physical labor to the point of fatigue: there is no such heavy food that they could not digest; on the contrary, food that is too light is digested very quickly and cannot satisfy. If they are not very tired, a well-groomed (old - "Sour") bread and a small amount of meat
2	sanguine		<p>Second courses (less liquid) should prevail in volume. Homemade food. Cold hot first courses and soups (okroshka, fruit soup). Raw greens salads. Foods with cooling properties are more suitable.</p> <p>Fruits, berries: pineapples, sweet apples, plums, black grapes, pomegranate, figs, figs, melon, lemons in tea,</p> <p>Vegetables, herbs, melons: any fresh vegetables, Brussels sprouts, white cabbage, cauliflower, rhubarb, olives, mushrooms, green peas, lettuce, asparagus, zucchini, cucumbers, turnips, young potatoes, spinach, carrots (preferably in salads), watermelon (not daily), limited - tomatoes, sauerkraut and other sour vegetables. Fats, oils: unsalted butter, olive, soy</p> <p>Cereals (the best source of energy): semolina and oatmeal, noodles, pasta, especially barley, rice, buckwheat, wheat bread (limited, but more often than rye). Legumes: peas, beans, beans (not lentils) Meat, poultry: lean beef, veal, lamb, goat meat, beef, chicken, especially chickens, geese, turkey, occasionally pork Fish, seafood: herring, seafood, lake and River fish</p> <p>Eggs, milk: cottage cheese and other dairy products, warm milk (in the evening), Dried fruits, honey, nuts, seeds: sesame like a source of calcium, seeds (pumpkin and sunflower), nuts (in limited quantities), raisins, prunes, honey for tea</p> <p>Spices and herbs: any fresh herbs, especially cilantro (and coriander), dill, celery, onion, garlic (in moderation, preferably with oil and / or as part of food - in vinaigrette, stew, cutlets), cinnamon. According to L. Kolesnikova: pepper, oregano, nutmeg, cloves, cinnamon, laurel, tarragon, cumin, vanilla, onion, dill, garlic, sumac, chili pepper, ginger, juniper, amaranth, salt [Kolesnikova, 2016].</p>	Excessive use of meat and acute dishes, exciting appetite. Sweets and flour. Meat, poultry: pork, sausages	<p>They love to eat deliciously, they are ready to spend a lot of time on cooking, but there is usually no time to prepare food thoroughly. Being overweight usually comes from the habit of enjoying delicious high-calorie food. To reduce body weight, you should reduce the amount of starchy foods and arrange a fasting day once a week, preferably a vegetable or fruit day, with a set of products depending on the season. It is useful to take a glass of water before meals, avoid eating before bedtime. Problems with calcium absorption have been noted. Taking into account the national characteristics of temperament, according to L. Kolesnikova, Americans are classified as sanguine (synthesis of cultures). They prefer fast food. Traditional dishes - burgers, chips, barbecue, pickled beans, turkey with sage, celery salad.</p> <p>Flavoring additives do not shine with naturalness, traditional spices: juniper, sumac, ginger and ginseng, amaranth [Kolesnikova, 2016]</p>
	Hot and wet		Well-groomed ("fermented") and baked bread, beef, lamb, veal and poultry. Garden greens. Wine - in very moderate quantities; healthier - weak coffee.	Stew, butter roots, spices, plenty of salt, unripe fruits, mealy substances, leguminous vegetables, adjusted provencal or "Ordinary" [vegetable] oil, aromatic substances containing spicy essential oil	Moderate nutrition required

Table 6 (continued)

No. p / p	A type Temperamenta		Healthy	Harmful	Notes (edit)
	modern	V antiquities			

3	phlegmatic		<p>Second courses (less liquid) should prevail in volume. Hot soups with hot spices, especially low-fat soups, including for dinner. Sources of vitamins and fiber: raw vegetables and fruits. Green tea. Foods with warming properties are more suitable.</p> <p>Vinaigrette with boiled vegetables. Any spices.</p> <p>Fruits, berries: apricots, pear, pomegranate, persimmon, apples (Antonovka, Golden), berries (especially wild ones), cherries</p> <p>Vegetables, herbs, melons: rhubarb, mushrooms, olives (in moderation), Brussels sprouts and cauliflower, courgettes, carrots, eggplant, young potatoes, radishes, spinach, beets, young radishes, turnips</p> <p>Fats, oils: melted (ghee), unsalted, sunflower, corn (limited). Cereals, cereals, cereal products: barley, rye, millet, semolina, noodles, pasta, buckwheat (limited), rice and corn (limited), oatmeal cookies</p> <p>Legumes: peas, lentils.</p> <p>Meat, poultry: chicken and beef liver, lamb, young beef, beef liver, chicken. Fish, seafood: light-salted herring (soaked), sea fish, caviar.</p> <p>Eggs, milk: egg yolk, any cheese (but fresh), fermented milk products (moderately): goat's milk, feta cheese.</p> <p>Dried fruits, honey, nuts: honey, dried fruits, especially raisins, prunes, nuts (in moderation) Sweets: oatmeal cookies</p> <p>Spices and herbs: any greens, especially celery, parsley, onion, garlic, cloves, cinnamon, ginger, saffron, cumin, bay leaf, red and especially black pepper, mustard, horseradish. According to L. Kolesnikova, vinegar, ordinary anise, salt [Kolesnikova, 2016]</p>	<p>Fatty, fatty and spicy foods.</p> <p>Vegetables, greenery, melons: potatoes</p> <p>Cereals, cereals, products from cereals: oatmeal (porridge)</p> <p>Any sweets</p>	<p>Doesn't like to cook. Even a snack takes a lot of time, especially the preparation of a full meal. Special attention is paid to complete food - soups, cereals, seasonal salads. Movement and calorie balance are essential. Taking into account the national characteristics of temperament, according to L. Kolesnikova, to phlegmatic</p> <p>Englishmen, relate which blindly adhere to traditions, stingy with flavoring additives. Spices and herbs are rarely consumed in the diet, more in the form of oil or vinegar tinctures.</p> <p>Windsor soup - the most "Specific" dish with vinegar. The rest of the food is served without spices and sauces [Kolesnikova, 2016].</p>
	Lymphatic - cold and raw		<p>Food that gives warmth to the body. Well-groomed ("fermented") bread is the basis of nutrition. The food is juicy, exciting, consisting of black meat: beef, lamb, pheasant, partridge and poulard. Plants that promote the secretion of urine (urine) containing a small amount of ammonia. Aromatic plants (food seasoning). The food is very spicy. Glandular and bitter preparations. There is not much liquid. Strong white or red wine; fermented drinks, bitter aromatic substances. Green tea</p>	<p>Milk, proteinaceous, mealy and substances, sour drinks, sour and alkaline food products, summer fruit.</p> <p>Fresh and watery plants: spinach, lettuce, raw or boiled chicory.</p> <p>Uncooked roots. Raw and laxative products</p>	<p>one. Opposite bilious temperament like water to fire</p> <p>2. Bread (pancakes, flat cakes) must be very well baked or dried</p>

4	melancholic		<p>First courses should prevail in volume (more liquid). Hot first courses: sour cabbage soup, borscht, pickles, hodgepodge. Vinaigrette with boiled vegetables. Fresh fruits. Protein food. Vegetable products. melons: eggplant Various spices. More suitable food. Legumes: exclude Meat, poultry: pork</p> <p>Fruits, berries: sweet fruits and berries (a little), citrus fruits, apricots, pear, pomegranate, persimmon, apples (Antonovka, Golden), berries (especially wild ones), cherries.</p> <p>Vegetables, herbs, melons: as much as possible vegetables, pickles and tomatoes, sauerkraut, rhubarb, mushrooms, olives (in moderation), Brussels sprouts and cauliflower, zucchini, carrots, eggplants, young potatoes, radishes, spinach, beets, young radishes, turnips.</p> <p>Fats, oils: melted (ghee), unsalted, sunflower, corn (limited). Cereals, cereals, cereal products: barley, rye, millet, semolina, noodles, pasta, buckwheat (limited), rice and corn (limited), oatmeal cookies</p> <p>Legumes: peas, lentils.</p> <p>Meat, poultry: lamb, young beef, beef liver, chickens.</p> <p>Fish, seafood: red and black caviar, salted fish, slightly salted herring (soaked), sea fish, especially fatty (fatty acids of fish oil have an effect similar to antidepressants - they separate some pathways of nerve conduction and increase the production of serotonin (the hormone of happiness).</p> <p>Eggs, milk: egg yolk, any cheese (but fresh), fermented milk products (moderately): goat's milk, feta cheese.</p> <p>Dried fruits, honey, nuts: honey, any sweet dried fruits, especially raisins, prunes, nuts (in moderation)</p> <p>Sweets: chocolate (a little), oatmeal cookies</p> <p>Spices and herbs: celery, parsley, onion, garlic, cloves, cinnamon, ginger, saffron, cumin, bay leaves, red and especially black pepper, mustard, horseradish. According to L. Kolesnikova, onions, black and red peppers, mustard, parsley, dill, garlic, horseradish, parsnip, bay leaf, ginger [Kolesnikova, 2016].</p>	<p>tea.</p> <p>Strong Highly digestible carbohydrates. Vegetables, greenery.</p>	<p>Extra depressive conditions. Required regular physical exercise without overload, meals at the same time, according to the regimen. Starvation contraindicated recommended unloading vegetable days.</p> <p>Taking into account the national characteristics of temperament, according to L. Kolesnikova, Russians are considered melancholic. Russian cuisine includes a variety of dishes included in the diet of the peoples inhabiting the territory: pancakes, gingerbread, bread, pickled and pickled vegetables, peppercorns, bacon with garlic, borscht. Garlic, onions, black pepper, bay leaves, horseradish and mustard can be called traditional [Kolesnikova, 2016].</p>
	Cold and dry		<p>Well-leavened bread, soup, grass-fed meat and chicken are the staple foods. Fresh garden vegetables. Very useful: spinach, boiled chicory, purslane.</p> <p>Moderately spicy foods; sometimes you can cinnamon and cloves, but in small quantities. Moderate amount of fluid with meals.</p> <p>Non-intoxicating wines, weak beer, decoctions of hops and chamomile, infusions of light aromatic herbs: lemon balm, blue St. John's wort, hyssopod, cowshed, anise.</p>		<p>1. Opposite to sanguine, like heat to cold</p> <p>2. "It is useful to give flexibility to too tight fiber, humidify entrails, prone to dryness, and to introduce enough fluid into the body in order to crush blood molecules that are too close to each other, and dilute phlegm in the body, prone to thickening."</p>
5	Special - nervous		<p>Excessive food and liquid quantity. Fatty and oily substances and products. Superfluous and frequent eating meat. Meat of young animals. Too much juicy and spicy dishes. Cloying and mucous food. Excessive use dairy products and cheeses. Salads, raw food, eggs. Rough food, salted and pickled meat. Excessive and frequent use alcoholic drinks. Absence guilt. Cold drinks and excessive water.</p> <p>Abuse liquids having fermentation.</p>		<p>Nervousness is not a distinctive feature of a special category of people: in all temperaments there are individuals of the nervous type - many melancholic, choleric, sanguine. The development of bile is promoted by the burning summer heat, dry and hot air temperature, the use of fatty and oily substances, excessive consumption of alcoholic beverages and meat, excessive physical Work; lasting and difficult exercises, lasting mental classes, immoderate vigils and outbursts of anger. The reason for the excess amount of bile lies in the excessive activity of the liver.</p>
6	mixed		<p>The 5 main temperaments are the following complex temperaments: sanguine, lymphatic, sanguine-bilious, sanguine-melancholic, sanguine-nervous, bilious-lymphatic, bilious-melancholic, bilious-nervous, lymphatic-melancholic, lymphatic-nervous, melancholic-nervous</p>		<p>Food should be selected based on temperament and constitutional features both types, forming each mixed type</p>

Reliable bibliographic data and normative documentation regarding the individualization of food,

found by us only in terms of the choice of food products for various nosological forms and syndromes. In particular, by order of the Ministry of Health of the Russian Federation dated 05.08.2003 No. 330, for the first time, a unified nomenclature of standard diets was introduced for all medical institutions, and previously used standards for the ratio of the chemical composition of diets, the interchangeability of food products and the replacement of products in medical institutions were canceled [10, 36, 40]; introduced a number of requirements for enteral nutrition in medical and preventive institutions (LPI) with the aim of its standardization [36]. Taking into account the modern requirements of nutritional science and the need to personalize diet therapy, in the order of the Moscow Department of Health dated December 23, 2011 No. 1851, an optimized average daily set of food products per patient is given for 6 standard diets (ATS, SHD, VBD, VBD (t), NBD, NKD) [37]. Moreover, in accordance with modern ND, the optimization of standard diets is achieved by clarifying the optimal sizes of daily food consumption, the use of dry protein composite mixtures for dietary (therapeutic and prophylactic) nutrition (adults and children) and some other factors that have nothing to do with the constitutional type or the patient's temperament. A complete analysis of the modern regulatory and methodological framework for the organization of medical nutrition in medical organizations of the Russian Federation is not the subject of this study; was previously performed by V.A. Tutelyan et al. [55]. the use of dry protein composite mixtures for dietary (therapeutic and prophylactic) nutrition (adults and children) and some other factors that have nothing to do with the constitutional type or temperament of the patient. A complete analysis of the modern regulatory and methodological framework for the organization of medical nutrition in medical organizations of the Russian Federation is not the subject of this study; was previously performed by V.A. Tutelyan et al. [55]. the use of dry protein composite mixtures for dietary (therapeutic and prophylactic) nutrition (adults and children) and some other factors that have nothing to do with the constitutional type or temperament of the patient. A complete analysis of the modern regulatory and methodological framework for the organization of medical nutrition in medical organizations of the Russian Federation is not the subject of this study; was previously performed by V.A. Tutelyan et al. [55].

The discussion of the results

As a result of the information-analytical study, it was possible to establish that already in antiquity in European medicine, the correct determination of the personality type largely determined the success of diagnosis and the choice of the method of treatment of the patient [54], since, according to Hippocrates, each type has a predisposition to certain diseases [6-8]. I.P. Pavlov, to the undoubted medical merits of Hippocrates, attributed his description of the properties of sanguine people, choleric people, phlegmatic people and melancholic people and the allocation of the corresponding body types and mental make-up, because it was he who "caught in the mass of countless variants of human behavior capital features" [cit. by: 5].

According to modern concepts, humoral and morphological theories cannot be practically used in medical practice, since they accept as the root cause of manifestations of temperament in behavior such systems of the body that do not possess the necessary properties [31-33, 54]. In particular, both Sheldon and Kretschmer, for example, carry the idea of the fatal somatic conditioning of various mental personality traits, including those that are entirely determined by the conditions of upbringing and the social environment [32, 34].

With the development of fundamental biomedical sciences, it became possible to classify constitutional types of a person on the basis of stable individual characteristics of the balance of excitatory and inhibitory processes in the central nervous system, the predominance of sympathetic or parasympathetic tone of the autonomic nervous system (ANS), the peculiarities of the organization of metabolic and other biological processes that provide characteristic types of psychosomatic relations [47].

At the end of the twentieth century, three main components were already distinguished in the structure of temperament: the general activity of a person, his motor manifestations and his emotionality [32]. General mental activity (from lethargy and inertia to extreme energy) characterizes the "dynamic" personality traits, its tendencies towards self-expression, effective development and transformation of external reality [31, 32]. The motor, or motor, component is a means by which the internal dynamics of mental states is actualized (speed, strength, sharpness, rhythm, amplitude, and other signs of muscle movement, some of which also apply to speech motor skills). Emotionality (impressionability, impulsivity, emotional lability) characterizes the features of the emergence, flow and cessation of various feelings, affects and moods.

At the moment, there is a description of more than 40 different classifications of types of constitution. We have summarized the main historical approaches to the classification of temperaments in table. 1. However, it should be borne in mind that all the classifications discussed in this work are of relative importance, since most people have mixed body types. From the standpoint of modern academic medicine, the constitutional type of one and the same person can change to a certain extent under the influence of environmental factors, for example, sports and physical labor, starvation, past diseases, etc. Nevertheless, many of the discussed approaches to the classification of constitutional types have received their confirmation in practice.

According to clinical observations, there is a definite connection between a person's physique and a tendency to certain diseases, although its mechanism is not always clear enough. Today it is known that hypersthenics are more likely to have diseases of the cardiovascular system than asthenics. More often they also have diseases associated with the violation of any metabolic processes. Atherosclerosis, coronary heart disease, hypertension, myocardial infarction, predisposition to obesity, hypertension, atherosclerosis, diabetes mellitus, and diseases of the biliary tract are often noted. Much more often than in other constitutional types, gallstone disease is observed in hypersthenics. Their blood cholesterol content is 1.5 times higher than that of asthenics. Among patients with diabetes mellitus, more than 40% are hypersthenics and only 12% are asthenics. Hypersthenics are characterized by the Cycloid type (mental constitution), which may indicate a higher risk of developing manic-depressive psychosis [17, 29].

On the contrary, peptic ulcer and 12 duodenal ulcer, as well as chronic colitis, are found mainly in asthenics. Among the endocrine diseases in asthenics, in whom the function of the adrenal glands is reduced, Addison's disease is more often observed. They also have an increased tendency to neurosis, arterial hypotension, peptic ulcer; to a lesser extent - to obesity, atherosclerosis, diabetes mellitus. A number of authors point to the more frequent, compared with other types, the incidence of asthenics with tuberculosis [17, 29].

In the normosthenic type, diseases of the respiratory tract, joints, neuralgia, as well as atherosclerosis of the coronary vessels, and myocardial infarction occur relatively more often [17, 29].

The problem of temperament and character in the history of medicine and psychology from ancient times to the present is discussed in great detail in the monograph of the same name by E.M. Psyadlo (2012) [45] and a number of other publications [9, 34, 56, 57]. However, there is still no single sufficiently developed concept of temperament and constitution, as well as

terminology and the corresponding conceptual apparatus, classification of constitutional types from the standpoint of evidence-based medicine.

Official medicine, as before, proceeds from the fact that the division of people into constitutional types in their traditional understanding is generally impossible, because for almost any parameter (external signs, internal structure, biochemical characteristics, etc.), a typical statistical distribution is found within the extreme values for a biological species. Consequently, there are many intermediate types, and their position (according to various criteria) in the statistical series can be completely different [17, 29, 58].

At the same time, it would be pointless to deny that the accumulated empirical data is extremely important. Even attempts at their primary generalization (without using factor analysis) allow us to assert that the probability of occurrence of certain diseases and the peculiarities of their course are associated with certain relatively stable properties of the organism, characteristic of large groups of people [17, 29].

A more adequate, from our point of view, approach to constitutional types (constitutions) is preserved to this day in traditional medical systems (TMS). The definition is also formulated in TM in a different way: a constitution is a complex of stable structural, anatomical, physiological, psychological and adaptive characteristics of an organism, formed under the influence of congenital and acquired factors [11]. Considering that today an integrative approach to prevention, treatment, rehabilitation and, even, diagnosis is optimal, we considered it expedient to conduct a real brief analysis of the accumulated information about constitutional types in academic and traditional medical practice, in order to further use the results obtained in choosing "suitable" food products.

Critical use of the results of modern information and analytical research in this area would also make it possible to carry out effective prevention of diseases by recommending optimal modes of life for various groups of people, to make diagnosis, forecasting and the choice of rational treatment more successful. Obviously, such research is needed.

conclusions

1. The analysis of the experience of European (pro-academic and academic) medicine in terms of taking into account constitutional characteristics of patients at various stages of medical care and in the choice of food products from ancient times to the present.
2. It is shown that the empirically accumulated data set has in a number of cases experimental justification and clinical confirmation, however, is still not systematized and not substantiated from the standpoint of evidence-based medicine. There is no unified scientifically grounded classification of constitutional types, the corresponding conceptual apparatus and terminology.
3. Data confirming the use of the constitutional type of patients in academic medical practice for the appointment (selection) of food products in the XVIII – XXI centuries, in the available literature has not been identified. The available scientifically grounded (historical) evidence of constitutionally determined prescriptions of food (the use of food as medicine) refers to ancient or medieval European medicine.

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