THE ROLE OF THE CONSTITUTION IN THE FORMATION OF A HARMONIOUS PERSONALITY OF A MEDICAL STUDENT

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Abstract Why does a person need to know their body type? What does it affect? It turns out, almost everything. Physique is genetically determined and cannot be altered through exercise or diet. It is this that "tells" our body how to work: in what places to accumulate fat, how to quickly gain weight and lose it. It is the features of our constitution that influence the choice of style and cuts of clothing, and even leave an imprint on the character and perception of ourselves and the world around us!

Key words: constitution, physique, somatotype, nutrition, training

"Everything should be fine in a person: and face, and clothes, and soul, and thoughts."
(Anton Pavlovich Chekhov)

Introduction. To date, the most successful and complete definition of the constitution is the following. The constitution (Latin constitutia - establishment, organization) is a complex of individual relatively stable morphological, physiological and mental properties of an organism, caused by heredity, as well as by long-term and intense environmental influences, manifested in its reactions to various influences (including social and pathogenic).

The disadvantage of all these classifications is the lack of an integrated approach. In addition, the concept of "constitution" is often generalized with the concept of "somatotype". In modern studies, the constitutional structure of the physique is considered as a combination of humoral-endocrine and metabolic characteristics with a more accurate complex determination of the parameters of the morphological and functional components of the human body. Somatotype, in anthropology, is the type of human constitution. When isolating the somatotype, the degree of development of the skeleton, muscles and fat deposition, the shape of the chest, abdomen and back are taken into account. However, the physique of a person changes throughout his life, while the somatotype is genetically determined and is his constant characteristic from birth to death.
Age-related changes, various diseases, increased physical activity change the size, shape of the body, but not the somatotype. A clear indicator of the somatotype is the physique, which is understood as the totality of parts of the human body and their mutual proportions. But physique characterizes a person only at a given moment in time. Therefore, for more detailed information about the constitution of the human body, they use such a concept as a somatotype. A somatotype is a body type that is determined on the basis of a person's physical data and characterizes the level and peculiarity of metabolism (the ratio of muscle, adipose and bone tissue). Ultimately, the endomorph has a slow metabolism, the mesomorph is characterized by an increased level of testosterone (which helps to gain muscle), and the ectomorph is characterized by a high level of cortisol.

Main part. Humanity has always been interested in the ability to predict human behavior and reactions in order to influence him in various ways: to manipulate or help. And not possessing superpowers, scientists around the world sought to find those typical criteria that would tell about the characteristics of a particular person. There are many criteria, but the simplest and most accessible group of criteria is a person’s appearance. This is something that every sighted person can see and appreciate in seconds and, as a rule, everyone always does it. We can immediately make a first impression of a stranger, and when we see a friend, we can understand that he is cunning, pleased or upset with something. It turns out that our thoughts, feelings; states are reflected in our body, because they say: "it is written on your forehead."

We found this interesting, since we work with young people, and they often themselves do not realize the root of their problem, therefore they cannot solve it on their own, and it is easier to read it from body language than to find out through questioning. Therefore, it helps us to choose the right tactics and approach in training. This prompted us to study this issue and study the relationship between a person's appearance and his psychological characteristics. We are preparing future doctors who need to learn to read their patients in appearance in order to help, but they themselves need to be an example for them and take care of themselves. Therefore, in the classroom we try to show and tell to give the right recommendations for creating a harmonious personality to our students. Among the students, we identified various types of somatotypes and traced a number of patterns.

The somatotype is embedded in a person at the genetic level and affects the physical development of a person throughout his life. Depending on various factors, the physique can change, but its change usually occurs within the somatotype. [1]

In addition, he determines the tendency to various diseases and psycho physiological differences, that is, character traits. In general, the somatic type is a morphological component of the constitution and one of the most integrative characteristics of the human body, determining, among other qualities, and physical capabilities of a person. These are just the main distinguishing features of these body types.

One of the key characteristics of body type is bone and wrist thickness. The girth of the wrist remains unchanged regardless of the amount of fat or muscle mass in the body. Usually the classic ectomorph has thin bones, the mesomorph is medium, and the endomorph is wide. Using this criterion, we have established and identified the somatotypes of students.

| Wrist circumference for men and women |
|-------------------------------|-----------------|-----------------|-----------------|
| Gender                        | Ectomorph       | Mesomorph       | Endomorph       |
| Men                           | 18-20 sm        | more than 20 sm | less than 18 sm |
| Women                         | 15-17 sm        | more than 17 sm | less than 15 sm |

An ectomorph is a naturally thin person, characterized by thin and long limbs with narrow shoulders and a flat chest, thinness and a minimum of subcutaneous fat. They have an accelerated metabolism and poor appetite, and their muscles do not have enough glycogen stores for training, which reduces the effectiveness of strength training and limits the possibility of muscle recovery and growth.

The advantage of the ectomorphic body type is the ability to quickly pump up the abs, as well as the absence of the need to follow a diet. The downside is the difficulty with gaining mass and the increased level of cortisol.

A strategy for lean ectomorphs, training should be done infrequently, but intensely, with low reps. The key point is the increased calorie intake, and especially immediately after the end of the workout.

Fast metabolism distinguishes lean ectomorphs from overweight endomorphs and muscular mesomorphs. An ectomorph teenager can eat high-calorie foods without gaining excess weight. However, only up to a certain age - after which, against the background of general thinness, fat in the lower abdomen can begin to grow. [5]

At the same time, it is nutrition that is the key to how an ectomorph can gain mass. Naturally thin guys looking to build up need to increase their daily calories and consume protein every few hours. In addition, maintaining muscle mass also requires calories.

Mesomorph is a sports body type with a penchant for active sports. Broad shoulders and developed rib cage, medium to large bone, low fat with prominent muscles. A fast metabolism coupled with a good appetite - all this allows them to quickly gain muscle.

The advantages of a mesomorphic body type are high testosterone levels (in men) and an innate love for sports, and the fact that their bodies need less time to recover. The disadvantages of mesomorph are the tendency to increase cholesterol levels and problems with blood vessels.

The endomorph is a type that is prone to gaining mass. You have large bone and massive limbs, short arms and legs, wide waist and hips, excess fat deposition. Among our students, it is one of the most
common. They differ in slowed metabolism against the background of high endurance. The combination of these factors gives good strength indicators, but provokes the growth of subcutaneous fat.

The advantage of the endomorphic body type is considered to be a powerful bone structure, which allows you to achieve great results in sports. The downside is the tendency to be overweight and the risk of developing diabetes when eating fast carbohydrates.

The key to creating an athletic body for endomorphs lays in constant adherence to a diet - they must monitor the glycemic index of carbohydrates consumed, as well as regularly engage in cardio and other fat burning workouts. Endomorphs lose weight the fastest in the performance of the circular training.

[6]

The more muscles in their body, the faster the metabolism works. However, the body is often not able to build muscle and burn fat at the same time - that's why it is better to alternate training on the weight of the cycle and drying.

Body types - in brief:
• ectomorph - a naturally thin man
• mesomorph - athletic body type
• endomorph - a tendency to gain excess weight

Pure variants of these somatotypes are rare. Usually people have mixed body types, in which certain signs of various somatotypes are expressed to varying degrees. William Sheldon himself believed that the somatotype cannot be changed during life. He argued that an endomorph with prolonged fasting becomes only a starving endomorph, but does not approach either a mesomorph or an ectomorph.

We also note that modern science is very critical of the theory of body types. Ultimately, there are no clear and unambiguous criteria by which a person relates to one of them. There are always exceptions and individual characteristics.

In some people (most commonly women), the upper body may show signs of one body type and the lower body of another. That is why it is extremely difficult for the average person to determine whether he is an endomorph, mesomorph or ectomorph. In addition, nutrition during adolescence also plays a role.

[2]

William Sheldon, the author of the theory of body types, noted that "pure" somatotypes are practically not found. In real life, a particular person is a combination of all three body types. [8]

The training and nutrition strategy that is necessary for him to create a sports figure depends on what type of physique prevails in a person. However, most people combine the characteristics of all three body types - but in different proportions.

Various somatotyping systems distinguish their body types, but although they have different names, they carry almost the same meaning and are similar to the Sheldon somatotypes. Analogies for body types:

- Endomorph: hypertrophic, brachiomorph, picanic.
- Mesomorph: normostenic, athletic.

Sometimes ectomorphs are called "hard gainers", from the English hard - "heavy" and gain - "increase".

This means that it is difficult for people of this type of physique to increase the indicators of muscle mass and strength. All people are different and this makes each person unique and inimitable.

The mental activity of different people proceeds in different ways: in some - evenly, smoothly, they are always calm, slow, stinging in movements, unsmilin, in others - in leaps and bounds, these people are mobile, lively, noisy, they have rich and varied facial expressions, movements are fuzzy are impatient. [7]

Natural (innate) features that determine the dynamic side of a person's mental activity are the properties of temperament.

According to the genetic theory, genes that determine somatotypological characteristics also determine a person's temperament. According to another theory, even in childhood, the individual realizes his constitutional advantages and realizes them in further development.

There are hundreds of studies on the connection between various mental processes and body types. It has been proved, for example, that ectomorphs are less sociable, more fearful, unfriendly, not cheerful, but have better gustatory sensitivity, learn languages better, read better and have a larger vocabulary. Mesomorphs are more active, energetic, have a greater reserve of physical strength, have a good orientation in space, but learn languages worse and have a smaller vocabulary. Endomorphs are characterized, first of all, by sociability and gaiety, a great manifestation of feelings, but much less hardy than the other two types. [3] It seems likely that the greatest connection between physique and the characteristics of the mental sphere is manifested in the traits of behavior. In general, the widespread stereotypes of a cheerful, carefree fat man, a resolute and self-confident athlete and a "pale youth with a burning gaze" immersed in his world seem to be confirmed.

We would like to draw your attention to the fact that constitutionalists, typing people according to anthropometric data, supplemented their work with mental characteristics inherent in certain types identified by them. Meanwhile, psychologists, classifying temperaments and personality traits, in turn, also gave a general description of external bodily manifestations.

And in general, different classifications can be superimposed on each other, which will only confirm that the whole variety of people can be clustered according to some criteria. The well-known modern psychologist Liz Burbo, in her book "Five injuries that prevent you from being yourself", begins each chapter with a drawing of a typical representative of the trauma carrier and characterizes his behavior, speech patterns, and psychosomatics. All of the above speaks of the unconditional existence of a relationship between the somatotype and psychological characteristics of people.

On the way to the same goal, different people achieve different results. This happens because everyone has a different set of moral, volitional and physical qualities. Even according to the intensity of development of only one constitutional feature (muscle
Certain connections with the development of certain diseases are revealed. So it is shown that in persons with a lack of muscle mass, neuroses and diseases of the digestive system are more often flustered; with an excess of it - ischemic heart disease, and in people suffering from both excess and lack of muscle mass, chronic diseases of the nervous system, and the upper respiratory tract, etc. are more often formed. [4]

People of different physiques are prone to various diseases. So, a clear connection was revealed between the frequency of mental illness and the type of physique. In particular, schizophrenia is more common in people with a high degree of ectomorphy, and in people with a low degree of ecomorphy, with a high degree of mesomorphism and endomorphy, manic-depressive psychosis is more common. Mesomorphic types are more prone to paranoia. In people of the mesomorphic and endomorphic types, hysteria and depression often develop, and in people of the ecomorphic type, neuroses of anxiety and fears develop. The ecomorphic body type is characterized by more frequent development of lung diseases and more rare - tumors. In people of the endomorphic type, myocardial infarction, tumors and cancer often occur and are severe.

The presence of the above coincidences between somatotypes, the reactivity of the organism and the frequency, rate of development, severity of treatment and the outcome of one pathology or another, apparently, is due to the fact that one locus of the chromosome (the location of the gene in the chromosome) simultaneously controls several signs: both morphological and functional, and mental.

The influence of body type on the organization of nutrition and the training process has been proven in practice. Looking at the difference in somatotypes, it becomes obvious that not only representatives of different types should train and eat in different ways, but the tasks they solve are also different.

**Conclusions.** In conclusion, it must be emphasized that the connection of the constitution with diseases, and especially with nutrition and the training process, does not yet have a convincing scientific basis. Nevertheless, knowledge of your somatotype serves as an additional help in building the shape and relief of the body of your dreams. Genetics and natural predisposition or non-predisposition to something is not a sentence. It is now known that with a properly developed training program and nutritional system, you can not only change your somatotype, but also maintain it in a new state for as long as you like. You can’t justify your laziness or, on the contrary, give up because “nature ordered it so”. Everything can be changed and everything can be achieved, if you really want it.

Research on the relationship between psychological properties and somatotypes has also been criticized for the random selection of features that characterize physique, for the low reliability of tests used by psychologists, and a global assessment of psychological properties.

There are different opinions: “for”, critical, there is an opinion that “this connection exists, but has the character of a tendency. Confident "prediction" of character traits based on physique, and by character - somatotype, does not yet look quite correct. It is obvious, nevertheless, that in our thinking there is a stereotypical image of a person, linking together constitutional traits and characteristics of behavior”; "... there is a benefit from typologies, at least in that they help to form a first impression of a person, to predict which behavior will be most comfortable for him, and which can be potentially conflicting."

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