

DISEASE-PREVENTIVE APPLICATION OF MEAT AND MEAT PRODUCTS IN MEDICINE OF TIBET

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The human diet influences considerably the health and length of life. It takes part in providing connections between the body and the environment. A human body performs coordination of metabolic processes and their normal going on through the assimilation of nutrients (1). The relative constant concentration of the main nutrients which meet the energy demands and the synthesis of body structures and specific products of metabolism is the indispensable condition of maintaining life.

The formalion of scientific notions about human diet, including mechanisms of digestion and metabolism, should be considered to be one of important achievements of the present because it is connected with life security of a large number of people by means of discovering new methods of disease treatment.

The elaboration of new disease-preventive nutrition, including the children one goes rapidly in meat industry. It is underlined the necessity of transition to creation of new forms of a diet meeting the consumer demands. Age, profession, nationality and some other peculiarities should be taken into consideration, age being the main criteria at the development of new disease-preventive diet. However, it should be noted that for human health it is important to elaborate nutrition taking into account peculiar climatic conditions.

Results and discussion

The character and degree of food assimilation in our bodies allow to consider food products from the point of view of their food value. For such evaluation, we usually regard function of separate nutrients, their metabolism (scheme of conversions) and make evaluation of their biological activity (2). As A. A. Pokrovsky noted, the term "food value" reflects all useful properties of a product and has wider notion than such terms as "biological value" (protein quality) and "energy value" (the amount of energy, released in a body from food products).

Nutrition is divided into 2 kinds according its administration: nutrition of healthy people (rational nutrition) and nutrition of non-healthy people (disease-preventive) (3). Rational nutrition has 3 main principles: a) equilibrium between energy taken into the body with the food and its use during vital activity, in other words-balance of energy; b) meeting body needs in some amount and ratio of nutrients; c) observance of nutrition regimes (a certain time of taking food and a certain amount of food at each taking).

Prevention of diseases plays the leading role for saving human health because all kinds of disorders take constantly peace in a body.

Meat and meat products, the best sources of high nutritional proteins, essential for life and optimum physiological performce. Meat proteins are almost completely digestible due to a perfect amino acid balance. Muscle tissue of meat is the most valuable. It contains 70-75% of water, 18-22% of proteins, 2-3% of fat, 0,8% of glycogen. Percentage of meat protein digestibility is: pork-90%, veab-80%, beef-75%, mutton-70%, meat of rabbits-65%.

Quality of meat and protein content depends upon the species of the animal. High content of proteins has the meat deers (23-24%), boars (21,5%), meat of turkeys is richer in proteins and has the better flavour, than meat of broilers, horse-flesh contains 17-21% of proteins. By-products also contain a consideratle amount of proteins (9,5-25,2%).

Fish from rivers and lakes has also a high biological value. Fish has the same proteins as meat.

Chemical composition of fish is the following: water-56-76%, fat-27-33%, protein-14-20%, minerals-1-5%.

Fish is very important for human diet. It has a high content of the essential amino acid- lysine (even more than in the egg yolk). The average content of lysine in fish products is 8 times higher than in bread.

In connection with the above said, it is interesting to consider some recommendations of medical science of Tibet.

The main source of Tibet medicine is the four-volume essay "Zhud-Shi". The translation of the first two volumes into Russian was made in 1898-1903 by P.A.Badmaev- "Fundamentals of doctor's science of Tibet "Zhud-Shi" (4).

The characteristic feature of Tibet medicine, on the opinion of P.A.Badmaew, is the conception of an integrated body and a systematic approach. Medical science of Tibet treats not a separate disease, but a patient as a whole. Their medical and preventive recommendations Tibet doctors give taking into account constitutional features and temperament of a patient. Views of Tibet medicine on health saving and longevity and their practical application to certain geographical conditions of people vital activity are actual nowadays.

Geographical situation of some countries in the north climatic conditions (Russia, Poland, Germany) determines its characteristic diseases of population according to Tibet classification; in cold, windy countries (not protected by mountains and in the present of a sea shore) the body absorption of the air is easily disordered. In a damp soil region, the functions of slimy and lymph systems rapidly disorder.

These disorders in tissue nutrition of a body are treated by means of: a) manner of life; b) food and drinking; c) medicine (mainly herbs); d) outer means of treatment (including surgery).

Treatment (as a whole) begins with the changes in nutrition and manner of life in the succession mentioned above. It is believed that "no disorders are possible at the correct manner of life and moderate use of food and drinking."

The disease-preventive role of the diet for human health is vividly shown by this statement.

For example, "fat mutton, of exciting character, strengthens, contributes to nourishment of tissues, treats disorders of air absorption and vital processes of slimy and lymph systems, stimulates the appetite.

Meat of cattle has the property of cooling, fat meat treats disorder of air absorption, which contributes to strengthening of vital heat. Pork has cooling, good digestible properties, treats wounds and sores and old chronic catarrh".

Recommendations of Tibet medicine describe meat properties on dependence of the animal anatomy, its sex and means of treatment.

Attention should be paid to properties of pork and poultry meat. They are characterized by the notion "digestible", i.e. in the present sense, it means "easily digestible" by a human stomach.

Technical progress of the 20th century and the development of new methods of applied biotechnology allowed to liquidate the dependence of human body treatment on the initial properties of meat. The development of meat industry in social and technological plan was orientated towards maximum meeting the consumer demands and producing of high quality products of new generation, ecologically safe and successful in medico-biological sense.

Human daily diet should contain more than 600 nutrients according to the opinion of medicine sciences. Approximately 96% of them have these or those medical properties. Therefore, prevention, dietary and medical properties of a final product (5,6) depend upon their amount and proportions in which they are combined.

Biotechnological methods elaborated by scientists at the present time are based on the fundamental investigations in the sphere of enzymology and microbiology in reference to concrete production technologies of new kinds of products.

The directed changing of the initial properties of meat raw materials is more perspective in sausage production. The development of various machines and apparatuses in meat industry (cutters, choppers, injectors etc.) gave to all kinds of meat for industrial application the necessary disease- preventive properties. Meat chopping for cooked sausages and frankfurters improved the "digestible" property of different meats. Thus, a wide assortment of meat products with healthy properties appeared.

Now, in medico-biological standards special attention is paid to the consistency and the degree of cutting, which should correspond to the age, physiological peculiarities of a human digestive system (7).

This property of meat products has got a further development in the result of addition of various protein additives to formulations. The most valuable is the meat treated by various proteolytic preparations to make it tender. Rather perspective is the production of new, combined products with the application of protein enzymatic hydrolysates both of plant (soya, lentil) and animal (collagen, elastin) origin. The products elaborated have all essential amino acids, a high content of complete protein which contributes to good assimilation.

Thus, the development of meat industry constantly introduces some corrections to Tibet medicine increasing the healthy properties of food products. On the other hand, knowledge of some recommendations of the Tibet medicine on the role of diet underlines its importance for human health and longevity.

Conclusions

At the present time the necessity of elaboration of meat products with special directed functional properties increases. Such branch of meat industry as the disease- preventive nutrition, may form a scientific approach to the elaboration of new meat products formulations with certain healthy properties on the basis of the Tibet medicine recommendations.

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