

rejection of sodium chloride. There is also bread without protein or vice versa-protein bread. They are designed for people with special nutrition needs.

Among the enrich varieties of bread that you find most beneficial to the body "bio-bread ". This is a relatively recent novelty. Bread from different varieties of flour without the addition of yeast, baking powder, etc. is cooked only with natural starter cultures.

Particular attention is paid to yeast-free bread, due to the belief that thermophilic yeast fungi adversely affect the digestive system, can cause dysbacteriosis, food allergies and other negative consequences. Experts believe that it is irrational from a technological point of view to completely abandon yeast, but it is possible to reduce their number. The problem can be solved if you speed up the process of natural maturation of the dough by adding a number of products that promote fermentation. These are dairy products rich in lactobacilli and amino acids. In this case, lactobacilli contribute to the accumulation of lactic acid in the test, and amino acids accelerate the fermentation process. The uniqueness of this technology lies in the fact that this bread is virtually no residual starch and yeast cells.

Used natural hop rye or sourdough, kvass wort concentrate, malt extracts and concentrates, of enzymatic hydrolysates derived from wheat or corn flour and starch, fruit and vegetable powders and non-traditional plant raw materials (apple pomace, seeds and seed nests, beet powder, nettle leaves, etc.), beet molasses, etc.

In this case, baking powder or food additives never added; do not used preservatives; among additives can only been sugar or salt. So bio-bread is more useful and healthy product than fully yeast variant. It is more complete and can be used for healthy, preventive and therapeutic nutrition.

The study of the properties of functional products, in particular bakery, and their range is necessary for the formation of a proper diet. However, in the Ukrainian market functional bread is presented in the amount of about 1%. The reason for this situation is that it is unprofitable for producers to establish the production of functional bread, since the production of such types of bread is more expensive, as well as in the absence of subsidies or a state program to support and develop the production of such types of bread.

Conclusion. Thus, the viability and prospects of consumption of bio-bread was determined and therefore need to expand the range and production of bread and bakery products functional purpose of domestic enterprises to implement the principles of a healthy lifestyle among the population of Ukraine.

PROSPECTS FOR THE MILD MEANS' USAGE IN THE PROSTATIC GLAND INFLAMMATORY PROCESSES' THERAPY

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Introduction. Prostatic gland or prostate is the so-called «second heart of a man.» Such diseases are the most commonly encountered among men's health problems. All the prostate illnesses are considered in three directions – inflamematory diseases (prostatitis), prostate diseases associated with age-related changes in the male's body (prostate adenoma), and malignant neoplasms in this body organ (prostate cancer).

Prostatitis is the prostate gland inflammation, triggered by pathogenic microorganisms, against the background of certain factors, such as hypothermia, a decrease in the body barrier functions, the presence of a permanent infection focal point.

Treatment of the prostate gland pathologies is considered to be a hot button. Therapy of its failure provides for conservative treatment and surgery, as may be required. Drug regimens include antimicrobial agents (penicillins, tetracyclines, fluoroquinolones (Norfloxacin, Levofloxacin), alpha-blockers (Cardura, Hitrino, Dalfast), 5-alpha reductase inhibitors (Proscar and Avotard), phyto- /organ remedies (Adenoprost, Prostamol Uno, lingonberry, birch, Kalanchoe, ginger, sweet and dandelion), nonsteroidal agents with both anti-inflammatory and antispasmodic action (Baclofen, Sirdaluda, Mydocalm) and hormones (Flutamyl, Androkur).

However, the treatment of all the prostatitis' types is quite ineffective. This determines the relevance of the new medicine development for both the disease correction and its aftermath on reproductive health.

Nowadays, compounds in nanoforms, being capable of approaching biological objects, interacting and binding with them offer the greatest promise due to their properties.

Aim. To determine the possibility of semi-solid pharmaceutical dosage forms usage for rectal use based on rare earth metals' nanoparticles in prostatitis' treatment.

Materials and methods. Object – semi-solid pharmaceutical dosage form, excipients, rare earth metals' nanoparticles. Methods – pharmaceutical technology.

Results. Rare-earth metal nanoparticles (NPREM) can be used in pharmacology as free radical acceptors or reactive oxygen species, the production of which is observed in inflammatory states. This single fact speaks more than butts and tons of declamation, being the basis for using NP REM as part of promising means for prostate diseases' treatment.

Tropic way of entering the active pharmaceutical ingredients right into the prostate is rectal, due to the fact the prostate gland is located near the posterior rectum wall, and the intestinal walls show selective absorbability.

Suppositories, capsules, solutions and suspensions (small enemas), semi-solid pharmaceutical dosage forms for rectal use, foams, tampons, as well as powders and pills for the rectal solutions' suspension preparation refer to dosage forms for rectal usage.

However, the final choice of the dosage form depends on the active ingredients' physicochemical properties and their ability to be released from it. Colloidal aqueous solutions of rare earth nanoparticles in various concentrations containing a significant proportion of the aqueous phase act as the main active ingredient, therefore the development of means for rectal use can only be provided in the form of solutions for small enemas, gels, creams and ointments that can be ejected using pipette-rectioli.

Mild forms remain the most acceptable ones for the rectal means development based on NP REM. Their soft texture provides ease of use, equiprobability distribution and medicinal substances' release from them. Ointment base is a carrier of active pharmaceutical ingredients, providing both volume and the desired physical and technological properties of the final product.

It is preferred to use gel-like dosage forms for now, having both better absorbency and smudge-like consistency. Aqueous solutions based on NP REM have a pH of 7.2 to 7.4, which is not a constraint for obtaining a mild gel carrier.

Conclusions. The mild gel-based agent development (with a carbomer as a gelling agent) containing rare-earth nanoparticles has been suggested for the prostate gland inflammatory processes' treatment.

TECHNOLOGICAL SPECIFICS OF CREATION OF TARGETED DELIVERY DRUGS

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Introduction. Cyclosporine A for oral administration is presented on the modern pharmaceutical market both in hard and soft capsules. Non-ionic surfactants (polyoxyethylene castor oil) are used as auxiliary substances. This surfactant has a number of side effects: hypersensitivity, nephrotoxicity and anaphylactoid reactions. Encapsulation of cyclosporine A in nanometric carriers (microspheres) or application of solid dispersion methods are proposed to overcome the problem of the use of surfactants. What is important, is that these methods improve the bioavailability of the drug.

In solid dispersions, cyclosporine A is dispersed with polymers such as hydroxypropyl cellulose–SSL, dimethyl- β -cyclodextrin, hydroxypropyl methylcellulose phthalate and polyoxyethylene hydrogenated castor oil, polyoxyethylene (40) stearate, dimyristoyl phosphatidylcholine, and sodium lauryl sulfate and dextrin in order to reach a better intrinsic solubility, dissolution rate, absorption rate, and thus, its oral bioavailability in vivo.