

of steam, gas, air sterilization, temperature, pressure. The most commonly used chemical indicators are divided into six classes: Class 1 – indicators of the external and internal process, which are placed on the outer wall of the product packaging and change color during sterilization; Class 2 – indicators that do not control sterilization parameters, but are intended for use in special tests, for example, to determine the efficiency of a vacuum pump and the presence of air in the sterilizer chamber; Class 3 – single variable indicators that determine only one sterilization parameter, for example, sterilization temperature but not exposure time; Class 4 – multivariable indicators that change their color only when several parameters are exposed at the same time; Class 5 – integrating indicators that respond to all critical parameters of the sterilization method; Class 6 – simulating indicators that are calibrated according to the specific parameters of sterilization modes, in which they are used and respond to all critical parameters of the sterilization method. Emulating indicators are the most modern. They clearly record the quality of sterilization with the correct ratio of all parameters – temperature, saturated steam, time. Within each of these groups, indicators are divided by the sterilization modes for which they are intended.

There are also disposable chemical indicators of steam sterilization, which are produced in the form of rectangular strips, the base of which is made of film and paper. On one side of such indicators marking and two color marks are applied, one of which is an indicator, and the other is a standard of comparison. The red-orange indicator label irreversibly changes its color when critical parameters reach certain values during steam sterilization.

Indicators can be used inside sterilized items or special packaging for sterilization. Steam sterilization with the use of such indicators is carried out in steam devices in which steam blowing removes air from the sterilization chamber.

In the State Register of medical equipment and medical devices of Ukraine, 9 indicators of sterilization of manufacturing companies are registered: 3M Center (USA), "ГЕХЕЗІС" (Ukraine), gke-GmbH (Germany), "Медикон ЛТД" (Russia), DGM Pharma Apparate Handel AG (USA), "ВИНАР" (Russia), "Медтест-СПБ" (Russia). Based on the results of a merchandising study of sterilization indicators, it was found that the chemical indicators of firms are also represented on the Ukrainian market: Альянс Групп (Ukraine), Бел-Медикон (Belarus) and biological indicators of the manufacturer 3M Center (USA).

Conclusions. Monitoring the effectiveness of sterilization plays a significant role in medical devices quality ensuring. Currently, the production of sterilization indicators is very important, since the production of sterile medical products is actively developed, which requires constant quality control. Using sterilization indicator greatly facilitates this process and contributes to timely determine any deviations in the sterilization parameters. The market of indicators of sterilization in Ukraine is characterized by the predominance of imported products. Promising is the opening of domestic industries that would be engaged in the development of the 6th class of sterilization indicators, which are the most modern and promising. Therefore, this direction in science is progressive and relevant, enabling more promising research achievements.

GENERAL COMMODITY ASPECTS OF ORTHOSES

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Introduction. About 650 million people, representing about 10 percent of the world's population, are disabled. According to WHO, this figure is increasing, response to population growth, achievements in medical science and population ageing. Unfortunately, the number of people with disabilities in the world is growing every year. Therefore, the study of the features of orthoses, providing

the possibility of effective rehabilitation of persons with disabilities is actual and perspective direction. The purpose of the work was to analyze the general commodity characteristics of orthoses

Materials and methods: Scientific publications, as well as systemic, logical, analytical, retrospective method.

Results and discussion. An orthosis is an externally applied device used to modify the structural and functional characteristics of the neuromuscular and skeletal system : unloading, fixing, activating and correcting the functions of the damaged joint or limb . An orthosis may be used to: control, guide, limit and/or immobilize an extremity, joint or body segment for a particular reason; restrict movement in a given direction; assist movement generally; reduce weight bearing forces for a particular purpose; aid rehabilitation from fractures after the removal of a cast; otherwise correct the shape and/or function of the body, to provide easier movement capability or reduce pain.

Classification of orthoses according to functional purpose: spinal orthoses (cervical collar tires, corsets, declinators, maternity braces); orthoses for upper limb joints (elbow orthoses; forearm-wrist orthoses; forearm-wrist-thumb orthoses; forearm-wrist-hand orthoses; hand orthoses; upper-extremity orthoses (with special functions)); lower-limb orthoses (orthoses of hip, knee and ankle joints, knee pads, orthopedic insoles, special footwear).

Classification of orthoses by production technology: serial – consist of standard modules and are not subject to partitioning if necessary; collapsible – formed and consist of directly in the area of the damaged joint, taking into account its features; the individual ones are made to order by the mold of the patient.

Conclusions. Therefore, when choosing orthoses, most attention is paid to the main commodity characteristics: type, manufacturer, functional purpose of orthoses, technology of production of orthoses, material of manufacture, degree of fixation, simplicity and reliability in operation.

COMPARATIVE ANALYSIS OF STETHOSCOPES

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Introduction. The systematization of knowledge of the modern product range of stethoscopes and phonendoscopes will help the professional to carry out professionally all stages of commodity analysis, as well as pharmaceutical care in the implementation of these devices, to understand all the advantages or disadvantages of this type of product, to orient the consumer when choosing and buying this type of device. The stethoscope is one of the most used diagnostic medical devices.

Auscultation of internal organs, particularly the lungs, especially in cases of colds and viral diseases, is an important component of proper diagnosis when examining patients. For auscultation, stethoscopes, phonendoscopes, or stetho-phonendoscopes are used, which are commonly known by modern physicians as the “stethoscope”.

The aim of our study was to conduct a comparative analysis of stethoscopes of foreign production.

Materials and methods of research. Foreign and domestic literature and own research were used to perform this comparative analysis.

Results and discussion. All stethoscopes can be classified into the following varieties by design and purpose:

- pediatric stethoscope; a stethoscope for adult patients;
- obstetric stethoscope; stethoscope obstetric wooden;
- obstetric stethoscope metal; Rapport stethoscope.