

HEARING AIDS AS A PROTEGE

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Анотація

Запропоновано для підвищення слуху користуватися слуховим апаратом. Також розглянуті актуальні теми видів слухових апаратів, їх можливість передачі інформації і відтворення звуку навколишнього середовища за допомогою слухового апарата.

Ключові слова: слуховий апарат, протезування, звук, слух.

Abstract

It is suggested to use hearing aids for hearing aids. Also, the topical topics of the types of hearing aids, their ability to transmit information and reproduction of the sound of the environment through the hearing aid are considered.

Keywords: hearing device, prosthetics, sound, ear.

Introduction

Today, widely used hearing aids to increase hearing and comfortable communication with people. According to experts, hearing impairment is more or less present in more than 600 million inhabitants of the planet. And the tendency to increase the number of people suffering from hearing loss persists [1].

The purpose of the work is to study the hearing aids in detail, their functions and types.

Research results

Audiology - Improvement of hearing using hearing aids. Currently, there are three methods of hearing prosthetics:

1 - Reconstructive surgery on the middle and outer ear.

2 - Cochlear implantation - a very effective method of hearing regeneration, which incorporates the latest achievements of otosurgery and medical technologies.

3 - Prosthetics through the transfer of auditory information through acoustic means - hearing aids.

Let's dwell on the last method of hearing prosthetics - on prosthetics with the help of hearing aids and their possibilities. Modern hearing aids affect us not only with its small size, but also fantastic possibilities.

Hearing aids - an electroacoustic device for individual use, used for a steady reduction of hearing [2].

Transmitting sound to the hearing aid

The microphone of the hearing aid captures the sound, then transmits and amplifies it. After that he gets through the speakers in the auditory channel.

Types of hearing aids found that there are such hearing aids: perineural, intra-ear and intracanal, pocket, hearing aids, implanted. By way of processing the audio signal are distinguished: analog, digital. Also, hearing aids have additional features.

Types of hearing aids

Peruvial hearing aids - placed behind the ear and air vent tube are connected to the inner tab, located directly in the user's auditory passage. Modern hearing aids are miniature, of different colors and design, are almost invisible behind the ear.

Intra-and intra-auditory hearing aids - placed in the auditory passage. They are manufactured individually,

pre-made drops of the eardrum. They are invisible and comfortable. However, they should not be used in children under 12 years of age and in severe hearing loss.

Pocket hearing aids - placed outside the ear (in the pocket on the belt). The hearing aid represents a rectangular case and is connected by a cord with a telephone and an ear tab which is located directly in the ear. They are used rarely - mainly to compensate for hearing loss in people who suffer from a lack of coordination of movements or arthritis. In addition to typical pocket hearing aids, still available hearing aids, glasses, hearing aids, hairpins and other design options.

Hearing glasses The electronic circuitry of this device is mounted directly into the bracket of glasses, and in some models the bracket also performs the function of a mini-vibrator, which has a beneficial effect on the eyesight of the user [3].

Implanted hearing aids. The vibrator generates sound oscillations that strengthen on the anvil and lead it to vibrations, corresponding to the input signal, the sound waves of which extend beyond its natural path. Vibrator dial-up with a miniature radio receiver implanted under the skin in the periosteum area. The radio receives radio signals from the transmitter and amplifier, placed from the outside of the receiver. The transmitter is held in the perianth region by means of a magnet placed on the implanted receiver. Such hearing aids are implanted without any external elements.

By way of processing the audio signal are distinguished

Analogue hearing aids - provide only amplification and simple signal processing and have a small set of functions. Analogue devices do not have such wide possibilities of fine tuning as digital, but, on the other hand, the sound obtained with the use of such a device remains more alive and natural, without a metal tint, characteristic of the sound signal in computer processing.

Digital hearing aids - are developed and manufactured using the most advanced sound processing technologies. Provide the highest quality of hearing prosthetics, and at the same time have many functions for different life situations. Sound vibrations, passing through such an auditory apparatus, are converted to digital format and processed in such a way as to maximize the quality of sound.

Additional features

Along with choosing different types of signal processing, hearing aids can have some additional features. Certain models of hearing aids have several listening programs designed for different acoustic conditions (noises, quiet surroundings, music). Remote control of settings allows you to easily change the volume and listening program. Hearing aids can have an induction coil, which provides reception of inductive signals, for example, from a handset tube, as well as devices for connecting to household radio - and teleapparature and filters - a noise canceller.

Conclusions

During the study of different types of hearing aids, it has been found that there are such hearing aids: perineural, intracranial and intracanal, pocket, hearing aids, implanted. By way of processing the audio signal are distinguished: analog, digital. Also, hearing aids have additional features.

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