

Brief

from team 07

PROBLEM

With age, many people face difficulties in moving. Limited mobility can be caused by various reasons, including physical and psychological factors. However, despite the difficulties, there are ways to help the elderly cope with these problems and improve their quality of life.

Elderly people often find it difficult to move for various reasons, which can limit their activity and quality of life. A decrease in physical activity and mobility can be caused by various factors, including age-related changes, chronic diseases, injuries and limited physical strength.

One of the main reasons for the restriction of movement in the elderly is age-related changes. With age, muscles and joints become less flexible and weak, which makes it difficult to move and increases the risk of falls. In addition, coordination of movements can be disrupted, which makes movement more difficult and dangerous.

Chronic diseases can also restrict movement in the elderly. For example, arthritis can cause soreness and inflammation of the joints, which makes walking difficult. Heart and lung diseases can reduce physical endurance and the ability to actively move. Other diseases, such as osteoporosis and diabetes, can also restrict movement and increase the risk of injury.

The limitation of physical strength may also be a factor limiting the movement of the elderly. A decrease in muscle mass and strength makes them less able to maintain balance and perform everyday tasks. This can cause difficulty climbing stairs, getting up from behind a chair, or moving outdoors.



TASK FOR DESIGNERS



1. Special sticks or canes:
They can be equipped with
several additional functions,
such as balance devices,
comfortable handles and
shock-absorbing elements to
reduce fatigue.



Typical crutches and walkers for the elderly, which are used by 80% of the elderly in Russia

2. Improved crutches:
Instead of traditional wooden or metal crutches, lighter and more ergonomic options can be used, consisting of special materials that provide better support.



3. Using lightweight materials: Crutches can be made of lighter materials such as aluminum or carbon fiber to reduce their weight and make it easier to use.



4. Ergonomic Design: Crutches can be designed with ergonomics in mind to provide maximum comfort and support to the user. For example, the handles can be curved or have a soft lining to reduce the load on the hands and joints.



5. More stable design: Crutches can be improved with a more stable design to prevent falls and increase the safety of the user. For example, you can add wider bases or anti-slip tips to prevent slipping on smooth surfaces.



5. Integration of additional functions: Crutches can be modified to integrate additional functions, such as built-in pockets or holders for drinking water, or a flashlight for use at night. This will help users to have easy access to the necessary items and improve their mobility.

