

**CTBT**Centre for Transfer of  
Biomedical Technologies

## TECHNOLOGY SUMMARY



### Technology Owner

University Hospital Hradec Králové

### Inventors

Tomáš Osladil

### IPR Status

Registered utility model 30666

### Stage of Development

prototype tested

### Contact

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## Balance Belt

### Background

As part of the rehabilitation and verticalization of seniors or patients with limited mobility or reduced stability, so-called walkers are used nowadays. The disadvantage of these walkers is that in some cases the user feels insecure and is afraid of falling, or the user isn't strong enough or doesn't feel strong enough to be able to stand or walk with support for hands only.

### Description of the Invention

The BalanceBelt consists of a seat, handles and strong elastic straps that can be attached to a high walker. It will enable the use of walkers even for people who, with standard walkers, would still need constant help from the nursing staff while standing or walking, either in the form of additional support or in the form of being ready to catch the patients in case of a fall. At the same time, it makes it easier for nursing staff to verticalize patients, for example when they need to get up to exercise with the help of a walker. The belt can be used separately to facilitate the manipulation with the patient (during transfers or bed exercises, when practicing sitting and standing up) or as part of a high walker for practicing walking.

### Advantages and Potential Application

The combination of flexible and strong attachment of ropes or straps is used:

- for standing up and balance training
- for training transfers from bed (to wheelchair, high walker)
- for walking (not only as support, but also as a stimulation)

Balance Belt is intended for people with limited mobility and stability problems after injuries, surgery, neurological and other disorders. It allows patients to overcome the fear of standing and walking, allowing faster progress in therapy, reducing the risk of instability and falling. It also enables caregivers to have a firmer grip and facilitates, eventually replaces manual assistance, and improves the ergonomics of work.

The device can be used in acute health care facilities (hospitals), aftercare facilities, rehabilitation institutions, social care institutions, retirement homes as well as in the home environment. The device can be easily used by both professional medical staff or by average non-medical population.

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**Program Gama**