AVAILABLE TECHNO

GRIPBALL: Practicable device to test muscular tone

palmar grip strength, hand tremor, muscular fatigue, serious game



CONTEXT

The question of vigilance towards frail elderly people is essential in the context of maintaining autonomy in the home under good conditions of safety and quality of life. One of the essential factors to observe is muscular capacity, evidenced by the pressure force that can be exerted by the hand (palmar grip force). The assessment of this strength is a commonly used means in a series of health assessment protocols. In this context, the GripBall developed at the University of Technology of Troyes, is a tool for evaluating the palmar grip strength and for supporting and monitoring functional recovery.

DESCRIPTION

The GripBall is a ball (round and deformable device) allowing the measurement of the palm grip strength. Based on a pressure measurement, the device measures the grip strength and thus make it possible to detect physical frailty in the people tested.

It is characterized in that:

- its internal pressure can be adapted according to use or user,
- its size allows it to be held in one hand,
- it does not require any connection during its use (Bluetooth communication).

Currently, softwares have been developed to explore the uses of such a device: measurement of grip strength to assess the frailty of the elderly (one of the FRIED criteria) and serious games for rehabilitation, especially after hand surgery.

COMPETITIVE ADVANTAGES

- internal pressure can be adapted according to use or user,
- > Size allows to be held in one hand
- > No wire during use (Bluetooth)



Markets & applications

Market

- E-health
- Elderly care
- Rehabilitation



Development stage

Functional prototype



Research team

Institut Charles Delaunay (ICD) - Université Technologique de Troyes



Intellectual property

Patented in France and Germany



Target partnership

licensing

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