## AbleHand™

"An NHS innovative device to assist in functional activity in the hand and lengthening hand tissue."





NHS Senior Back Care Advisor Louis Bell Inventor of the AbleHand™

## Tees, Esk and Wear Valleys MHS



**NHS Innovations North** 



Decreased function in the upper limb effects people of all ages with varying conditions, for example Stroke, Rheumatoid Arthritis, Cerebral Palsy, or Multiple Sclerosis. Currently, treatment includes physiotherapy intervention to increase/maintain soft tissue length and function. This treatment involves methods of stretching the tissues and holding them in specific hand positions.

Many splints exist to hold the hand in these positions, either when the user is awake or asleep. They hold the hand in position using either cones that fit in the palm of the hand, or rigid shaped cast type devices that fit round the hand and forearm. A major limitation of this approach is that these devices do not allow the user to fit tools or objects in to the product whilst maintaining the therapeutic hand position. If this were possible, it would promote independence for the user and encourage them to be more compliant with their rehabilitation and encourage better self management; which may further improve function in the upper limb and hand.



The idea for a functional hand-splint was conceived by Louis Bell, a senior back care advisor/ physiotherapist from Tees, Esk and Wear Valleys NHS Trust in order to meet an unmet clinical need.

It was designed to increase functionality in the hand and arm, by encouraging the user to perform manual tasks e.g. eating, painting and brushing teeth whilst still retaining a functional hand position. The splint may also be used to encourage specific therapeutic movements in a clinical setting.



Benefits to using the AbleHand™ Assistive Hand Splint:

- Promotes increased independence and Self Management for users.
- Designed for those with tight flexed hands, arthritis, decreased hand function, and those recovering from strokes and/or undergoing physical rehabilitation.
- Can be used as an extension to everyday items such as pens, cutlery and toothbrushes.
- The material and unique shape of the device is designed to fit in the palm of the users hand and to minimise movement once in situ.
- Ideal for people with limited grip.
- Robust, long lasting, and machine washable.
- The opening at both ends of the splint enables multi-functional use of different daily aid tools.



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