



## tipstim® – BRAIN STIMULATION AT YOUR FINGERTIPS

A COMPLETELY NEW APPROACH  
IN REHABILITATION AFTER STROKE



- Major enforcement of neuroplasticity
- Substantial improvement of patients' sensory and motor abilities
- Therapeutic effects proven by clinical studies
- Painless treatment without side-effects
- Easy to apply
- Demands no attention and cooperation from the patient
- Easy integration into everyday life

NEW. ADVANCED. EFFECTIVE.

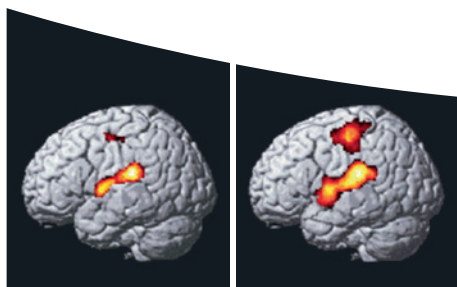
# Brain stimulation at your fingertips

Plastic processes of human brain – neuroplasticity – modify our perception and behavior throughout life. Usually, there is a need for intensive training to induce neuroplasticity. In particular damage to the brain caused by injury or stroke call for intense and long-lasting rehabilitation processes.



glove and pulse generator (tipstim® glove und tipstim®).

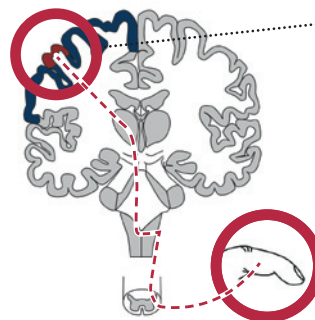
## CORTICAL ACTIVATION (MRT) OF HAND AREAS BEFORE AND AFTER TIP-STIMULATION



before tip-stimulation

after 60 min of tip-stimulation

## EFFECTIVENESS



- ✓ repetitive activation
- ✓ LTP-like processes
- ✓ modification of synaptic efficacy
- ✓ cortical reorganisation
- ✓ remodeling of tactile and sensorimotor processing
- ✓ recruitment of cortical processing resources
- ✓ improvement of tactile/haptic perception and sensorimotor performance
- tip-stimulation

## Cutting-edge technology – the product

Tip-stimulation with tipstim® facilitates long-lasting therapy procedures. By sensory stimulation of the finger tips, tipstim® drives plasticity processes in cerebral areas involved in the activation of the hand and fingers. Specially designed stimulation patterns – developed in many years of research and studies – are being generated by a pulse generator and are being applied directly to the finger tips via a completely new and highly-sophisticated therapy glove (tipstim® glove).

Tipstim glove® is the first product of its kind making use of a new conductive and bio-compatible textile which has been proven for medical use. By processing modern materials – otherwise being used in the sports sector – tipstim® glove shows a high wearing comfort and a high accuracy of fit.

The therapy itself is completely painless, without side-effects and very easy to apply. The patient simply pulls over the glove, connects it to the pulse generator and starts the therapy session once a day for 1 hour. The therapy does not demand any special attention from the patient. Due to the small size of the pulse

generator, the therapy can easily be integrated into everyday life and home care – even when being limited in mobility. In principle, therapy can be applied everywhere, even during walking, and during other occupations such as reading or watching television.

## Excellent results – high-level efficacy

The proven efficiency of tipstim® results from stimulation pattern specially designed for most effective enforcement of neuroplasticity processes. Clinical studies show that these special patterns produce cerebral changes which lead to persistent improvement of a patients' sensorimotor abilities. By means of randomized and placebo-controlled clinical trials in several rehabilitation centers, significant therapeutic ameliorations of sensorimotor deficits could be shown for both subacute and chronic stroke patients. Especially sensory deficits and deficits of proprioceptive functions have shown a much better recovery than with standard rehabilitation therapy alone.

Tipstim®-therapy is also highly recommendable for chronic stroke patients. Single case studies showed that even patients, whose apoplectic

insult occurred many years ago, benefited significantly from this kind of therapy.

The tipstim®-therapy is efficient, economical and pleasant to the patient and strikes a new path in the rehabilitation of stroke patients.



tipstim®-therapy is a common project of the Neural Plasticity Lab, Institute of Neuroinformatics, Ruhr University of Bochum, of the Neurological Clinic of the University Hospital Bergmannsheil in Bochum and of the companies Haynl-Elektronik GmbH and BOSANA Medizintechnik GmbH.

### Reference study:

Repetitive sensory stimulation for the treatment of sensorimotor deficits in subacute stroke patients: a randomised, sham-controlled trial (JC Kattenstroth\*, T Kalisch\*, W Greulich, M Tegenthoff, HR Dinse), published 86th Congress of the German Society of Neurology, September 2013

For more information, please visit [www.bhr.co.uk](http://www.bhr.co.uk)

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