

Assessment, Communication & Training for Coma Patients

Imagine being able to think, hear, and feel - but not move or communicate. Over 40% of patients diagnosed as vegetative are reclassified as (at least) minimally conscious when assessed by expert teams.

Visit us at **MEDICA 2016** in hall 17, booth D20!



mindBEAGLE is a new system that can be used with patients who have disorders of consciousness (DOC) and live with one of the following conditions due to a serious brain injury: Coma, Unresponsive Wakefulness Syndrome, Minimal Consciousness or Locked-In Syndrome.

Assessment

mindBEAGLE uses auditory, vibrotactile stimulation and motor imagery to assess a patient's condition. Auditory awareness is tested by playing sounds with high and low frequencies to the patient. To test tactile awareness, the patients feel vibrations on both hands and a third location. A special EEG-cap measures the brain activity during these procedures.

Communication

The patient is asked to focus on the vibration on a specific body part (e.g. right hand or left hand). When the patient is asked a simple YES or NO question, she or he has to focus on the vibrations on the left hand to answer YES. If the patient wants to answer NO, she or he has to focus on vibrations on the right hand. mindBEAGLE can measure the imagination of an arm or hand movement. In this case, the patient has to imagine the movement to answer a question. For example, the movement of the left hand means YES and the movement of the right hand means NO.

Training

Motor imagery and vibrotactile stimulation pair brain activity with peripheral stimulation, a principle that g.tec uses as a rehabilitation strategy for stroke patients. This powerful principle of paired association can also have a positive effect on DOC or coma patients.

mindBEAGLE Mobile Assessment Service

g.tec's mindBEAGLE Mobile Assessment Service performs measurements in hospitals, rehab centers, care facilities or at home. The mindBEAGLE Mobile Assessment Service is available in Schiedberg (Austria), Barcelona (Spain) and Albany (New York, USA), where scientists and physicians study how mindBEAGLE works.

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