

Supplemental Materials

Choice of MEG Sensors and Strategy for Training Feedback

For online feedback, we chose a single frequency band within the μ rhythm (9 to 15 Hz) or β (18 to 30 Hz) range that displayed the largest correlation with successful target hitting in the visual feedback task (see supplemental Figure I). As a spatial filter, sensors with the highest correlation values were linearly combined with weights of +1 or -1 depending on the relative orientation of the magnetic field lines at the respective sensor locations (into or out of the skull; for further details see Mellinger et al, 2007).¹¹

Supplemental Figure

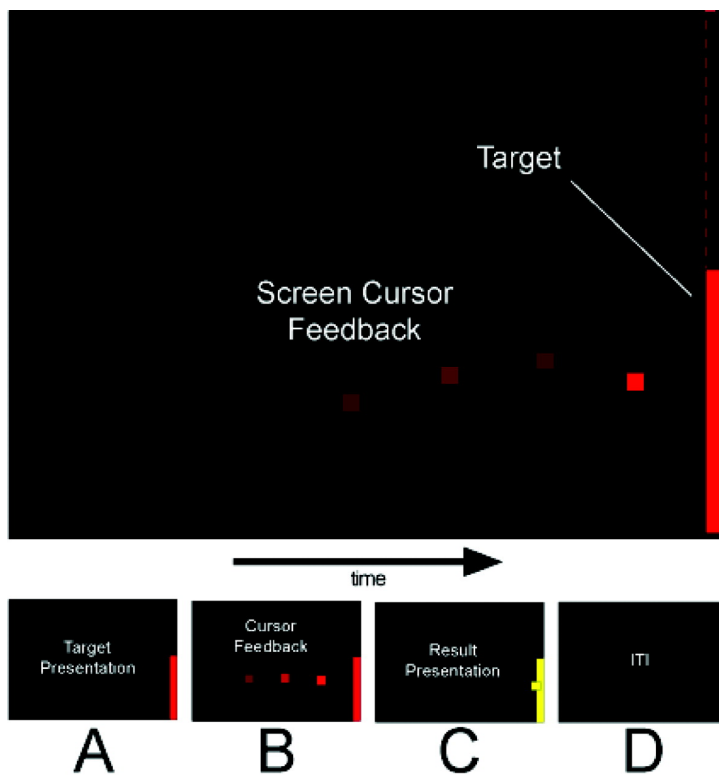


Figure I. Elements of a feedback trial. A trial consisted of the following events: (A) a pretrial target display period in which the target indicated the required response (associated with hand-opening or grasping) for the upcoming trial, but no screen-cursor was visible (1.5 seconds for NIH; 0.8 or 1.3 seconds for Tübingen); (B) a feedback display period where the cursor moved from left to right at a constant rate and the vertical velocity was updated in real-time and controlled by the state of the patient's μ -rhythm (4.7 seconds for NIH; 1.3, 4.2, or 9.4 seconds for Tübingen); (C) a result display period during which the screen cursor was removed and the target changed to a yellow color following successful contact with the screen cursor, or remained red following an unsuccessful trial (1.2 seconds for NIH; 0.9 or 1.0 seconds for Tübingen); and (D) an intertrial interval period (2.1 seconds for NIH; 0.6 or 0.8 seconds for Tübingen).