

研究業績 英文表記

和文	
表題	食事動作の実動作と運動イメージにおける脳活性化の比較
著者名	松尾萌美 ¹ , 磯直樹 ² , 藤原謙吾 ³ , 森内剛史 ⁴ , 松田大輝 ⁵ , 光永済 ⁶ , 中島輝 ⁴ , 東登志夫 ⁴
所属	¹ 西九州大学リハビリテーション学部, ² 東京家政大学, ³ 長崎リハビリテーション病院, ⁴ 長崎大学, ⁵ 長崎原爆病院, ⁶ 長崎大学病院
英文	
Title	Comparison of cerebral activation between motor execution and motor imagery of self-feeding activity
Author	Moemi Matsuo ¹ , Naoki Iso ² , Kengo Fujiwara ³ , Takefumi Moriuchi ⁴ , Daiki Matsuda ⁵ , Wataru Mitsunaga ⁶ , Akira Nakashima ⁴ , Toshio Higashi ⁴
Affiliation	¹ Faculty of Rehabilitation Sciences, Nishi Kyushu University, ² Tokyo Kasei University, ³ Nagasaki Rehabilitation Hospital, ⁴ Nagasaki University, ⁵ Nagasaki Genbaku Hospital, ⁶ Nagasaki University Hospital
Abstract	<p>Motor imagery is defined as an act wherein an individual contemplates a mental action of motor execution without apparent action. Mental practice executed by repetitive motor imagery can improve motor performance without simultaneous sensory input or overt output. We aimed to investigate cerebral hemodynamics during motor imagery and motor execution of a self-feeding activity using chopsticks. This study included 21 healthy right-handed volunteers. The self-feeding activity task comprised either motor imagery or motor execution of eating sliced cucumber pickles with chopsticks to examine eight regions of interest: pre-supplementary motor area, supplementary motor area, bilateral prefrontal cortex, premotor area, and sensorimotor cortex. The mean oxyhemoglobin levels were detected using near-infrared spectroscopy to reflect cerebral activation. The mean oxyhemoglobin levels during motor execution were significantly higher in the left sensorimotor cortex than in the supplementary motor area and the left premotor area. Moreover, significantly higher oxyhemoglobin levels were detected in the supplementary motor area and the left premotor area during motor imagery, compared to motor execution. Supplementary motor area and premotor area had important roles in the motor imagery of self-feeding activity. Moreover, the activation levels of the supplementary motor area and the premotor area during motor execution and motor imagery are likely affected by intentional cognitive processes. Levels of cerebral activation differed in some areas during motor execution and motor imagery of a self-feeding activity. This study was approved by the Ethical Review Committee of Nagasaki University (approval No. 18110801) on December 10, 2018.</p>
keyword	Activities of Daily Living, brain function, hemodynamics, imagery (psychotherapy), mental practice, motor cortex, near-infrared neuroimaging, neuroscience, rehabilitation; spectroscopy

※本データの英文表記は実際の論文上の表記とは異なります。