Phantom Limbs More Common Than Previously Thought

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After the loss of a limb, most patients experience the feeling of a phantom limb — the vivid illusion that the amputated arm or leg is still present. Damage to the nervous system, such as stroke, may cause similar illusions in weakened limbs, whereby an arm or leg may feel as if it is in a completely different position or may even feel as if it is moving when it is not. Cases of phantom limbs in non-amputees have previously been considered rare events, but a new study published in the October 2010 issue of *Cortex* reports that more than half of patients recovering from stroke may in fact experience phantom limb sensations.

Daniel Antoniello from the Albert Einstein College of Medicine in New York, together with colleagues from the Universities of Colorado and Florida, and New York University, interviewed 50 post-stroke patients, with the aim of establishing how common phantom limbs were and determining the characteristics of such experiences. They found 27 of the interviewees had experienced phantom limb sensations, many on a daily basis. They would move to adjust their position in bed, only to discover that their arm was underneath them instead of beside them; others would feel their toes or fingers wiggling, even though they were not and some were even able to control their phantom limb (e.g., extending the arm to scratch an itch, which would of course not relieve the itch).

Antoniello suggests that a possible reason for the phenomenon being underreported is that “patients fear being labeled ‘crazy’ and are less likely to report these sensations than other symptoms.” A detailed exploration of body image has also not been part of the standard clinical assessment of stroke patients.

“The study sheds light on how the phenomenal experience of one’s body can be altered after neurological damage,” explains Antoniello. “Remarkably, some of these individuals are able to control their phantom limbs with near total volition. This report has identified a group of patients that provide a valuable opportunity to explore how the brain constructs the conscious perception of the body.”