A

Automatism

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Synonyms

[Automatic behavior](#)

Definition

This is a complex movement that occurs without conscious awareness or purposeful intent.

Current Knowledge

Automatisms may occur in the setting of complex-partial seizures. Typical simple movements include lip smacking, chewing, or finger rubbing. More complex automatisms include walking, running, undressing, and speaking. Emotional expressions, such as laughing or crying, may also occur as automatisms. Automatisms may occur during seizures or as postictal phenomena. Speech automatisms tend to lateralize to the left hemisphere, but lateralization is not predictable for other automatisms (Rasonyi et al. 2006).

Responsiveness is usually lost when automatisms occur during seizures. Rarely, patients may have preserved responsiveness in the presence of seizure-induced automatisms and only with seizures that arise from right hemisphere foci (Ebner et al. 1995).

In addition to epileptic seizures, automatisms may also be observed in other situations including intoxication, sleep walking, hypoglycemia, and psychological disorders, such as dissociative fugue states. Forensic assessments aimed at determining culpability often center around the differential diagnosis of automatisms (Fenwick 1990).

Cross-References

► [Complex Partial Seizures](#)

References and Readings

- Ebner, A., Dinner, D. S., Noachtar, S., & Luders, H. (1995). Automatisms with preserved responsiveness: A lateralizing sign in psychomotor seizures. *Neurology*, 45(1), 61–64.
- Fenwick, P. (1990). Automatism, medicine and the law. *Psychological Medicine. Monograph Supplement*, 17, 1–27.
- Rasonyi, G., Fogarasi, A., Kelemen, A., Janszky, J., & Halasz, P. (2006). Lateralizing value of postictal automatisms in temporal lobe epilepsy. *Epilepsy Research*, 70 (2–3), 239–243.