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The ascending arousal system and its impact on cognition

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Curriculum vitae

Beth Lloyd was born on November 8, 1991, in Cardiff, Wales. In 2010, she completed the International Baccalaureate at Malvern College in Worcestershire. After spending a few years living and working abroad in Canada, the USA, and Australia, she pursued a Bachelor of Science in Psychology at Erasmus University Rotterdam.

After graduating in 2017, she began a Research Master's in Neuroscience and Cognition at Utrecht University. During this time, she conducted research internships at two Korsakoff Syndrome clinics in the Netherlands and at the Department of Neural Sciences at New York University. She completed her Master's program in 2019.

Following this, she began her PhD at the Cognitive Psychology Unit of the Institute of Psychology at Leiden University, studying the effects of arousal on cognitive function under the supervision of Prof. Dr. Sander Nieuwenhuis and Dr. Franz Wurm. During her PhD, Beth completed several additional courses, including Networking Skills for Young Scientists and UTQ courses: Teaching in Practice, Supervising Thesis Students, Testing and Assessment, and Inclusive Education.

Upon completing her PhD, Beth began a new position as a postdoctoral researcher at the Social, Economic, and Organisational Unit at Leiden University, where she will study how the structure of semantic representations affects decision-making under the guidance of Marc-Lluís Vives Moya.

Full publication list

- Lloyd, B.**, Miletić, S., & Nieuwenhuis, S. (submitted). Pupil-linked arousal counteracts the positive effects of reward anticipation on incidental memory encoding.
- Lloyd, B.**, Miletić, S., Bazin, P.-L., Isherwood, S., Tse, D.H.Y., Håberg, A., Forstmann, B., & Nieuwenhuis, S. (in press). Subcortical nuclei of the human ascending arousal system encode anticipated reward but do not predict subsequent memory. *Cerebral Cortex*
- Lloyd, B.** & Nieuwenhuis, S. (2024). The effect of reward-induced arousal on the success and precision of episodic memory retrieval. *Scientific Reports*, **14**, 2105.
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- Lloyd, B.***, Wurm, F.*, de Kleijn, R., & Nieuwenhuis, S. (2023). Short-term transcutaneous vagus nerve stimulation increases pupil size but does not affect EEG alpha power: a replication of Sharon et al. (2021, *Journal of Neuroscience*). *Brain Stimulation*, **16**, 1001-1008.
- Lloyd, B.**, de Voogd, L.D., Mäki-Marttunen, V., & Nieuwenhuis, S. (2023). Pupil size reflects activation of subcortical ascending arousal system nuclei during rest. *eLife*, **12**: e84822.
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- Oudman, E., Krooshof, E., van Oort, R., **Lloyd, B.**, Wijnia, J. W., & Postma, A. (2020). Effects of Korsakoff Amnesia on performance and symptom validity testing. *Applied Neuropsychology: Adult*, **27**(6), 549-557.

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Lloyd, B., Oudman, E., Altgassen, M., & Postma, A. (2019). Smartwatch aids time-based prospective memory in Korsakoff syndrome: A case study. *Neurocase*, **25**(1-2), 21-25.

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