<https://doi.org/10.1007/s11062-009-9057-4>

<https://link.springer.com/article/10.1007/s11062-009-9057-4>

* [Published: 26 March 2009](https://link.springer.com/article/10.1007/s11062-009-9057-4#article-info)

Effects of Vitamin B1 Antagonists on Synaptic Transmission in a Striated Muscle of the Mouse

* [A. V. Romanenko](https://link.springer.com/article/10.1007/s11062-009-9057-4#auth-A__V_-Romanenko-Aff1) & [S. E. Shepelev](https://link.springer.com/article/10.1007/s11062-009-9057-4#auth-S__E_-Shepelev-Aff1)

[*Neurophysiology*](https://link.springer.com/journal/11062) **volume 40**, pages 333–341 (2008)

We studied the effects of antagonists of vitamin В1, pyrithiamine and oxythiamine, on neuromuscular transmission in the diaphragmatic muscle of the mouse. In isolated phrenico-hemidiaphragmatic preparations obtained from animals i.p. injected with 100 mg/kg pyrithiamine 1.5 h earlier, the amplitudes of miniature end-plate potentials (mEPPs) and evoked end-plate potentials (EPPs), as well as an estimate of the quantum content of EPP, were significantly smaller than in the control. In similar preparations examined 3 or 24 h after subcutaneous injections of 400 mg/kg oxythiamine, the amplitude of EPPs and their quantum content were also smaller than in the control. Such an effect was not found 72 h after injection of oxythiamine.

Author information

Authors and Affiliations

1. **Bogomolets National Medical University, Ministry of Public Health of Ukraine, Kyiv, Ukraine**

A. V. Romanenko & S. E. Shepelev

Corresponding author

Correspondence to S. E. Shepelev.

About this article

Cite this article

Romanenko, A.V., Shepelev, S.E. Effects of Vitamin B1 Antagonists on Synaptic Transmission in a Striated Muscle of the Mouse. *Neurophysiology* **40**, 333–341 (2008). https://doi.org/10.1007/s11062-009-9057-4

[Download citation](https://citation-needed.springer.com/v2/references/10.1007/s11062-009-9057-4?format=refman&flavour=citation)

* Received 20 August 2008
* Published 26 March 2009
* Issue Date September 2008

DOIhttps://doi.org/10.1007/s11062-009-9057-4

Keywords

* **pyrithiamine**
* **oxythiamine**
* **neuromuscular transmission**
* **miniature end-plate potentials**
* **end-plate potentials**
* **quantum content**

