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

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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.

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* **pyrithiamine**
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* **miniature end-plate potentials**
* **end-plate potentials**
* **quantum content**

