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Synaptic Inhibition in Colonic Smooth Muscles in Humans of Different Age Groups

* [M. M. Grusha](https://link.springer.com/article/10.1007/s11062-012-9276-y#auth-M__M_-Grusha-Aff1) & [A. V. Romanenko](https://link.springer.com/article/10.1007/s11062-012-9276-y#auth-A__V_-Romanenko-Aff1)

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We analyzed parameters of inhibitory synaptic potentials (ISPs) in isolated muscle strips of the circular layer of smooth muscles (SMs) of human colonic fragments isolated in the course of surgical interventions. The fragments were isolated in the closest vicinity to the resection zone, within visually normal parts of the colon, and, at the same time, as far as possible (10 cm or more) from its pathologically modified part. We compared the state of synaptic inhibition in colonic SMs in humans of different age groups, 30-60 and 61-81 years. Using parametric and non-parametric statistical tests, we found that there were no significant differences between parameters of synaptic inhibition in SMs in the above-mentioned age groups. The obtained data indicate that the efficacy of synaptic inhibition in enteral SMs undergoes only insignificant changes against the background of aging-induced involutive modifications in the human digestive system.

Author information

Authors and Affiliations

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

M. M. Grusha & A. V. Romanenko

Corresponding author

Correspondence to [M. M. Grusha](mailto:g_mykhaylo@meta.ua).

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