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To ensure that all abstracts use comparable formatting, authors must adhere to the requirements detailed below. Abstracts that do not adhere to these requirements will not be accepted.

The deadline for abstract submission is **Thursday 24 November, 2022 at 4pm AEDT.**

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Abstracts should be a maximum of 250 words (excluding title, authors, affiliations and references). Abstracts exceeding this limit will not be accepted. All text is to be in 12 point Times New Roman font with single line spacing. Text should be unjustified and aligned to the left. The body of the abstract should include the following headings in bold font: Introduction, Methods, Results, Conclusion. Please see the example abstract below for styling of the title, authors, and affiliations. Please define measures of variability and use exact p-values.

**EXAMPLE ABSTRACT**

AGE-RELATED CHANGES IN PRE- AND POST-SYNAPTIC INTRACORTICAL INHIBITION IN A HUMAN HAND MUSCLE

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**Introduction:** Previous research has observed age-related changes in short- (SICI) and long-interval intracortical inhibition (LICI), but age-related changes in the interaction between these paradigms have not been assessed. SICI-LICI interactions are thought to reflect presynaptic inhibition in motor cortex, which is abnormal in some neurological conditions. The current study therefore investigated age-related changes in the presynaptic modulation of SICI by LICI.

**Methods:** In 15 young (22.5 ± 3.5 years) and 9 old (74.1 ± 1.5 years) adults, paired-pulse transcranial magnetic stimulation (TMS) was used to measure SICI (2 ms interstimulus interval; ISI) and LICI (100 and 150 ms ISI) in resting first dorsal interosseous muscle, whereas triple-pulse TMS was used to investigate SICI when primed by LICI.

**Results:** For SICI, no difference was found between young and old subjects. For LICI, measurements using a 100 ms ISI were consistent between groups, whereas those using a 150 ms ISI were significantly reduced in older subjects. For both age groups, SICI was reduced when primed by LICI at both 100 ms and 150 ms. However, old adults showed less reduction in SICI when primed by LICI when using a 100 ms ISI compared with young subjects.

**Conclusion:** Our results support age-related reductions in GABAB mediated intracortical inhibition within primary motor cortex. Furthermore, these changes are timing dependent, providing further evidence for the independence of LICI when assessed at 100 ms and 150 ms. Age-related changes in SICI-LICI interactions suggest that motor cortex presynaptic inhibition may be altered with healthy ageing.

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