

# Effects of intermittent hypoxia on cat petrosal ganglion responses induced by acetylcholine, adenosine 5'-triphosphate and NaCN

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Exposure to chronic intermittent hypoxia (CIH) for 4 days enhances the cat carotid body (CB) chemosensory responses to acute hypoxia. However, it is not known if CIH enhances the responses of the petrosal ganglion (PG) neurons that innervate the CB chemoreceptor cells. Accordingly, we studied the effects of the CB putative excitatory transmitter acetylcholine (ACh) and adenosine 5'-triphosphate (ATP), and the effects of cytotoxic hypoxia (NaCN) applied to the isolated PG from cats exposed to CIH for 4 days. The dose-dependent curve parameters of the frequency of discharges evoked in the carotid sinus nerve by the application of ACh, ATP and NaCN to the isolated PG in control condition were not significantly modified in the CIH-treated cats. Present results suggest that CIH enhances the chemosensory responses to acute hypoxia acting primarily at the chemoreceptor cells, without major changes in the response of PG neurons evoked by the application of putative CB excitatory transmitters