

# Responses to hypoxia of petrosal ganglia in vitro

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NaCN is a classical stimulus used to elicit discharges from carotid body chemoreceptors. The effect is assumed to be mediated by glomus (type I) cells, which release an excitatory transmitter for the excitation of carotid nerve endings. Since the sensory perikarya of the glossopharyngeal nerve (from which the carotid nerve branches) are located in the petrosal ganglion, we tested whether application of this drug to the petrosal ganglion superfused in vitro elicits antidromic discharges in the carotid nerve. NaCN did indeed cause an intense and prolonged burst of nerve impulses in the carotid nerve, while provoking a less intense and much briefer burst of discharges in the glossopharyngeal branch. Carotid nerve responses to NaCN were reduced and shortened by prior or following application of dopamine to the ganglion. Sodium azide applied to the petrosal ganglion evoked a less intense and much briefer burst of impulses in the carotid nerve. Ganglionar application of 2,4-dinitrophenol did