

Cat carotid body chemosensory responses to non-hypoxic stimuli are inhibited by sodium nitroprusside in situ and in vitro

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We studied the effects of sodium nitroprusside, a nitric oxide donor, on the chemosensory responses to cyanide and nicotine in the cat carotid body. In situ, sodium nitroprusside infusion reduced the cyanide-evoked responses in a dose-dependent manner. In vitro, Tyrode containing nitroprusside reversibly reduced the cyanide- (by 59%) and nicotine-induced (by 45%) chemosensory responses. The present results suggest that chemosensory responses induced by cyanide and nicotine are reduced by increased nitric oxide content, similarly to the hypoxic chemosensory responses.