

# Relevance of the Carotid Body Chemoreflex in the Progression of Heart Failure

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Chronic heart failure (CHF) is a global health problem affecting millions of people. Autonomic dysfunction and disordered breathing patterns are commonly observed in patients with CHF, and both are strongly related to poor prognosis and high mortality risk. Tonic activation of carotid body (CB) chemoreceptors contributes to sympathoexcitation and disordered breathing patterns in experimental models of CHF. Recent studies show that ablation of the CB chemoreceptors improves autonomic function and breathing control in CHF and improves survival. These exciting findings indicate that alterations in CB function are critical to the progression of CHF. Therefore, better understanding of the physiology of the CB chemoreflex in CHF could lead to improvements in current treatments and clinical management of patients with CHF characterized by high chemosensitivity. Accordingly, the main focus of this brief review is to summarize current knowledge of CB chemoreflex function in different experimental models of CHF and to comment on their potential translation to treatment of human CHF. © 2015 David C. Andrade et al.