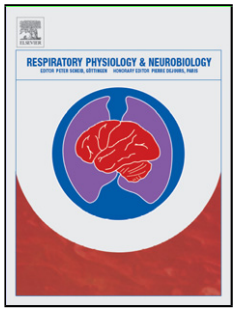
Accepted Manuscript



Title: Effect of Chronic Heart Failure in Older Rats on Respiratory Muscle and Hindlimb Blood Flow during Submaximal Exercise

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PII: S1569-9048(17)30097-6
DOI: http://dx.doi.org/doi:10.1016/j.resp.2017.05.002
Reference: RESPNB 2808

To appear in: *Respiratory Physiology & Neurobiology*

Received date: 25-3-2017
Revised date: 4-5-2017
Accepted date: 4-5-2017

Please cite this article as: Smith, Joshua R., Hageman, K.Sue, Harms, Craig A., Poole, David C., Musch, Timothy I., Effect of Chronic Heart Failure in Older Rats on Respiratory Muscle and Hindlimb Blood Flow during Submaximal Exercise.Respiratory Physiology and Neurobiology http://dx.doi.org/10.1016/j.resp.2017.05.002

Effect of Chronic Heart Failure in Older Rats on Respiratory Muscle and Hindlimb Blood Flow during Submaximal Exercise

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Running title: Effect of CHF on diaphragm and hindlimb BF

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Highlights

- Chronic heart failure (CHF) disproportionally afflicts older adults
- We examined if older CHF rats had elevated diaphragm BF during exercise
- Older CHF had greater diaphragm BF and lower hindlimb BF compared to healthy rats
- Submaximal exercise hindlimb BF was negatively related to diaphragm BF in CHF rats

1.

Abstract

Submaximal exercise diaphragm blood flow (BF) is elevated in young chronic heart failure (CHF) rats, while it is unknown if this occurs in older animals. Respiratory and hindlimb muscle BFs (radiolabeled microspheres) were measured at rest and during submaximal exercise (20 m/min, 5% grade) in older healthy (n=7) and CHF (n=6) Fischer 344 x Brown Norway rats (27-29 mo old). Older CHF, compared to healthy, rats had greater ($p<0.01$) left ventricular end-diastolic pressure and right ventricle and lung weight (normalized to body weight). During