

Supplemental Data

Table 1. Descriptive data in aged animals.

n	Selection Group	Generation	Running capacity at 11 weeks of age, meters	Body mass at 11 weeks of age, g	n at time of experiment	Age at time of experiment, months	Body mass at time of experiment, g
7	LCR	20	186 ± 19	355 ± 8	3	22.7 ± 0.3	624 ± 11
	aged						
7	HCR	20	1776 ± 45*	251 ± 7*	6	22.8 ± 0.3	470 ± 30*
	aged						

Values are means ± SE. *P<0.05 versus LCR.

Table 2. Citrate synthase activity in aged animals.

Muscle	LCR, $\mu\text{mol} \times \text{min}^{-1} \times \text{g}^{-1}$	HCR, $\mu\text{mol} \times \text{min}^{-1} \times \text{g}^{-1}$
Soleus	18.8 ± 2.2	23.4 ± 1.7*
Red Gastrocnemius	22.0 ± 2.8	31.0 ± 2.0*

Values are means ± SE. *P<0.05 versus LCR.

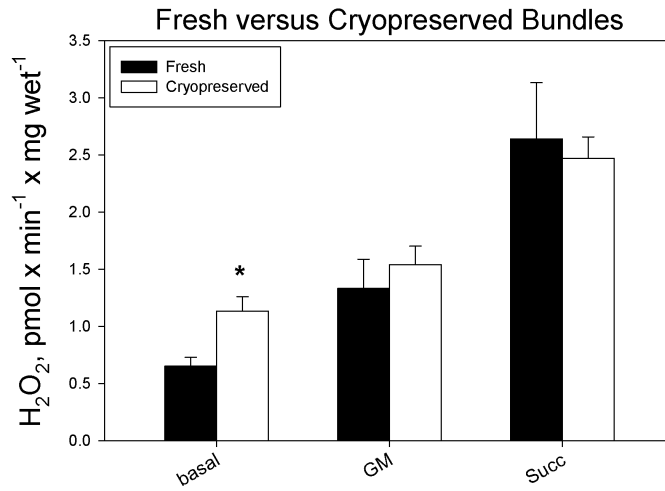


Figure 1. Comparison of H₂O₂ production in small bundles of soleus muscle that were studied on the same day of tissue harvest (fresh) versus being cryopreserved on the day of tissue harvest and thawed out one week after collection. *P<0.05 versus fresh bundles.

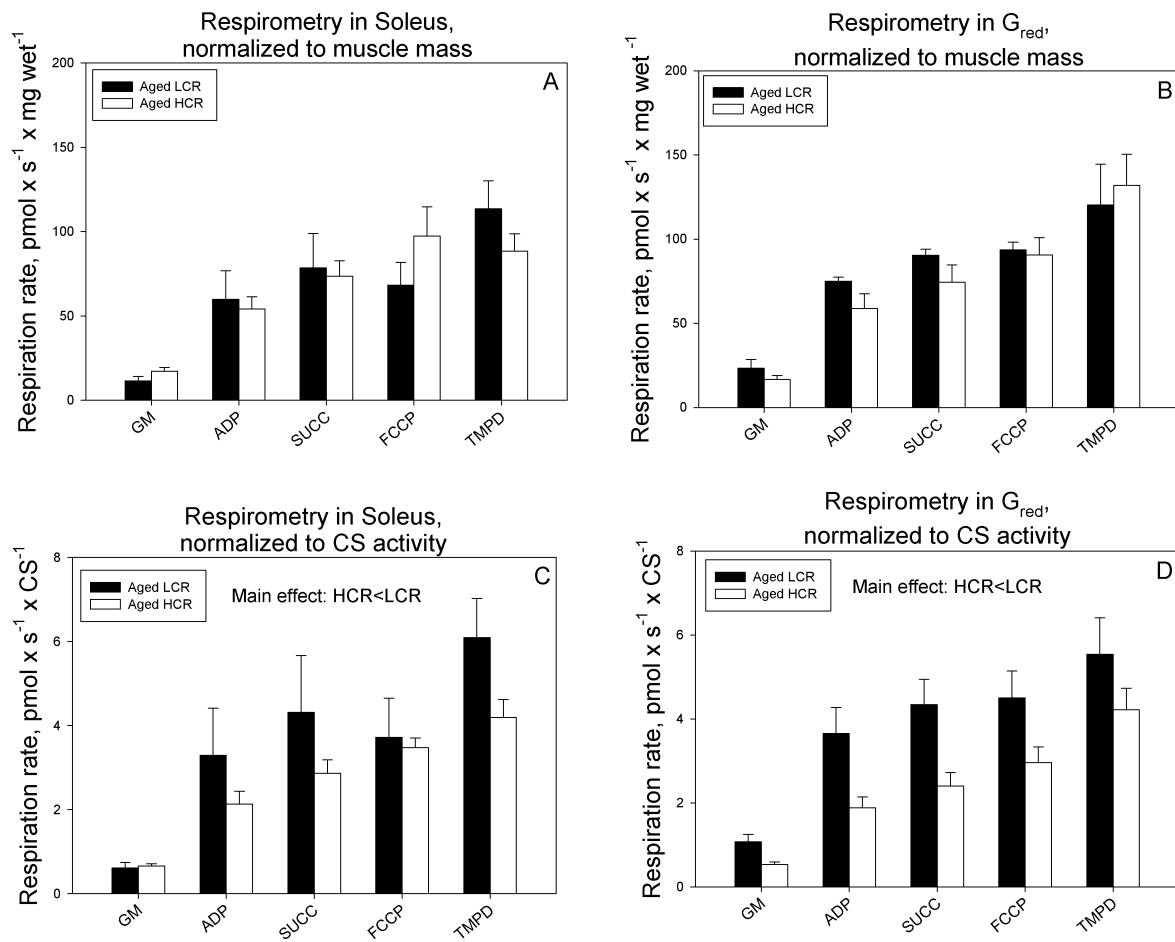


Figure 2. Respiration in small bundles of soleus muscle and the red region of gastrocnemius muscle normalized to muscle (wet) mass (A,B) or normalized to citrate synthase activity (C,D) of aged LCR and HCR rats. *P<0.05 vs LCR.

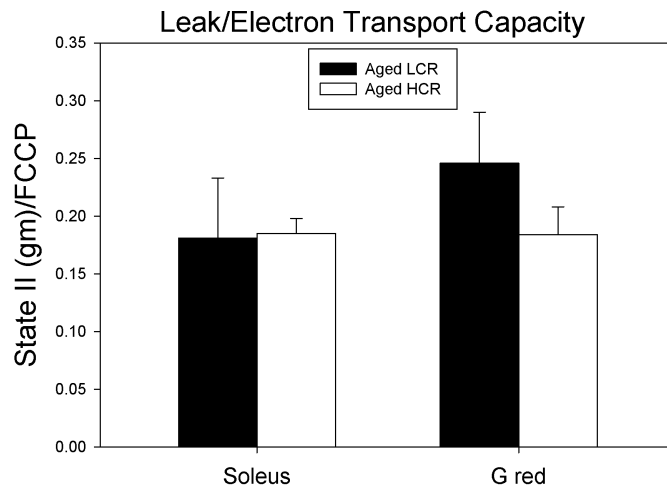


Figure 3. Leak (state II respiration with glutamate & malate as substrates) as a fraction of electron transport capacity (FCCP) in small muscle bundles of soleus muscle and the red region of gastrocnemius muscle of aged and aged LCR and HCR rats. * $P < 0.05$ versus LCR group.

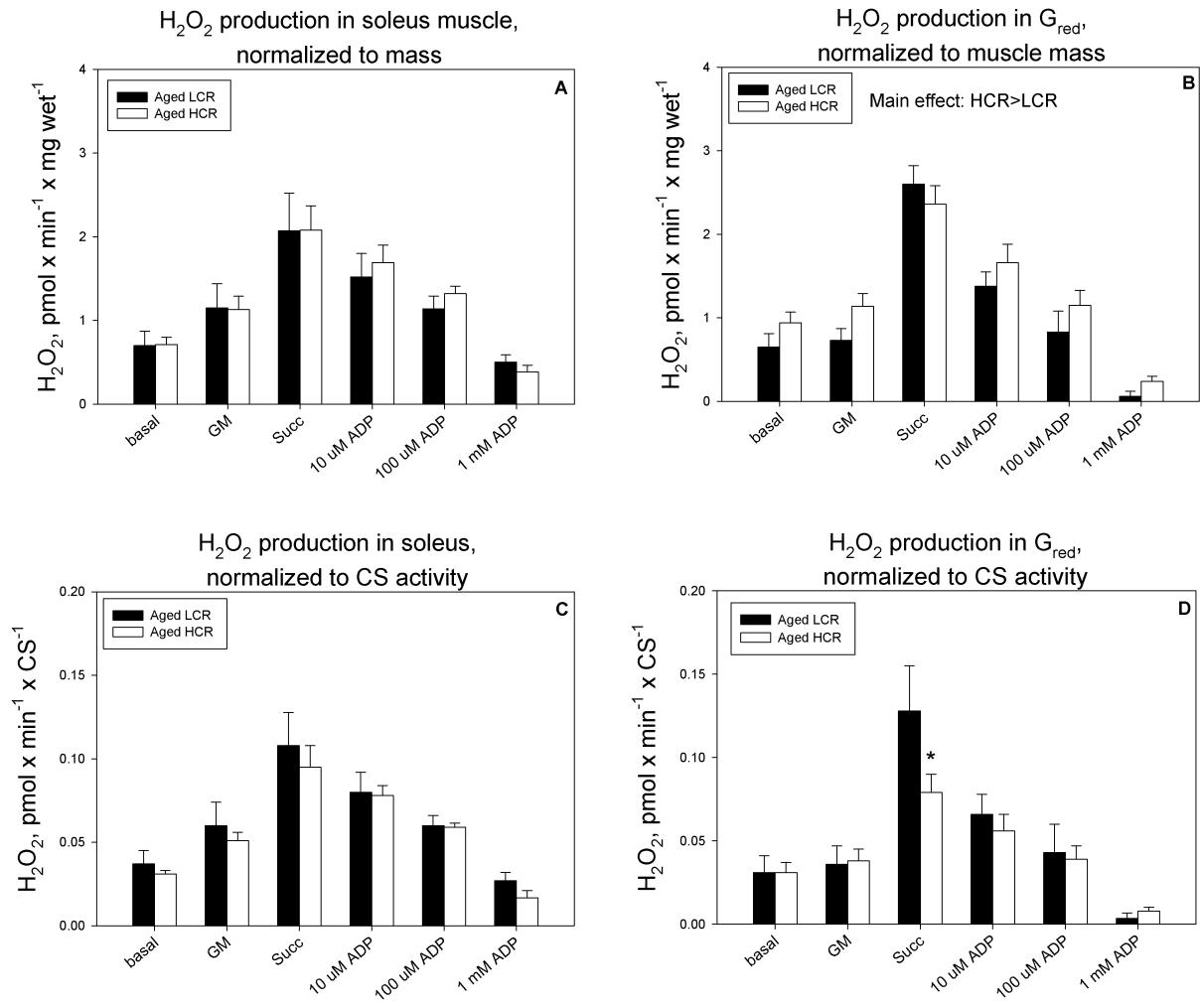


Figure 4. H₂O₂ production in small bundles of soleus muscle and the red region of gastrocnemius muscle in aged LCR and HCR rats normalized to muscle (wet) mass (A,B) or normalized to citrate synthase activity (C,D).

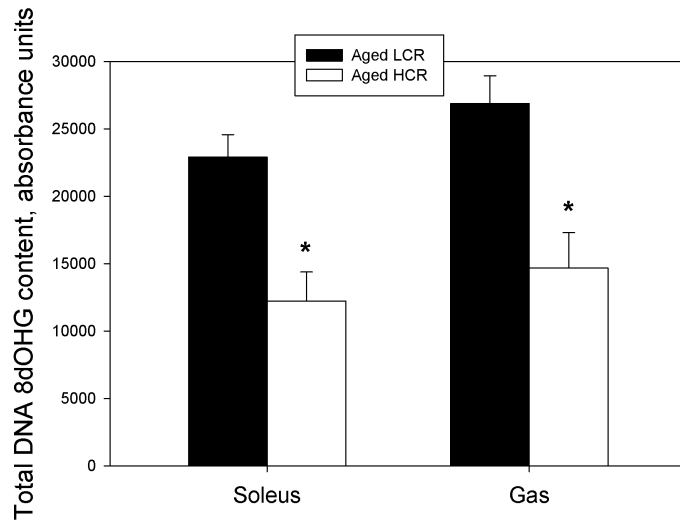


Figure 5. Total 8-dOHG content in DNA isolated from soleus muscle and mixed gastrocnemius muscle of aged LCR and HCR rats. *P<0.05 versus LCR group.

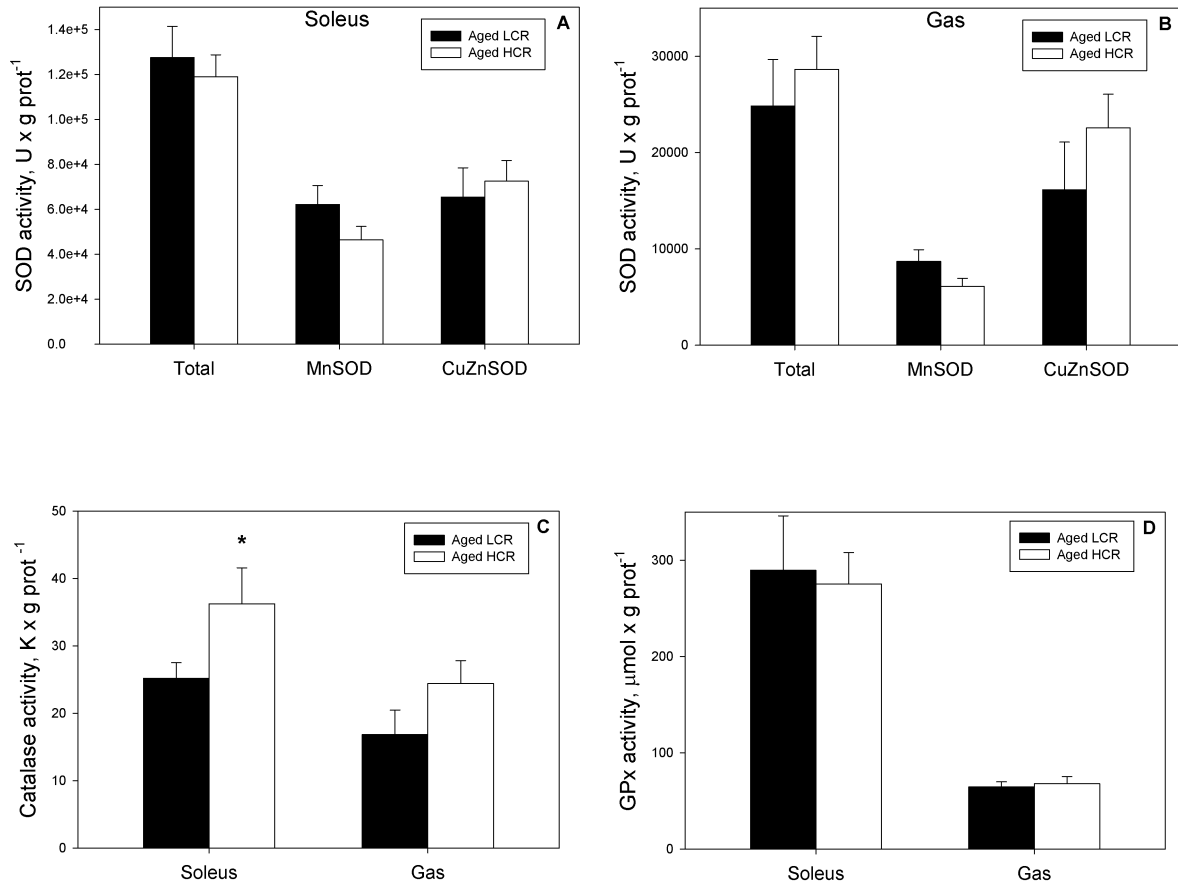


Figure 6. Superoxide dismutase (A,B), Catalase (C) and Glutathione peroxidase (D) enzyme activities in soleus muscle and gastrocnemius muscle of aged LCR and HCR rats.

*P<0.05 versus LCR group.

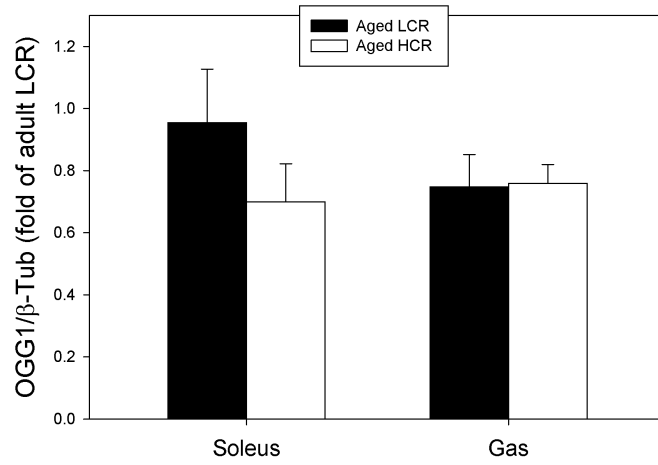


Figure 7. Protein levels of the DNA repair enzyme, OGG1, in aged LCR and HCR rats.