

Online Supplemental Material

**Table S1.** Significance levels (2-tailed *P* values; degrees of freedom in parentheses) from SAS Procedure Mixed Analyses of seven body mass measurements at different infection time points.

Trait (N)	Transform	Mean Age (days)	Infection	Linetype	Infection*Linetype	Mini-muscle	Age	Diaphragm Larvae Counts
Bleed 1 Mass (at infection) (101)	None	51	--	0.1004 (-) (1,6)	--	<b>0.0027 (-)</b> (1,91)	<b>0.0168 (+)</b> (1,91)	--
Bleed 2 Mass (100)	None	58	0.0969 (-) (1,6)	0.2069 (-) (1,6)	0.3671 (1,6)	<b>0.0097 (-)</b> (1,82)	<b>0.0224 (+)</b> (1,82)	--
Bleed 3 Mass (97)	None	65	<b>0.0055 (-)</b> (1,6)	0.2322 (-) (1,6)	0.1716 (1,6)	<b>0.0097 (-)</b> (1,79)	0.0881 (+) (1,79)	--
Mass On Wheel (96)	None	82	<b>0.0303 (-)</b> (1,6)	0.1646 (-) (1,6)	0.6088 (1,6)	<b>0.0012 (-)</b> (1,79)	0.7893 (+) (1,79)	--
Mass On Wheel (with Diaphragm Larvae Count) (49)	None	82	--	0.1790 (-) (1,6)	--	<b>0.0037 (-)</b> (1,38)	0.5197 (+) (1,38)	<b>&lt;0.0001 (-)</b> (1,38)
$\dot{V}O_2$ max (1) (Mass Off) (95)	None	88	<b>0.0180 (-)</b> (1,6)	0.2052 (-) (1,6)	0.6001 (1,6)	<b>0.0013 (-)</b> (1,77)	0.7414 (+) (1,79)	--
$\dot{V}O_2$ max (1) (Mass Off) (with Diaphragm Larvae Count) (49)	None	88	--	0.0646 (-) (1,6)	--	<b>0.0153 (-)</b> (1,38)	0.7871 (+) (1,38)	<b>&lt;0.0001 (-)</b> (1,38)
$\dot{V}O_2$ max (2) Mass (95)	None	88	<b>0.0177 (-)</b> (1,6)	0.1705 (-) (1,6)	0.7121 (1,6)	<b>0.0036 (-)</b> (1,77)	0.5879 (+) (1,77)	--

$\dot{V}O_{2,max}$ (2) Mass (with Diaphragm Larvae Count) (49)	None	88	--	<b>0.0377 (-)</b> (1,6)	--	<b>0.0153 (-)</b> (1,38)	0.6447 (+) (1,38)	<b>&lt;0.0001 (-)</b> (1,38)
Dissection Mass (95)	None	97	<b>0.0140 (-)</b> (1,6)	0.2126 (-) (1,6)	0.4813 (1,6)	<b>0.0081 (-)</b> (1,77)	0.3477 (+) (1,77)	--
Dissection Mass (with Diaphragm Larvae Count) (49)	None	97	--	0.1206 (-) (1,6)	--	<b>0.0269 (-)</b> (1,38)	0.6962 (+) (1,38)	<b>&lt;0.0001 (-)</b> (1,38)

Positive signs following *P*-values indicate infected>uninfected, HR>C, mini-muscle>normal or positive effect of age.  
*P*-values < 0.05 are in **bold**.

**Table S2.** Least squares means from SAS Procedure Mixed Analyses of seven body mass measurements, as shown in Table S1.

Trait	Least Squares Means $\pm$ Standard Error					
	Control Uninfected	Control Infected	High Runner Uninfected	High Runner Infected	Normal Muscle	Mini-muscle
Bleed 1 Mass (at infection)	31.196 $\pm$ 1.134		28.489 $\pm$ 0.966		31.668 $\pm$ 0.698	28.017 $\pm$ 1.209
Bleed 2 Mass	31.126 $\pm$ 1.282	29.063 $\pm$ 1.266	28.404 $\pm$ 1.113	27.709 $\pm$ 1.099	30.670 $\pm$ 0.720	27.481 $\pm$ 1.234
Bleed 3 Mass	32.875 $\pm$ 1.390	28.427 $\pm$ 1.353	29.678 $\pm$ 1.166	27.614 $\pm$ 1.153	31.469 $\pm$ 0.755	27.828 $\pm$ 1.368
Mass On Wheel	34.796 $\pm$ 1.531	31.690 $\pm$ 1.500	31.656 $\pm$ 1.318	29.549 $\pm$ 1.315	34.318 $\pm$ 0.834	29.527 $\pm$ 1.449
Mass On Wheel (with diaphragm larvae count)	--	32.027 $\pm$ 1.145	--	29.919 $\pm$ 0.951	32.993 $\pm$ 0.693	28.953 $\pm$ 1.277
$\dot{V}O_2$ max (1) (Mass Off)	33.971 $\pm$ 1.507	31.263 $\pm$ 1.479	31.093 $\pm$ 1.312	29.178 $\pm$ 1.302	33.701 $\pm$ 0.873	29.052 $\pm$ 1.449
$\dot{V}O_2$ max (1) (Mass Off) (with diaphragm larvae count)	--	32.153 $\pm$ 0.978	--	29.613 $\pm$ 0.768	32.495 $\pm$ 0.564	29.271 $\pm$ 1.184
$\dot{V}O_2$ max (2) (Mass)	34.688 $\pm$ 1.540	31.864 $\pm$ 1.509	31.655 $\pm$ 1.333	29.434 $\pm$ 1.322	34.069 $\pm$ 0.877	29.751 $\pm$ 1.486
$\dot{V}O_2$ max (2) (Mass) (with diaphragm larvae count)	--	32.666 $\pm$ 0.930	--	29.891 $\pm$ 0.715	32.895 $\pm$ 0.524	29.662 $\pm$ 1.169
Dissection Mass	34.954 $\pm$ 1.650	31.300 $\pm$ 1.620	31.672 $\pm$ 1.443	29.332 $\pm$ 1.433	33.844 $\pm$ 0.941	29.786 $\pm$ 1.560
Dissection Mass (with diaphragm larvae count)	--	31.926 $\pm$ 1.074	--	29.691 $\pm$ 0.845	32.419 $\pm$ 0.620	29.208 $\pm$ 1.298

**Table S3.** Least squares means and significance levels (2-tailed *P* values; degrees of freedom in parentheses) from SAS Procedure Mixed Analyses of organ masses where diaphragm larvae counts are used as a covariate. Body mass was not transformed for analyses of organ masses.

Organ Mass (N)	Transform	Least Squares Means $\pm$ S.E.M.				2-tailed P values (d.f.)			
		Control Infected	High Runner Infected	Normal Muscle	Mini-muscle	Linetype	Mini-muscle	Body Mass	Diaphragm Larvae Count
Spleen (with diaphragm larvae count) (49)	Log <sub>10</sub>	-1.0206 $\pm$ 0.0368	-0.9506 $\pm$ 0.0328	-0.9923 $\pm$ 0.0230	-0.9789 $\pm$ 0.0398	0.1844 (+) (1,6)	0.7341 (+) (1,38)	<b>0.0010 (+)</b> (1,38)	0.2962 (-) (1,38)
Wet Liver (with diaphragm larvae count) (49)	None	1.9247 $\pm$ 0.0918	1.8994 $\pm$ 0.0785	1.7384 $\pm$ 0.0540	2.0857 $\pm$ 0.1130	0.8270 (+) (1,6)	<b>0.0064 (+)</b> (1,38)	<b>&lt;0.0001 (+)</b> (1,38)	0.4228 (-) (1,38)
Dry Liver (with diaphragm larvae count) (49)	None	0.6149 $\pm$ 0.0329	0.6101 $\pm$ 0.0282	0.5554 $\pm$ 0.0195	0.6695 $\pm$ 0.0402	0.9081 (+) (1,6)	<b>0.0110 (+)</b> (1,38)	<b>0.0001 (+)</b> (1,38)	0.3524 (-) (1,38)
Wet Ventricle (with diaphragm larvae count) (49)	Log <sub>10</sub>	-0.8618 $\pm$ 0.0110	-0.8216 $\pm$ 0.0093	-0.8439 $\pm$ 0.0061	-0.8395 $\pm$ 0.0150	<b>0.0205 (+)</b> (1,6)	0.7909 (+) (1,38)	<b>&lt;0.0001 (+)</b> (1,38)	<b>0.0219 (-)</b> (1,38)
Dry Ventricle (with diaphragm larvae count) (49)	Log <sub>10</sub>	-1.5007 $\pm$ 0.0100	-1.4589 $\pm$ 0.0085	-1.4824 $\pm$ 0.0056	-1.4773 $\pm$ 0.0134	<b>0.0119 (+)</b> (1,6)	0.7293 (+) (1,38)	<b>&lt;0.0001 (+)</b> (1,38)	<b>0.0373 (-)</b> (1,38)

Wet Lungs (with diaphragm larvae count) (48)	Log <sub>10</sub>	-0.6981 ± 0.0298	-0.6462 ± 0.0253	-0.6531 ± 0.0174	-0.6912 ± 0.0373	0.1974 (+) (1,6)	0.3468 (+) (1,37)	0.8286 (+) (1,37)	0.4936 (+) (1,37)
Dry Lungs (with diaphragm larvae count) (48)	Log <sub>10</sub>	-1.3595 ± 0.0299	-1.3093 ± 0.0254	-1.3048 ± 0.0175	-1.3639 ± 0.0369	0.2121 (+) (1,6)	0.1429 (+) (1,37)	0.6851 (+) (1,37)	0.2972 (+) (1,37)

Positive signs following *P*-values indicate HR>C, mini-muscle>normal or positive effect of diaphragm larvae count.  
*P*-values < 0.05 are in **bold**.