

Figure S1. Method of determining the critical  $O_2$  tension for oxygen consumption rate ( $P_{crit}$ ) in rainbow trout.  $O_2$  consumption of sham operated and coronary ligated rainbow trout during hypoxia. Whole-animal oxygen consumption ( $MO_2$ ) in A) sham operated trout (open circles, n=8) and B) coronary ligated trout (filled squares; n=9). The grey data point on each graph represents standard metabolic rate (SMR). This plot includes only the  $MO_2$  traces down to  $P_{LOE}$  of those individuals where  $P_{crit}$  could be estimated. Red lines represents the regression line including  $MO_2$  values below and one data point above the interception point of SMR with the  $MO_2$  traces. Values are means  $\pm$  SEM.

Table S1. Summary of the coefficients of the multiple regression model for cardiovascular variables and environmental tolerances in sham operated and coronary ligated rainbow trout (Oncorhynchus mykiss).

		В	Std. Error B	β	p	95.0 % Confidence interval for <i>B</i>	
						Lower bound	Upper bound
$P_{LOE}$	Intercept	6.883	1.226		0.000	4.316	9.450
	Relative ventricular mass	-18.713	10.647	-0.303	0.095	-40.997	3.571
	Percentage compact myocardium	-4.410	2.125	-0.378	0.052	-8.857	0.038
	Peak SV <sub>hypoxia</sub>	-2.230	0.666	-0.610	0.003	-3.625	-0.835
CT <sub>max</sub>	Intercept	24.647	0.474		0.000	23.661	25.634
	Peak COwarming	0.060	0.019	0.562	0.005	0.020	0.101
CT <sub>max</sub>	Intercept	29.332	0.914		0.000	27.427	31.238
	$P_{LOE}$	-0.596	0.332	-0.331	0.087	-1.288	0.095
	Treatment	-1.013	0.404	-0.461	0.021	-1.856	-0.170

The output of the multiple linear regression model displaying the relative contribution of different variables in explaining the variability in temperature and hypoxia tolerance. The abbreviations are: unstandardized regression coefficient (B), standard error of B (Std. Error B) and standardized coefficient (B), PO<sub>2</sub> at loss of equilibrium ( $P_{LOE}$ ), stroke volume in hypoxia ( $SV_{hypoxia}$ ), upper critical thermal maximum ( $CT_{max}$ ) and cardiac output during warming ( $CO_{warming}$ ).