

Table S1. *Halichoerus grypus*. Additional linear models examining variation between pup BCI and individual-level metrics. Models presented here are those with Δ AIC between 2 and 10 and are ordered by Δ AIC. Factors significant at $p < 0.05$ are in bold face.

Model	AIC	Δ AIC	AIC weight
Sex + $\delta^{13}\text{C}$ + $\delta^{15}\text{N}$ + Colony	646.56	2.7	0.04
Year + Sex + $\delta^{13}\text{C}$ + Colony	646.59	2.72	0.04
$\delta^{13}\text{C}$ + Colony	646.71	2.85	0.04
Year + $\delta^{13}\text{C}$	646.77	2.91	0.04
Sex + Age + $\delta^{13}\text{C}$	647	3.13	0.03
Sex + Age + $\delta^{13}\text{C}$ + Colony	647.19	3.32	0.03
$\delta^{13}\text{C}$ + $\delta^{15}\text{N}$	647.24	3.37	0.03
Year + Sex + $\delta^{13}\text{C}$ + $\delta^{15}\text{N}$	647.32	3.46	0.03
Age + $\delta^{13}\text{C}$	647.79	3.92	0.02
Year + Sex + $\delta^{13}\text{C}$ + $\delta^{15}\text{N}$ + Colony	648.53	4.67	0.02
Year + $\delta^{13}\text{C}$ + Colony	648.64	4.78	0.01
Age + $\delta^{13}\text{C}$ + Colony	648.66	4.8	0.01
Year + Sex + Age + $\delta^{13}\text{C}$	648.7	4.84	0.01
Year + $\delta^{13}\text{C}$ + $\delta^{15}\text{N}$	648.76	4.9	0.01
Sex + Age + $\delta^{13}\text{C}$ + $\delta^{15}\text{N}$	648.78	4.91	0.01
Year + Sex + Age + $\delta^{13}\text{C}$ + Colony	648.78	4.92	0.01
Sex + Age + $\delta^{13}\text{C}$ + $\delta^{15}\text{N}$ + Colony	649.1	5.24	0.01
Sex + $\delta^{15}\text{N}$	649.26	5.4	0.01
Year + Age + Colony	649.39	5.52	0.01
Age + $\delta^{13}\text{C}$ + $\delta^{15}\text{N}$	649.72	5.85	0.01
Sex + $\delta^{15}\text{N}$ + Colony	649.85	5.99	0.01
Year + Sex + Age + $\delta^{13}\text{C}$ + $\delta^{15}\text{N}$	650.52	6.66	0.01
Sex + Colony	650.57	6.71	0.01
Year + Age + $\delta^{13}\text{C}$ + Colony	650.64	6.77	0.01
Year + $\delta^{13}\text{C}$ + $\delta^{15}\text{N}$ + Colony	650.64	6.77	0.01

Age + $\delta^{13}\text{C}$ + $\delta^{15}\text{N}$ + Colony	650.65	6.79	0.01
Year + Sex + Age + $\delta^{13}\text{C}$ + $\delta^{15}\text{N}$ + Colony	650.71	6.84	0.01
Year + Sex + $\delta^{15}\text{N}$	650.77	6.91	0
Sex	650.79	6.93	0
$\delta^{15}\text{N}$	651.25	7.38	0
Year + Age + $\delta^{13}\text{C}$ + $\delta^{15}\text{N}$	651.34	7.47	0
Year + Sex + $\delta^{15}\text{N}$ + Colony	651.81	7.95	0
Year + Sex	652.01	8.15	0
Year + Sex + Colony	652.52	8.65	0
$\delta^{15}\text{N}$ + Colony	652.54	8.68	0
Year + $\delta^{15}\text{N}$	652.61	8.75	0
Year + Age + $\delta^{13}\text{C}$ + $\delta^{15}\text{N}$ + Colony	652.63	8.76	0
Sex + Age + $\delta^{15}\text{N}$	652.74	8.87	0
Colony	652.75	8.88	0
Sex + Age + $\delta^{15}\text{N}$ + Colony	652.78	8.92	0
Year	653.13	9.26	0
Sex + Age + Colony	653.78	9.91	0