

Table S1. Average anti-tetanus antibody responses for the primary response (outside of the molt season) and secondary response (during molt) for WD, WR, and Y canaries.

	Descriptive results			ANOVA results		
	Color type	Sample size	Average response \pm SE (milliOD/min)	Variable	F (df)	P
Primary response (non-molt)	WD	3 F, 1 M	0.51 \pm 0.04	Color type	2.358 (2,26)	0.114
	WR	14 F, 9 M	1.02 \pm 0.12	Sex	1.255 (1,26)	0.273
	Y	3 F, 2 M	0.67 \pm 0.12	Interaction	0.783 (2,26)	0.467
Secondary response (molt)	WD	6 F, 2 M	2.08 \pm 0.26	Color type	1.164 (2,46)	0.321
	WR	10 F, 13 M	1.61 \pm 0.17	Sex	4.190 (1,46)	0.046
	Y	7 F, 14 M	1.60 \pm 0.20	Interaction	1.476 (2,46)	0.239

F = female, M = male; df = degrees of freedom (numerator, denominator).

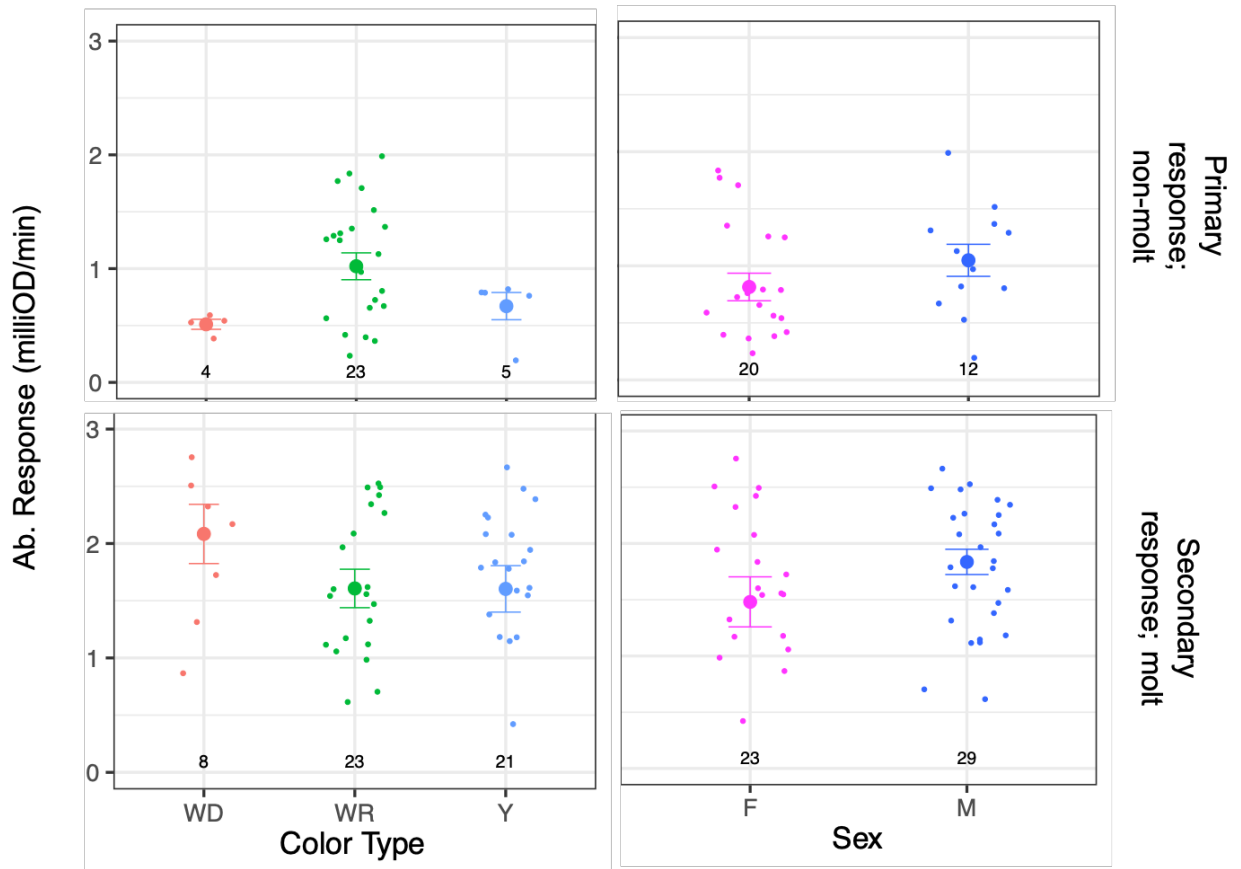


Figure S1. Mean \pm SE anti-tetanus antibody responses of the three color types (left panel) and the two sexes (right panel). Small points represent individual raw data; numbers at the base of each panel represent sample sizes.

Table S2. Average total antioxidant capacity of plasma samples from WD, WR, and Y canaries, inside and outside of molt.

	Descriptive results			ANOVA results		
	Color type	Sample size	Average response ± SE (CRE)	Variable	F (df)	P
Non-molt	WD	3 F, 8 M	1595 ± 221	Color type	0.925 (2,23)	0.411
	WR	2 F, 7 M	1536 ± 171	Sex	0.541 (1,23)	0.469
	Y	2 F, 7 M	1265 ± 133	Interaction	1.908 (2,23)	0.171
Molt	WD	2 F, 3 M	1889 ± 550	Color type	0.516 (2,20)	0.605
	WR	7 F, 4 M	1589 ± 173	Sex	4.821 (1,20)	0.040
	Y	6 F, 4 M	1471 ± 240	Interaction	0.346 (2,20)	0.711

CRE = copper reduction equivalents; F = female, M = male; df = degrees of freedom (numerator, denominator).

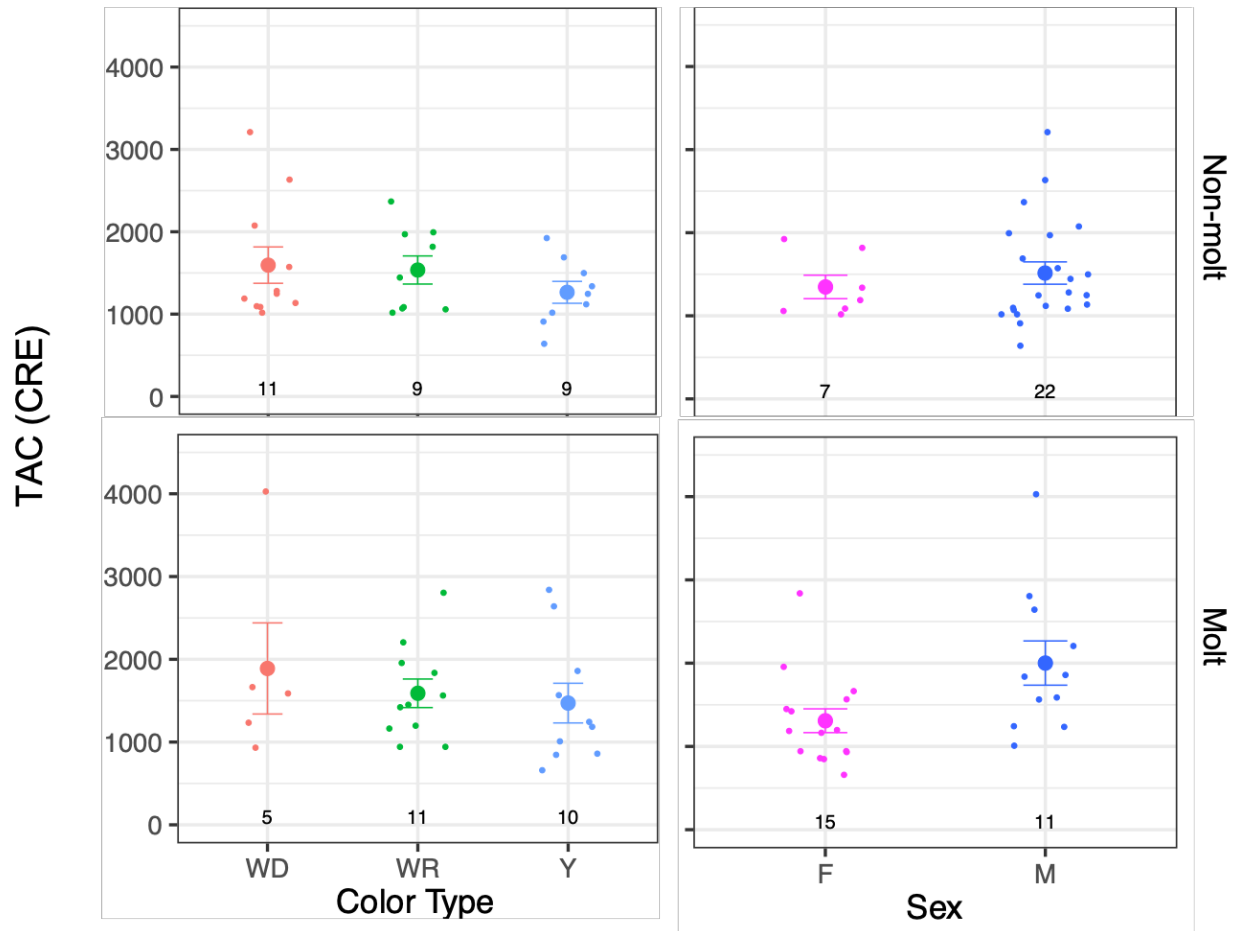


Figure S2. Mean \pm SE total antibody capacity (TAC) of the three color types (left panels) and the two sexes (right panels). Small points represent individual raw data; numbers at the base of each panel represent sample sizes.

Table S3. Baseline physiological metrics and their LPS-mediated changes in WD, WR, and Y canaries during molt.

	Descriptive results			ANOVA results		
	Color type	Sample size	Average response \pm SE	Variable	F (df)	P
Initial mass (g)	WD	6 F, 2 M	22.73 \pm 1.26	Color type	2.691 (2,5)	0.078
	WR	10 F, 16 M	25.40 \pm 0.72	Sex	1.008 (1,51)	0.320
	Y	7 F, 16 M	23.60 \pm 0.59	Interaction	0.526 (2,51)	0.594
Change in mass (g)	WD	6 F, 2 M	-0.85 \pm 0.19	Color type	4.421 (2,50)	0.017
	WR	10 F, 16 M	-1.37 \pm 0.01	Sex	0.242 (1,50)	0.625
	Y	7 F, 16 M	-1.14 \pm 0.10	Interaction	2.258 (2,50)	0.115
				Initial value	12.536 (1,50)	<0.001
Initial body temperature ($^{\circ}$ C)	WD	4 F, 3 M	40.67 \pm 0.20	Color type	4.552 (2,29)	0.019
	WR	8 F, 7 M	41.22 \pm 0.12	Sex	0.007 (1,29)	0.932
	Y	6 F, 7 M	40.97 \pm 0.09	Interaction	0.099 (2,29)	0.906
Change in body temperature ($^{\circ}$ C)	WD	4 F, 3 M	0.60 \pm 0.11	Color type	0.733 (2,28)	0.490
	WR	8 F, 7 M	0.45 \pm 0.11	Sex	4.109 (1,28)	0.052
	Y	6 F, 7 M	0.41 \pm 0.12	Interaction	0.371 (2,28)	0.693
				Initial value	16.262 (1,28)	<0.001
Initial food consumption (mg consumed / hour / g body mass)	WD	6 F, 2 M	2.79 \pm 0.43	Color type	0.376 (2,55)	0.688
	WR	11 F, 17 M	3.08 \pm 0.26	Sex	3.032 (1,55)	0.087
	Y	8 F, 17 M	2.76 \pm 0.34	Interaction	2.347 (2,55)	0.105
Change in food consumption (g consumed / hour / g body mass)	WD	6 F, 2 M	0.34 \pm 0.51	Color type	0.510 (2,54)	0.603
	WR	11 F, 17 M	-0.19 \pm 0.23	Sex	5.185 (1,54)	0.027
	Y	8 F, 17 M	-0.17 \pm 0.40	Interaction	1.811 (2,54)	0.173
				Initial value	19.724 (1,54)	<0.001
Heterophil to lymphocyte ratio (post-LPS only)	WD	6 F, 3 M	0.17 \pm 0.039	Color type	2.354 (2,45)	0.107
	WR	9 F, 15 M	0.34 \pm 0.039	Sex	0.556 (1,45)	0.460
	Y	6 F, 12 M	0.33 \pm 0.058	Interaction	0.244 (2,45)	0.785

Negative values for change in mass, temperature, or food consumption indicate that measurements decreased in value after LPS injection. F = female, M = male; df = degrees of freedom (numerator, denominator).

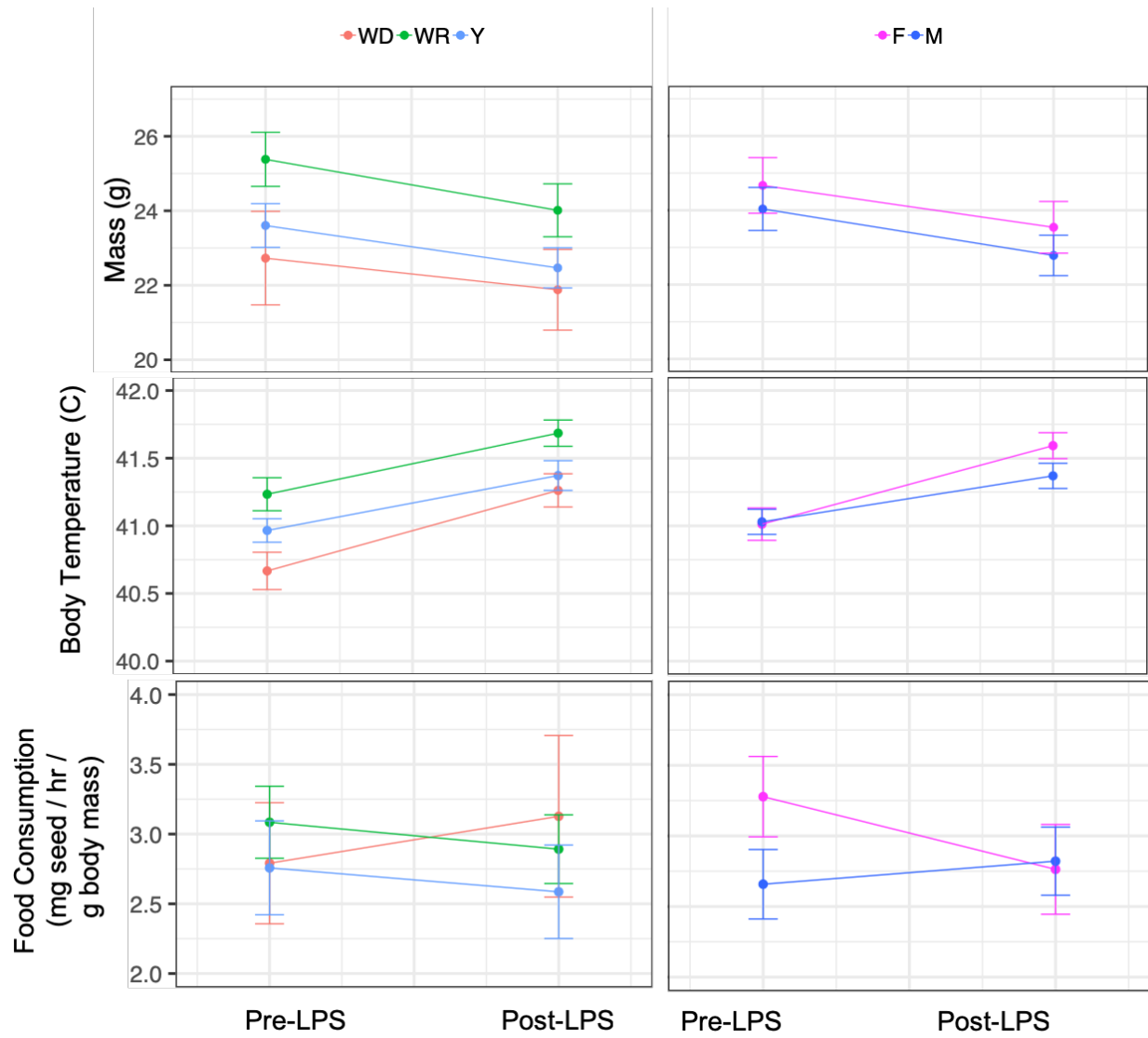


Figure S3. Mean \pm SE measurements taken prior to or after bacterial lipopolysaccharide (LPS) injection.

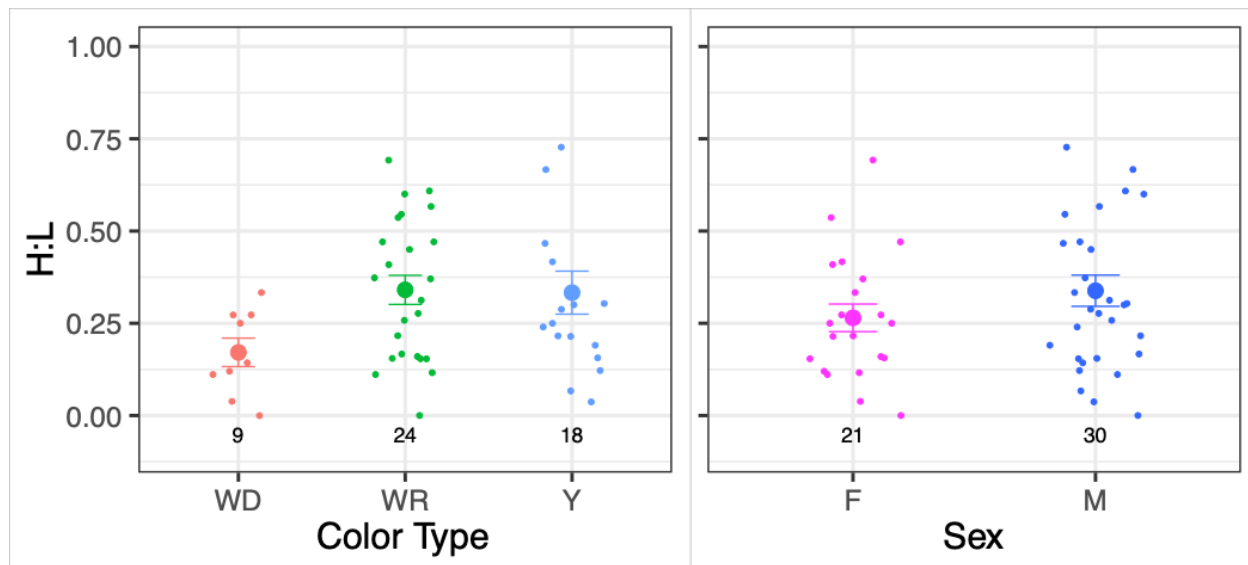


Figure S4. Mean \pm SE heterophil to lymphocyte ratio of the three color types (left panels) and the two sexes (right panels). Small points represent individual raw data; numbers at the base of each panel represent sample sizes.

Table S4. Bacterial killing ability of WD, WR, and Y canaries during molt.

Descriptive results			ANOVA results			Binomial GLM results		
Color type	Sample size	Average response ± SE (Percent bacterial killing), fraction of individuals who fully- killed their challenge	Variable	F (df)	P	Variable	Z	P
WD	5 F, 3 M	39.05 ±17.35, 3/8	Color type	1.845 (2,47)	0.169	Intercept	-0.444	0.657
						Color type (WR vs. WD)	0.365	0.715
						Color type (Y vs. WD)	0.011	0.991
WR	10 F, 10 M	58.22 ±10.56, 12/20	Sex	0.395 (1,47)	0.533	Sex	-0.188	0.851
Y	6 F, 15 M	65.49 ± 9.77, 14/21	Interaction	2.472 (2,47)	0.095	Interaction (WR vs. WD by Sex)	0.634	0.526
						Interaction (Y vs. WD by Sex)	-0.011	0.992

Individuals were considered to have “fully-killed their challenge” if they had a percentage of bacteria killed greater than 90%. Results are presented both for an ANOVA performed on continuous data of percent bacterial killing, and a binomial generalized linear model (GLM) on categorical data indicating whether or not an individual fully-killed their challenge. F = female, M = male; df = degrees of freedom (numerator, denominator).

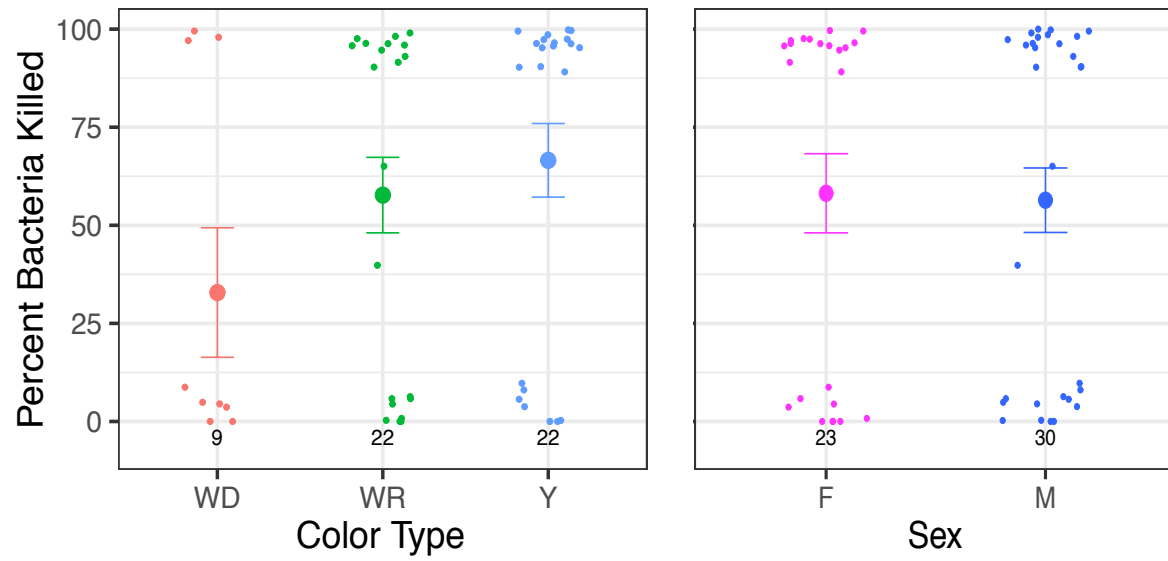


Figure S5. Mean \pm SE bacterial killing capacity (percent bacteria killed relative to positive controls). Small points represent individual raw data; numbers at the base of each panel represent sample sizes.