Table S1 Estimated marginal means and standard errors from SPSS, corresponding to tests (separate-sex analyses) presented in Table 1. Means represent the effects of maternal exercise condition (none, post-weaning only, post-weaning and gestational) on offspring (G_2) exercise traits, body weight, body composition, and change in body weight and composition as a result of exercise.

Trait ^a	None				Post-weaning				Post-weaning & gestational			
	Male		Female		Male		Female		Male		Female	
	Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE
Revolutions/day	5925.998	571.705	3.940	0.030	6977.516	569.119	3.913	0.290	7547.943	596.828	3.917	0.030
1-minute intervals/day	368.515	28.676	531.786	27.203	438.001	28.546	535.876	26.201	433.162	29.936	515.668	27.052
Average speed (rpm)	1.196	0.015	1.219	0.022	1.200	0.015	1.189	0.021	1.233	0.016	1.214	0.022
Maximum speed (rpm)	1.466	0.014	1.466	0.018	1.443	0.013	1.443	0.018	1.472	0.014	1.471	0.018

^aRevolutions/day (distance), 1-minute intervals/day (time, cumulative 1-minute intervals in which at least one revolution was recorded), average running

speed (total revolutions/time spent running), and maximum running speed (highest number of revolutions in any 1-min interval within a 24 h period).

Table S2 Pearson partial correlations for maternal (G_1) and offspring (G_2) mean voluntary running traits. Correlations were generated with individuals (G_1 and G_2) representing two of three maternal exercise conditions (post-weaning only, post-weaning and gestational).

Trait	G ₂ Time	G ₂ Average Speed	G ₂ Maximum Speed	G ₁ Distance	G ₁ Time	G ₁ Average Speed	G ₁ Maximum Speed
G ₂ Distance	0.654**	0.646**	0.525^{**}	0.282^*	0.269^{*}	0.227	0.233
G ₂ Time		-0.144	-0.224	0.227	0.371*	0.068	0.011
G ₂ Average Speed			0.914**	0.105	-0.032	0.186	0.237
G ₂ Maximum Speed				0.060	-0.102	0.178	0.252
G ₁ Distance					0.727**	0.837**	0.762**
G ₁ Time						0.246	0.190
G ₁ Average Speed							0.918**

Pearson partial correlations (r; controlling for sex) are shown for revolutions/day (distance), 1-minute intervals/day (time, cumulative 1-minute intervals in which at least one revolution was recorded), average running speed (total revolutions/time spent running), and maximum running speed (highest number of revolutions in any 1-min interval within a 24 h period). G₁ values are the averages of days 33 and 34 of wheel access. The G₁ running trait values are approximately age matched to the values of the offspring (G₂). Running wheel circumference was 1.1 m. $p^* < 0.05$. $p^* < 0.001$.

Table S3 Pearson partial correlations for maternal-gestational (G_1) and offspring (G_2) mean voluntary running traits. Correlations were generated with individuals (G_1 and G_2) representing one of three maternal exercise conditions (post-weaning and gestational).

Trait	G ₂ Time	G ₂ Average Speed	G ₂ Maximum Speed	G ₁ Distance	G ₁ Time	G ₁ Average Speed	G ₁ Maximum Speed
G ₂ Distance	0.573**	0.694**	0.719^{**}	0.600^{**}	0.321	0.357	0.395*
G ₂ Time		-0.181	-0.104	0.409*	0.349	0.143	-0.081
G ₂ Average Speed			0.965**	0.372	0.077	0.301	0.501*
G ₂ Maximum Speed				0.379	0.065	0.292	0.482*
G ₁ Distance					0.272	0.622^*	0.458^{*}
G ₁ Time						-0.515*	-0.089
G ₁ Average Speed							0.594*

Pearson partial correlations (r; controlling for sex) are shown for revolutions/day (distance), 1-minute intervals/day (time, cumulative 1-minute intervals in which at least one revolution was recorded), average running speed (total revolutions/time spent running), and maximum running speed (highest number of revolutions in any 1-min interval within a 24 h period). G₁ running trait values are the means of days 48-54 of wheel access. Days 48-54 occurred after a confirmed pregnancy (presence of vaginal plugs) and removal of the male, but prior to giving birth. Running wheel circumference was 1.1 m. $p^* < 0.05$. $p^* < 0.001$.

Table S4 Separate-sex analyses of offspring (G2) body composition traits at different ages and in response to 6

days of voluntary wheel running.

Trait	Trans ^c	n	Group	Age
\sim 3 weeks of age				
Body mass, g	none	45	$F_{2, 42} = 2.409$ p = 0.102	
Dody mass, g	none	45	$F_{2, 42} = 3.089$ p = 0.056	
% Fat	log10	45	$F_{2, 42} = 0.301$ p = 0.742	
	^2.5	45	$F_{2, 42} = 2.289$ p = 0.114 $F_{2, 42} = 0.022$	
% Lean	none	45	$F_{2,42} = 0.022$ p = 0.979 $F_{2,42} = 3.356$	
~ 4 weeks of age	\log_{10}	45	p = 0.044	
Body mass, g	none	44	$F_{2, 40} = 1.468$ p = 0.243	$F_{1, 40} = 17.317$ p < 0.001
body mass, g	log10	44	$F_{2, 40} = 3.184$ p = 0.052	$F_{1, 40} = 17.761$ p < 0.001
% Fat	log10	44	$F_{2, 40} = 0.042$ p = 0.959 $F_{2, 40} = 0.810$	$F_{1, 40} = 2.410$ p = 0.128 $F_{1, 40} = 0.651$
	none	44	p = 0.452 $F_{2,40} = 0.158$	p = 0.425 $F_{1,40} = 2.405$
% Lean	none	44 44	p = 0.855 $F_{2,40} = 0.325$ p = 0.724	p = 0.129 $F_{1, 40} = 0.210$ p = 0.649
~5 weeks of age			p 0.721	<i>p</i> 0.019
Body mass, g	log10	43 ^b	$F_{2, 39} = 0.228$ p = 0.797	p = 0.051
Doug muss, g	log10	43 ^b	p = 0.463	$F_{1,39} = 11.282$ p = 0.002
% Fat	log10		$F_{2,39} = 1.739$ p = 0.189 $F_{2,39} = 0.092$	$F_{1,39} = 0.046$ p = 0.831 $F_{1,39} = 1.239$
	none		p = 0.912 p = 2.387 $F_{2,39} = 2.387$	n - (1777)
% Lean	none		p = 0.105 $F_{2,39} = 1.338$	p = 0.433
~6 weeks of age	none	-	p = 0.274	<i>p</i> = 0.046
	none		$F_{2, 40} = 0.046$ p = 0.955	$n \equiv 0.057$
Body mass, g	log10	44	$F_{2,40} = 0.046$	$F_{1, 40} = 1.767$ p = 0.191
% Fat	log10	44	$F_{2,40} = 1.515$	$F_{1, 40} = 0.420$

$\begin{array}{c} p = 0.232 \qquad p = 0.521 \\ \text{none} 44 \begin{array}{c} F_{2,40} = 0.198 F_{1,40} = 0.006 \\ p = 0.821 \qquad p = 0.938 \\ \gamma = 0.306 \qquad p = 0.322 \\ \text{none} 44 \begin{array}{c} F_{2,40} = 1.218 F_{1,40} = 1.003 \\ p = 0.306 \qquad p = 0.322 \\ \text{none} 44 \begin{array}{c} F_{2,40} = 0.355 F_{1,40} = 0.039 \\ p = 0.703 \qquad p = 0.844 \end{array}$ $\begin{array}{c} \sim 7 \ weeks \ of \ age \\ \text{Body mass, g} \\ \text{log10} 44 \begin{array}{c} F_{2,40} = 0.214 F_{1,40} = 4.700 \\ p = 0.808 \qquad p = 0.036 \\ p = 0.951 \qquad p = 0.014 \end{array}$ $\begin{array}{c} \sim 8-9 \ weeks \ of \ age^c \\ \text{Body mass, g} \\ \text{log10} 44 \begin{array}{c} F_{2,40} = 0.191 F_{1,40} = 1.035 \\ p = 0.827 p = 0.315 \\ \text{log10} 44 \begin{array}{c} F_{2,40} = 0.209 F_{1,40} = 1.866 \\ p = 0.812 \qquad p = 0.812 p = 0.186 \\ p = 0.812 p = 0.185 p = 0.213 \\ \text{none} 44 \begin{array}{c} F_{2,40} = 1.649 F_{1,40} = 1.000 \\ p = 0.185 p = 0.213 \\ \text{none} 44 \begin{array}{c} F_{2,40} = 0.615 F_{1,40} = 0.029 \\ p = 0.546 p = 0.867 \\ p = 0.867 p = 0.877 p = 0.151 \\ \text{none} 44 \begin{array}{c} F_{2,40} = 0.699 F_{1,40} = 0.179 \\ p = 0.743 p = 0.674 \\ p = 0.275 p = 0.151 \\ \text{none} 44 \begin{array}{c} F_{2,40} = 0.695 p = 0.275 \\ p = 0.695 p = 0.276 \\ p = 0.877 p = 0.014 \\ \gamma = 0.136 F_{1,40} = 0.005 \\ p = 0.873 p = 0.971 \\ p = 0.873 p = 0.659 \\ p = 0.871 p = 0.699 \\ p = 0.384 p = 0.988 \\ p = 0.987 p = 0.988 \\ p = 0.871 p = 0.69$					
$p = 0.821$ $p = 0.938$ $\gamma_{2,40} = 1.218$ $F_{1,40} = 1.003$ $p = 0.703$ $p = 0.322$ none 44 $F_{2,40} = 0.355$ $F_{1,40} = 0.039$ $p = 0.703$ $p = 0.844$ $\gamma_{2,40} = 0.355$ $F_{1,40} = 4.700$ $p = 0.808$ $p = 0.036$ $p = 0.808$ $p = 0.036$ $p = 0.703$ $p = 0.844$ $\gamma_{2,40} = 0.050$ $F_{1,40} = 4.700$ $p = 0.808$ $p = 0.036$ $p = 0.808$ $p = 0.036$ $p = 0.808$ $p = 0.036$ $p = 0.807$ $p = 0.036$ $p = 0.812$ $p = 0.014$ $\sim 8-9$ weeks of age^c $p = 0.827$ $p = 0.315$ $p = 0.812$ $p = 0.812$ $p = 0.812$ $p = 0.812$ $\gamma_{2,40} = 0.615$ $F_{1,40} = 1.003$ $p = 0.546$ $p = 0.213$ $\gamma_{1,40} = 1.649$ $F_{1,40} = 2.143$ $p = 0.743$ $p = 0.743$ $p = 0.74$ $\gamma_{2,40} = 0.615$ $F_{1,40} = 0.105$ $p = 0.743$ $p = 0.743$ $p = 0.743$ $\gamma_{1,40} = 1.629$ $P_{1,40} = 0.126$ $p = 0.871$ $p = 0.674$ <td></td> <td></td> <td></td> <td>1</td> <td>1</td>				1	1
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Body mass, g $p = 0.308$ $p = 0.030$ $p = 0.030$ $\log 10$ 44 $F_{2,40} = 0.050$ $F_{1,40} = 6.546$ $\sim 8-9$ weeks of age ^c none44 $F_{2,40} = 0.019$ $F_{1,40} = 1.035$ Body mass, g $\log 10$ 44 $F_{2,40} = 0.209$ $F_{1,40} = 1.866$ $p = 0.812$ $p = 0.812$ $p = 0.315$ $\log 10$ 44 $F_{2,40} = 1.763$ $F_{1,40} = 1.600$ $p = 0.812$ $p = 0.185$ $p = 0.213$ none44 $F_{2,40} = 1.649$ $F_{1,40} = 0.029$ $p = 0.546$ $p = 0.867$ γ γ 44 $F_{2,40} = 1.649$ $F_{1,40} = 0.0179$ $p = 0.743$ $p = 0.674$ $p = 0.743$ $p = 0.674$ $p = 0.743$ $p = 0.743$ $p = 0.674$ $p = 0.743$ $p = 0.675$ $p = 0.743$ $p = 0.929$ $p = 0.743$ $p = 0.674$ $p = 0.695$ $p = 0.210$ $p = 0.743$ $p = 0.674$ $p = 0.695$ $p = 0.275$ $p = 0.695$ $p = 0.275$ $p = 0.695$ $p = 0.275$ $p = 0.695$ $p = 0.276$ $p = 0.695$ $p = 0.276$ $p = 0.873$ $p = 0.971$ γ .5.0 44 $F_{2,40} = 0.136$ $F_{1,40} = 0.198$ $p = 0.871$ $p = 0.659$ $p = 0.871$ $p = 0.624$ $p = 0.871$ $p = 0.659$ $p = 0.133$ $p = 0.75$ $p = 0.871$ $p = 0.699$ $p = 0.133$ $p = 0.75$ $p = 0.871$ $p = 0.699$ $p = 0.13$	\sim 7 weeks of age				
Body mass, g $p = 0.308$ $p = 0.030$ $p = 0.030$ $\log 10$ 44 $F_{2,40} = 0.050$ $F_{1,40} = 6.546$ $\sim 8-9$ weeks of age ^c none44 $F_{2,40} = 0.019$ $F_{1,40} = 1.035$ Body mass, g $\log 10$ 44 $F_{2,40} = 0.209$ $F_{1,40} = 1.866$ $p = 0.812$ $p = 0.812$ $p = 0.315$ $\log 10$ 44 $F_{2,40} = 1.763$ $F_{1,40} = 1.600$ $p = 0.812$ $p = 0.185$ $p = 0.213$ none44 $F_{2,40} = 1.649$ $F_{1,40} = 0.029$ $p = 0.546$ $p = 0.867$ γ γ 44 $F_{2,40} = 1.649$ $F_{1,40} = 0.0179$ $p = 0.743$ $p = 0.674$ $p = 0.743$ $p = 0.674$ $p = 0.743$ $p = 0.743$ $p = 0.674$ $p = 0.743$ $p = 0.675$ $p = 0.743$ $p = 0.929$ $p = 0.743$ $p = 0.674$ $p = 0.695$ $p = 0.210$ $p = 0.743$ $p = 0.674$ $p = 0.695$ $p = 0.275$ $p = 0.695$ $p = 0.275$ $p = 0.695$ $p = 0.275$ $p = 0.695$ $p = 0.276$ $p = 0.695$ $p = 0.276$ $p = 0.873$ $p = 0.971$ γ .5.0 44 $F_{2,40} = 0.136$ $F_{1,40} = 0.198$ $p = 0.871$ $p = 0.659$ $p = 0.871$ $p = 0.624$ $p = 0.871$ $p = 0.659$ $p = 0.133$ $p = 0.75$ $p = 0.871$ $p = 0.699$ $p = 0.133$ $p = 0.75$ $p = 0.871$ $p = 0.699$ $p = 0.13$		log10	44	$F_{2,40} = 0.214$	$F_{1, 40} = 4.700$
$\sim 8-9$ weeks of age^c none44 $F_{2,40} = 0.050$ $F_{1,40} = 6.346$ $p = 0.014$ $\sim 8-9$ weeks of age^c none44 $F_{2,40} = 0.191$ $F_{1,40} = 1.035$ $p = 0.827$ $= 0.014$ none44 $F_{2,40} = 0.209$ $F_{1,40} = 1.035$ $p = 0.315$ $= 0.014$ $P = 0.827$ $p = 0.812$ $p = 0.812$ $p = 0.812$ $p = 0.180$ $P = 0.315$ $p = 0.315$ $= 0.016$ $F_{2,40} = 0.209$ $p = 0.546$ $p = 0.185$ $p = 0.213$ $p = 0.546$ $p = 0.867$ $P = 0.867$ $P = 0.867$ $= 0.014$ $F_{2,40} = 0.615$ $P = 0.546$ $p = 0.205$ $p = 0.151$ $p = 0.743$ $P = 0.867$ $P = 0.743$ $p = 0.674$ $= 0.015$ Post exercise $P = 0.205$ $p = 0.125$ $p = 0.733$ $p = 0.674$ $P = 0.867$ $P = 0.439$ $p = 0.944$ $= 0.025$ $p = 0.439$ $p = 0.743$ $p = 0.695$ $p = 0.275$ $P = 0.867$ $P = 0.439$ $p = 0.944$ $= 0.024$ $p = 0.695$ $p = 0.210$ $p = 0.126$ $p = 0.2175$ $P = 0.867$ $P = 0.873$ $p = 0.971$ $P = 0.873$ $p = 0.971$ $= 0.164$ $P = 0.873$ $P = 0.126$ $P = 0.024$ $P = 0.871$ $P = 0.871$ $P = 0.659$ $P = 0.325$ $P = 0.133$ $P = 0.133$ $P = 0.133$ $P = 0.133$ $P = 0.133$ $P = 0.133$ $P = 0.134$ $= 0.024$ $P = 0.869$ $P = 0.324$ $P = 0.871$ $P = 0.659$ $P = 0.354$ $= 0.024$ $P = 0.969$ $P = 0.354$ $= 0.024$ $P = 0.969$ $P = 0.354$ $= 0.024$ $P = 0.969$ $= 0.025$ $P = 0.354$ $= 0.026$ $P = 0.357$ $= 0.026$ $P = 0.357$ $= 0.026$ $P $	Body mass, g	10510		$p \equiv 0.808$	p = 0.030
$ \begin{array}{c} \sim 8-9 \ weeks \ of \ age^{c} \\ \mbox{Body mass, g} \\ \mbox{Body mass, g} \\ \mbox{Body mass, g} \\ \mbox{W Fat} \\ \mbox{W Fat} \\ \mbox{W Fat} \\ \mbox{W Fat} \\ \mbox{W Lean} \\ W L$		log10	44	$F_{2, 40} = 0.050$	$F_{1,40} = 6.546$
Body mass, gnone44 $F_{2,40} = 0.191$ $F_{1,40} = 1.035$ $p = 0.315$ Body mass, glog1044 $F_{2,40} = 0.209$ $F_{1,40} = 1.866$ $p = 0.812$ $p = 0.180$ % Fatlog1044 $F_{2,40} = 1.763$ $F_{1,40} = 1.600$ $p = 0.185$ $p = 0.213$ $p = 0.213$ % Leannone44 $F_{2,40} = 1.649$ $F_{1,40} = 2.143$ $p = 0.205$ $p = 0.867$ % Lean^5.044 $F_{2,40} = 0.615$ $F_{1,40} = 2.143$ $p = 0.205$ $p = 0.743$ Post exercise** $F_{2,40} = 0.299$ $F_{1,40} = 0.179$ $p = 0.743$ Body Mass, g^2.544 $F_{2,40} = 0.367$ $F_{1,40} = 0.005$ $p = 0.743$ % Fat $0g10$ 44 $F_{2,40} = 0.367$ $F_{1,40} = 0.005$ $p = 0.210$ % Fat $0g10$ 44 $F_{2,40} = 0.367$ $F_{1,40} = 0.001$ $p = 0.210$ % Lean $none$ 44 $F_{2,40} = 0.136$ $F_{1,40} = 0.001$ $p = 0.142% Leannone44F_{2,40} = 0.136F_{1,40} = 0.0142% Leannone44F_{2,40} = 0.136F_{1,40} = 0.014% Leannone43^{5}F_{2,39} = 2.308F_{1,39} = 0.071% Leannone43^{5}F_{2,39} = 0.537F_{1,39} = 0.604p = 0.113p = 0.175% Change in massnone43^{5}F_{2,39} = 0.537F_{1,39} = 0.604p = 0.589p = 0.354None43^{5}F_{2,39} = 3.228F_{1,39} = 0.402p = 0.050p = 0.$	~ 8.0 weaks of aga°			p = 0.931	<i>p</i> – 0.014
Body mass, g $p = 0.827$ $p = 0.315$ log1044 $F_{2,40} = 0.209$ $F_{1,40} = 1.866$ $p = 0.812$ $p = 0.180$ $p = 0.180$ $p = 0.180$ $p = 0.185$ $p = 0.185$ $p = 0.213$ none44 $F_{2,40} = 0.615$ $F_{1,40} = 0.029$ $p = 0.546$ $p = 0.867$ $\%$ Lean $^{5.0}$ 44 $F_{2,40} = 1.649$ $p = 0.205$ $p = 0.151$ none44 $F_{2,40} = 0.299$ $P = 0.743$ $p = 0.674$ Post exercise $p = 0.439$ $p = 0.944$ log1044 $F_{2,40} = 0.367$ $F_{1,40} = 0.005$ $p = 0.75$ log1044 $F_{2,40} = 0.367$ $F_{1,40} = 0.024$ $p = 0.695$ $p = 0.695$ $p = 0.275$ log1044 $F_{2,40} = 1.625$ $F_{1,40} = 0.001$ $p = 0.873$ $p = 0.873$ $p = 0.971$ $^{5.0}$ 44 $F_{2,40} = 0.136$ $F_{1,40} = 0.001$ $p = 0.871$ $p = 0.175$ none 43^{2b} $F_{2,39} = 2.308$ $F_{1,39} = 1.907$ $p = 0.969$ $p = 0.354$ none 43^{2b} $F_{2,39} = 0.537$ $F_{1,39} = 0.604$ $p = 0.871$ $p = 0.752$ none 43^{2b} $F_{2,39} = 0.537$ $F_{1,39} = 0.604$ $p = 0.969$ $p = 0.354$ none 43^{2b} $F_{2,40} = 0.092$ <td>~0-9 weeks of uge</td> <td></td> <td></td> <td>$E_{\rm r} = 0.101$</td> <td>$F_{\rm e} = 1.035$</td>	~0-9 weeks of uge			$E_{\rm r} = 0.101$	$F_{\rm e} = 1.035$
perform 1000000000000000000000000000000000000		none		$n \equiv 0.827$	n = 0.515
% Fat $p = 0.812$ $p = 0.180$ % Fat $\log 10$ 44 $F_{2,40} = 1.763$ $F_{1,40} = 1.600$ $p = 0.185$ $p = 0.213$ none44 $F_{2,40} = 1.649$ $F_{1,40} = 0.029$ $p = 0.546$ $p = 0.867$ $r > 0.025$ $p = 0.151$ none44 $F_{2,40} = 1.649$ $F_{1,40} = 2.143$ $p = 0.743$ $p = 0.743$ $p = 0.674$ Post exercise $r > 2.5$ 44 $F_{2,40} = 0.840$ $F_{1,40} = 0.005$ Body Mass, g 2.5 44 $F_{2,40} = 0.367$ $F_{1,40} = 0.275$ $p = 0.695$ $p = 0.275$ $p = 0.695$ $p = 0.275$ $p = 0.695$ $p = 0.210$ $p = 0.142$ $p = 0.210$ $p = 0.142$ $n > 5.0$ 44 $F_{2,40} = 2.178$ $F_{1,40} = 0.001$ $p = 0.873$ $p = 0.024$ $p = 0.126$ $p = 0.024$ $n = 44$ $F_{2,40} = 0.139$ $F_{1,40} = 0.198$ $p = 0.126$ $p = 0.013$ $p = 0.142$ $n = 43^{2b}$ $F_{2,39} = 2.308$ $F_{1,39} = 1.907$ $p = 0.113$ $p = 0.024$ $n = 44$ $F_{2,40} = 0.032$ $F_{1,40} = 0.880$ $p = 0.969$ $p = 0.357$ $F_{1,39} = 0.604$ $p = 0.387$ $p = 0.969$ $p = 0.354$ $p = 0.387$ $p = 0.988$ $p = 0.988$ $p = 0.387$ $p = 0.998$ $p = 0.442$ $n = 43^{2b}$ $F_{2,39} = 0.537$ $F_{1,39} = 0.402$ $p = 0.387$ $p = 0.998$ $p = 0.718$ $p = 0.998$ $p = 0.589$ $p = 0.718$ </td <td>Body mass, g</td> <td>1 10</td> <td></td> <td>$F_{2,40} = 0.209$</td> <td>$F_{1,40} = 1.866$</td>	Body mass, g	1 10		$F_{2,40} = 0.209$	$F_{1,40} = 1.866$
% Fat $p = 0.185$ $p = 0.213$ none44 $F_{2,40} = 0.615$ $F_{1,40} = 0.029$ $p = 0.546$ $p = 0.867$ $p = 0.526$ $p = 0.867$ $p = 0.205$ $p = 0.151$ none44 $F_{2,40} = 1.649$ $f_{1,40} = 0.179$ $p = 0.743$ $p = 0.743$ $p = 0.743$ $p = 0.674$ Post exerciseBody Mass, g $^{\circ}$ Sat exercise $Post$		log10		n = 0.812	p = 0.180
% Fat $p = 0.185$ $p = 0.213$ none44 $F_{2,40} = 0.615$ $F_{1,40} = 0.029$ $p = 0.546$ $p = 0.867$ $p = 0.205$ $p = 0.181$ $p = 0.205$ $p = 0.151$ none44 $F_{2,40} = 0.299$ $p = 0.743$ $p = 0.743$ $p = 0.743$ $p = 0.674$ Post exercise 2.5 44 $P_{2,40} = 0.367$ $F_{1,40} = 0.005$ Body Mass, g 2.5 44 $P_{2,40} = 0.367$ $F_{1,40} = 0.005$ $p = 0.743$ $p = 0.944$ $log 10$ 44 $F_{2,40} = 0.367$ $F_{1,40} = 0.210$ $p = 0.210$ $p = 0.126$ $p = 0.210$ $p = 0.126$ $p = 0.971$ $h = 0.126$ $p = 0.126$ $p = 0.126$ $p = 0.126$ $p = 0.139$ $F_{1,40} = 0.198$ $p = 0.871$ $p = 0.659$ $p = 0.139$ $F_{1,40} = 0.198$ $p = 0.139$ $F_{1,40} = 0.080$ $p = 0.969$ $p = 0.354$ $p = 0.969$ $p = 0.357$ $F_{1,39} = 0.402$ $p = 0.969$ $p = 0.387$ $p = 0.987$ $p = 0.998$ $p = 0.988$ $p = 0.999$ <td></td> <td>log10</td> <td>ΔΔ</td> <td>$F_{2, 40} = 1.763$</td> <td>$F_{1, 40} = 1.600$</td>		log10	ΔΔ	$F_{2, 40} = 1.763$	$F_{1, 40} = 1.600$
none44 $F_{2,40} = 0.615$ $F_{1,40} = 0.029$ $p = 0.546$ $p = 0.867$ $p = 0.151$ $p = 0.205$ % Lean 5.0 44 $F_{2,40} = 1.649$ $F_{1,40} = 2.143$ $p = 0.205$ Body Mass, gnone44 $F_{2,40} = 0.299$ $F_{1,40} = 0.179$ $p = 0.743$ Body Mass, g 2 .544 $F_{2,40} = 0.840$ $F_{1,40} = 0.005$ $p = 0.743$ % Fat 2 .544 $F_{2,40} = 0.840$ $F_{1,40} = 1.227$ $p = 0.695$ % Fat 0 .544 $F_{2,40} = 0.367$ $F_{1,40} = 1.227$ $p = 0.695$ % Lean 0 .544 $F_{2,40} = 1.625$ $F_{1,40} = 2.240$ $p = 0.126$ % Lean 0 .544 $F_{2,40} = 0.136$ $F_{1,40} = 0.001$ $p = 0.873$ % Lean 0 .544 $F_{2,40} = 0.136$ $F_{1,40} = 0.198$ $p = 0.659$ % Change in mass 0 .6 2 .39 2 .308 $F_{1,39} = 1.907$ $p = 0.113$ % Change in % fat 0 .6 2 .40 0 .972 $F_{1,40} = 0.880$ $p = 0.589$ % Change in % lean 0 .6 2 .39 2 .328 $F_{1,39} = 0.604$ $p = 0.387$ % Change in % lean 0 .43 ^b $F_{2,39} = 3.228$ $F_{1,39} = 0.402$ $p = 0.050$ % Change in % lean 0 .6 2 .40 0 .009 $F_{1,40} = 2.245$	% Fat	10510		n = 0.185	n = 0.213
% Lean^5.044 $F_{2,40} = 1.649$ $F_{1,40} = 2.143$ $p = 0.205$ $p = 0.151$ $p = 0.151$ $p = 0.743$ Post exerciseBody Mass, g% Fat^2.544 $F_{2,40} = 0.840$ $F_{1,40} = 0.005$ $p = 0.439$ % Fat% Fat% Lean% Lean% Lean% Change in mass% Change in % fat% Change in % fat% Change in % lean% Change in % lean<		none	44	$F_{2,40} = 0.615$	$F_{1, 40} = 0.029$
% Lean $p = 0.205$ $p = 0.151$ none44 $F_{2,40} = 0.299$ $F_{1,40} = 0.179$ Post exercise 2.5 44 $F_{2,40} = 0.840$ $F_{1,40} = 0.005$ Body Mass, g 2.5 44 $F_{2,40} = 0.367$ $F_{1,40} = 1.227$ $p = 0.695$ $p = 0.205$ $p = 0.275$ $\log 10$ 44 $F_{2,40} = 1.625$ $F_{1,40} = 2.240$ $p = 0.210$ $p = 0.126$ $p = 0.227$ $\log 10$ 44 $F_{2,40} = 1.625$ $F_{1,40} = 2.240$ $p = 0.210$ $p = 0.142$ $no.5$ 44 $F_{2,40} = 2.178$ $F_{1,40} = 0.001$ $p = 0.873$ $p = 0.971$ $no.5$ 44 $F_{2,40} = 2.178$ $F_{1,40} = 5.503$ $p = 0.126$ $p = 0.024$ none44 $F_{2,40} = 0.139$ $F_{1,40} = 0.198$ $p = 0.871$ $p = 0.659$ none43 ^b $F_{2,39} = 2.308$ $F_{1,39} = 1.907$ $p = 0.126$ $p = 0.013$ $p = 0.175$ none43 ^b $F_{2,39} = 0.537$ $F_{1,39} = 0.604$ $p = 0.969$ $p = 0.354$ $p = 0.969$ $p = 0.354$ none43 ^b $F_{2,39} = 0.537$ $F_{1,39} = 0.604$ $p = 0.589$ $p = 0.442$ $p = 0.387$ $p = 0.998$ none43 ^b $F_{2,39} = 3.228$ $F_{1,39} = 0.402$ $p = 0.050$ $p = 0.718$ $p = 0.050$ $p = 0.718$				p = 0.546	p = 0.867
% Leannone 44 $\overrightarrow{F}_{2,40} = 0.299$ $\overrightarrow{F}_{1,40} = 0.179$ $p = 0.674$ Post exercise 2.5 44 $\overrightarrow{F}_{2,40} = 0.840$ $F_{1,40} = 0.005$ $p = 0.439$ Body Mass, g 2.5 44 $\overrightarrow{F}_{2,40} = 0.840$ $F_{1,40} = 0.005$ $p = 0.439$ % Fat $0g10$ 44 $\overrightarrow{F}_{2,40} = 0.367$ $F_{1,40} = 1.227$ $p = 0.695$ % Fat $0g10$ 44 $F_{2,40} = 0.367$ $F_{1,40} = 2.240$ $p = 0.210$ % Lean 0.5 44 $F_{2,40} = 0.136$ $F_{1,40} = 0.001$ $p = 0.873$ % Lean 0.644 $F_{2,40} = 2.178$ $F_{1,40} = 5.503$ $p = 0.126$ % Change in mass $0ne$ 43^{b} $F_{2,39} = 2.308$ $F_{1,39} = 1.907$ $p = 0.113$ % Change in $\%$ fat $none$ 43^{b} $F_{2,39} = 0.537$ $F_{1,39} = 0.604$ $p = 0.589$ % Change in $\%$ fat $none$ 43^{b} $F_{2,39} = 0.537$ $F_{1,39} = 0.604$ $p = 0.589$ % Change in $\%$ fat $none$ 43^{b} $F_{2,39} = 3.228$ $F_{1,39} = 0.402$ $p = 0.050$ % Change in $\%$ fat $none$ 43^{b} $F_{2,39} = 3.228$ $F_{1,39} = 0.402$ $p = 0.505$ % Change in $\%$ lean $none$ 43^{b} $F_{2,39} = 3.228$ $F_{1,39} = 0.402$ $p = 0.050$ ϕ		^5.0	44	$r_{2,40} = 1.049$ n = 0.205	$r_{1,40} = 2.143$ n = 0.151
$p = 0.743$ $p = 0.674$ Post exercise $p = 0.743$ $p = 0.674$ Body Mass, g $^{2}2.5$ 44 $F_{2,40} = 0.840$ $F_{1,40} = 0.005$ $p = 0.439$ $p = 0.944$ $\log 10$ 44 $F_{2,40} = 0.367$ $F_{1,40} = 1.227$ $p = 0.695$ $p = 0.275$ $\log 10$ 44 $F_{2,40} = 0.367$ $F_{1,40} = 2.240$ $p = 0.210$ $p = 0.210$ $p = 0.142$ $^{0}.5$ 44 $F_{2,40} = 0.136$ $F_{1,40} = 2.240$ $p = 0.873$ $p = 0.971$ $^{5}.0$ 44 $F_{2,40} = 0.136$ $F_{1,40} = 0.001$ $p = 0.126$ $p = 0.024$ $p = 0.126$ $p = 0.024$ $p = 0.139$ $F_{1,40} = 0.198$ $p = 0.139$ $F_{1,40} = 0.198$ $p = 0.113$ $p = 0.175$ $p = 0.113$ $p = 0.175$ $p = 0.113$ $p = 0.175$ $p = 0.969$ $p = 0.354$ $p = 0.969$ $p = 0.354$ $p = 0.589$ $p = 0.442$ $p = 0.387$ $p = 0.998$ $p = 0.387$ $p = 0.998$ $p = 0.387$ $p = 0.998$ $p = 0.050$ $p = 0.718$ $p = 0.050$ $p = 0.718$	% Lean			$F_{2,40} = 0.209$	$F_{1,40} = 0.179$
Body Mass, g^2.544 $F_{2,40} = 0.840$ $p = 0.439$ $p = 0.944$ $p = 0.944$ $p = 0.944$ $p = 0.695$ $p = 0.275$ 		none	44	p = 0.743	p = 0.674
Body Mass, g $n=2.5$ 44 $p = 0.439$ $p = 0.944$ $\log 10$ 44 $F_{2,40} = 0.367$ $F_{1,40} = 1.227$ $p = 0.695$ $p = 0.275$ $\log 10$ 44 $F_{2,40} = 1.625$ $F_{1,40} = 2.240$ $p = 0.210$ $p = 0.142$ $no.5$ 44 $F_{2,40} = 0.136$ $F_{1,40} = 0.001$ $p = 0.873$ $p = 0.971$ $no.5$ 44 $F_{2,40} = 2.178$ $F_{1,40} = 5.503$ $p = 0.126$ $p = 0.024$ $none$ 44 $F_{2,40} = 0.139$ $F_{1,40} = 0.198$ $p = 0.126$ $p = 0.024$ $none$ 43^{b} $F_{2,39} = 2.308$ $F_{1,39} = 1.907$ $p = 0.113$ $p = 0.175$ $p = 0.113$ $p = 0.175$ $none$ 43^{b} $F_{2,39} = 0.537$ $F_{1,39} = 0.604$ $p = 0.589$ $p = 0.354$ $p = 0.589$ $p = 0.442$ $none$ 43^{b} $F_{2,39} = 3.228$ $F_{1,39} = 0.402$ $p = 0.387$ $p = 0.998$ $p = 0.998$ $p = 0.500$ $p = 0.050$ $p = 0.718$ $p = 0.718$ $p = 0.050$ $p = 0.718$ $p = 0.718$	Post exercise				
Body Mass, g $p = 0.439$ $p = 0.944$ $\log 10$ 44 $F_{2,40} = 0.367$ $F_{1,40} = 1.227$ $p = 0.695$ $p = 0.275$ $p = 0.695$ $p = 0.275$ $\log 10$ 44 $F_{2,40} = 1.625$ $F_{1,40} = 2.240$ $p = 0.210$ $p = 0.142$ $n 0.5$ 44 $F_{2,40} = 0.136$ $F_{1,40} = 0.001$ $p = 0.873$ $p = 0.971$ $n 0.5$ 44 $F_{2,40} = 2.178$ $F_{1,40} = 5.503$ $p = 0.126$ $p = 0.024$ $n 0.6$ 44 $F_{2,40} = 0.139$ $F_{1,40} = 0.198$ $p = 0.871$ $p = 0.659$ $n 0.843^{b}$ $F_{2,39} = 2.308$ $F_{1,39} = 1.907$ $p = 0.969$ $p = 0.113$ $p = 0.175$ $n 0.6$ 43^{b} $F_{2,39} = 0.537$ $F_{1,39} = 0.604$ $p = 0.589$ $p = 0.589$ $p = 0.442$ $n 0.6$ 43^{b} $F_{2,39} = 3.228$ $F_{1,39} = 0.402$ $p = 0.589$ $p = 0.972$ $F_{1,40} < 0.001$ $p = 0.050$ $p = 0.718$ $p = 0.050$ $p = 0.718$ $p = 0.050$ $p = 0.718$		^2 5	$\Delta \Delta$		
1000000000000000000000000000000000000	Body Mass, g	2.0			
% Fat $log10$ 44 $F_{2,40} = 1.625$ $F_{1,40} = 2.240$ $p = 0.142$ % Fat $^{\circ}0.5$ 44 $F_{2,40} = 0.136$ $F_{1,40} = 0.001$ $p = 0.873$ % Lean $^{\circ}0.5$ 44 $F_{2,40} = 2.178$ $F_{1,40} = 5.503$ $p = 0.126$ % Lean $^{\circ}0.6$ 44 $F_{2,40} = 2.178$ $F_{1,40} = 5.503$ $p = 0.024$ % Change in massnone44 $F_{2,40} = 0.139$ $p = 0.871$ $F_{1,40} = 0.198$ $p = 0.871$ % Change in massnone 43^{b} $F_{2,39} = 2.308$ $p = 0.113$ $F_{1,39} = 1.907$ $p = 0.113$ % Change in % fatnone 43^{b} $F_{2,39} = 0.537$ $p = 0.589$ $F_{1,39} = 0.604$ $p = 0.589$ % Change in % fatnone 43^{b} $F_{2,39} = 0.537$ $p = 0.387$ $F_{1,39} = 0.402$ $p = 0.998$ $p = 0.050$ % Change in % leannone 43^{b} $F_{2,39} = 3.228$ $F_{1,39} = 0.402$ $p = 0.718$, <u> </u>	log10	44		
% Fat $p = 0.210$ $p = 0.142$ $^{\circ}$ M Fat $^{\circ}$ M S Fat $p = 0.136$ $F_{1,40} = 0.001$ $^{\circ}$ M S Lean $^{\circ}$ M S S S S S S S S S S S S S S S S S S		-		1	1
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% Lean $p = 0.126$ $p = 0.024$ none44 $F_{2,40} = 0.139$ $F_{1,40} = 0.198$ $p = 0.871$ $p = 0.871$ $p = 0.659$ none 43^{b} $F_{2,39} = 2.308$ $F_{1,39} = 1.907$ $p = 0.113$ $p = 0.113$ $p = 0.175$ none 44 $F_{2,40} = 0.032$ $F_{1,40} = 0.880$ $p = 0.969$ $p = 0.969$ $p = 0.354$ none 43^{b} $F_{2,39} = 0.537$ $F_{1,39} = 0.604$ $p = 0.589$ $p = 0.442$ none 44 $F_{2,40} = 0.972$ $F_{1,40} < 0.001$ $p = 0.387$ $p = 0.998$ none 43^{b} $F_{2,39} = 3.228$ $F_{1,39} = 0.402$ $p = 0.050$ $p = 0.718$ none 44 $F_{2,40} = 0.009$ $F_{1,40} = 2.245$		~0. 3		$n - 0 \times 13$	n - (1 y / 1)
% Lean $p = 0.126$ $p = 0.024$ none44 $F_{2,40} = 0.139$ $F_{1,40} = 0.198$ $p = 0.871$ $p = 0.871$ $p = 0.659$ none 43^{b} $F_{2,39} = 2.308$ $F_{1,39} = 1.907$ $p = 0.113$ $p = 0.113$ $p = 0.175$ none 44 $F_{2,40} = 0.032$ $F_{1,40} = 0.880$ $p = 0.969$ $p = 0.969$ $p = 0.354$ % Change in % fatnone 43^{b} $F_{2,39} = 0.537$ $F_{1,39} = 0.604$ $p = 0.387$ $p = 0.998$ $p = 0.387$ $p = 0.998$ none 43^{b} $F_{2,39} = 3.228$ $F_{1,39} = 0.402$ $p = 0.050$ $p = 0.718$ $p = 0.718$ $p = 0.050$ $p = 0.718$ $F_{2,40} = 0.009$		^5.0	44	$F_{2, 40} = 2.178$	$F_{1, 40} = 5.503$
$p = 0.871$ $p = 0.659$ % Change in massnone 43^{b} $F_{2,39} = 2.308$ $F_{1,39} = 1.907$ $p = 0.113$ $p = 0.113$ $p = 0.113$ $p = 0.175$ none 44 $F_{2,40} = 0.032$ $F_{1,40} = 0.880$ $p = 0.969$ $p = 0.969$ $p = 0.969$ $p = 0.354$ none 43^{b} $F_{2,39} = 0.537$ $F_{1,39} = 0.604$ $p = 0.589$ $p = 0.589$ $p = 0.442$ none 44 $F_{2,40} = 0.972$ $F_{1,40} < 0.001$ $p = 0.387$ $p = 0.387$ $p = 0.998$ none 43^{b} $F_{2,39} = 3.228$ $F_{1,39} = 0.402$ $p = 0.718$ $p = 0.050$ $p = 0.718$ none 44 $F_{2,40} = 0.009$ $F_{1,40} = 2.245$	% Lean			$n \equiv 0.120$	n = 0.024
% Change in mass $p = 0.113$ $p = 0.175$ none44 $F_{2,40} = 0.032$ $F_{1,40} = 0.880$ $p = 0.969$ $p = 0.969$ $p = 0.354$ none $43^{\rm b}$ $F_{2,39} = 0.537$ $F_{1,39} = 0.604$ $p = 0.589$ $p = 0.442$ none44 $F_{2,40} = 0.972$ $F_{1,40} < 0.001$ $p = 0.387$ $p = 0.998$ none $43^{\rm b}$ $F_{2,39} = 3.228$ $F_{1,39} = 0.402$ $p = 0.050$ $p = 0.718$ none 44 $F_{2,40} = 0.009$ $F_{1,40} = 2.245$		none	44	$r_{2,40} = 0.139$ n = 0.871	$r_{1,40} = 0.198$ n = 0.650
% Change in mass $p = 0.113$ $p = 0.175$ none44 $F_{2,40} = 0.032$ $F_{1,40} = 0.880$ $p = 0.969$ $p = 0.969$ $p = 0.354$ none $43^{\rm b}$ $F_{2,39} = 0.537$ $F_{1,39} = 0.604$ $p = 0.589$ $p = 0.442$ none 44 $F_{2,40} = 0.972$ $F_{1,40} < 0.001$ $p = 0.387$ $p = 0.998$ none $43^{\rm b}$ $F_{2,39} = 3.228$ $F_{1,39} = 0.402$ $p = 0.050$ $p = 0.718$ none 44 $F_{2,40} = 0.009$ $F_{1,40} = 2.245$			(a h	$F_{2,39} = 2.308$	$F_{1,39} = 1.907$
None44 $F_{2,40} = 0.032$ $F_{1,40} = 0.880$ None44 $p = 0.969$ $p = 0.354$ None43 ^b $F_{2,39} = 0.537$ $F_{1,39} = 0.604$ None44 $p = 0.589$ $p = 0.442$ None44 $F_{2,40} = 0.972$ $F_{1,40} < 0.001$ $p = 0.387$ $p = 0.998$ None43 ^b $F_{2,39} = 3.228$ $F_{1,39} = 0.402$ $p = 0.050$ $p = 0.718$ None44 $F_{2,40} = 0.009$ $F_{1,40} = 2.245$	0/ Channel in march	none		p = 0.113	p = 0.175
% Change in % fatnone 43^{b} $F_{2,39} = 0.537$ $F_{1,39} = 0.604$ $p = 0.589$ % Change in % leannone 44 $F_{2,40} = 0.972$ $p = 0.387$ $F_{1,40} < 0.001$ $p = 0.387$ % Change in % leannone 43^{b} $F_{2,39} = 3.228$ $p = 0.050$ $F_{1,39} = 0.402$ $p = 0.718$ none 44 $F_{2,40} = 0.009$ $F_{1,40} = 2.245$	% Change in mass	none	11	$F_{2,40} = 0.032$	$F_{1, 40} = 0.880$
% Change in % fat $p = 0.589$ $p = 0.442$ none44 $F_{2,40} = 0.972$ $F_{1,40} < 0.001$ $p = 0.387$ $p = 0.998$ none43 ^b $F_{2,39} = 3.228$ $F_{1,39} = 0.402$ $p = 0.050$ $p = 0.718$ none44 $F_{2,40} = 0.009$ $F_{1,40} = 2.245$		none	44	<i>p</i> = 0.969	<i>p</i> = 0.354
% Change in % fatnone44 $F_{2,40} = 0.972$ $F_{1,40} < 0.001$ % Change in % leannone43 ^b $F_{2,39} = 3.228$ $F_{1,39} = 0.402$ % Change in % leannone44 $F_{2,40} = 0.009$ $p = 0.718$		none	43 ^b	$F_{2,39} = 0.537$	$F_{1,39} = 0.604$
% Change in % lean $p = 0.387 \qquad p = 0.998 \\ F_{2,39} = 3.228 \qquad F_{1,39} = 0.402 \\ p = 0.050 \qquad p = 0.718 \\ F_{2,40} = 0.009 \qquad F_{1,40} = 2.245$	% Change in % fat			p = 0.389 $F_{2,40} = 0.072$	p = 0.442 $F_{1,40} < 0.001$
% Change in % lean none 43^{b} $F_{2,39} = 3.228$ $F_{1,39} = 0.402$ p = 0.050 $p = 0.718F_{2,40} = 0.009 F_{1,40} = 2.245$		none	44	p = 0.387	p = 0.998
% Change in % lean $F_{2,40} = 0.009$ $F_{1,40} = 2.245$.	1.2p		
none 44 $F_{2, 40} = 0.009$ $F_{1, 40} = 2.245$ p = 0.992 $p = 0.142$	% Change in % lean	none	45	p = 0.050	p = 0.718
p = 0.992 $p = 0.142$	/o Change III /o Icall	none	44	$F_{2, 40} = 0.009$	$F_{1, 40} = 2.245$
				p = 0.992	p = 0.142

Data were from general linear models [Univariate GLM ANOVA (SPSS, Chicago, IL)] and transformed^a as necessary to improve normality of residuals. Significance levels (P-values: bold indicates p < 0.05) for the effect of maternal (G₁) exercise group (none, post-weaning only, post-weaning and gestational). Age, days since birth at the time of phenotypic measurement was included as a covariate where appropriate. ^bRemoval of one or more outliers based on formal statistical test [37,38]. ^cAt ~8 weeks of age body composition measures were taken immediately prior to (in) and following (out) 6 days of wheel access. Percent body fat (and lean) was calculated as (fat mass/body mass)*100. Percent change variables were calculated as [(out - in)/in]*100.

Table S5 Estimated marginal means and standard errors from SPSS, corresponding to tests (separate-sex analyses) presented in Supplementary Table 4. Note that data transformation is not uniform for males and females for a given trait. Means represent the effects of maternal exercise condition (none, post-weaning only, post-weaning and gestational) on offspring (G_2) body weight, body composition, and change in body weight and composition as a result of exercise.

Trait	None					Post-v	veaning		Po	ost-weaning	g & gestati	onal
	Male		Fe	male	Ν	Iale	Fe	male	Male		Female	
	Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE
\sim 3 weeks of age												
Body Mass, g	16.307	0.519	15.367	0.421	15.607	0.519	15.493	0.421	14.700	0.519	14.153	0.421
% Fat	1.112	0.021	732.147	55.320	1.094	0.021	564.832	55.320	1.092	0.021	653.133	55.320
% Lean	85.367	0.684	1.920	0.003	84.652	0.637	1.930	0.003	84.954	0.598	1.926	0.003
~ 4 weeks of age												
Body Mass, g	25.717	0.539	1.314	0.010	25.570	0.537	1.318	0.010	24.493	0.557	1.284	0.011
% Fat	3.303	0.075	13.660	0.589	3.300	0.075	12.605	0.589	3.329	0.078	13.229	0.610
% Lean	86.988	0.538	82.747	0.597	86.637	0.536	83.419	0.598	86.596	0.557	82.982	0.619
~5 weeks of age												
Body Mass, g	1.480	0.009	1.391	0.010	1.485	0.009	1.401	0.011	1.489	0.009	1.382	0.011
% Fat	1.089	0.021	16.533	0.820	1.130	0.020	16.245	0.850	1.079	0.021	16.029	0.850
% Lean	83.752	0.556	79.359	0.793	82.681	0.537	78.499	0.822	84.342	0.556	80.399	0.821
~6 weeks of age												
Body Mass, g	33.082	0.599	1.413	0.014	33.313	0.597	1.416	0.014	33.299	0.620	1.410	0.014
% Fat	1.106	0.023	17.001	0.877	1.133	0.023	16.276	0.877	1.075	0.024	16.896	0.908
% Lean	$3.4*10^{11}$	$1.6*10^{10}$	78.949	0.809	$3.2*10^{11}$	$1.6*10^{10}$	79.909	0.810	$3.6*10^{11}$	$1.6*10^{10}$	79.347	0.838
~7 weeks of age												
Body Mass, g	1.544	0.008	1.427	0.013	1.549	0.008	1.423	0.013	1.541	0.009	1.421	0.014
~8-9 weeks of age ^a												
Body Mass, g	38.802	0.697	1.436	0.014	38.194	0.695	1.446	0.014	38.461	0.721	1.434	0.014
% Fat	1.119	0.034	15.811	1.152	1.153	0.034	14.938	1.153	1.063	0.035	16.780	1.193
% Lean	$3.4*10^{9}$	$1.9*10^{8}$	78.520	1.012	$3.2*10^{9}$	$1.9*10^{8}$	79.469	1.012	$3.7*10^{9}$	$2.0*10^{8}$	78.489	1.048
Post exercise												
Body Mass, g	$8.3*10^{3}$	372.5	1.424	0.012	$8.4*10^{3}$	371.3	1.435	0.012	$8.0*10^{3}$	385.4	1.421	0.013
% Fat	0.948	0.043	3.272	0.118	1.010	0.043	3.185	0.118	0.900	0.044	3.232	0.122
% Lean	$4.4*10^{9}$	$2.2*10^{8}$	81.935	0.816	$4.1*10^{9}$	$2.2*10^{8}$	82.523	0.817	$4.7*10^{9}$	$2.3*10^{8}$	82.093	0.845
% change in mass	-4.576	1.193	-2.594	1.300	-2.877	1.151	-2.340	1.301	-6.441	1.193	-2.811	1.346
% change in % fat	-33.236	5.269	-32.140	5.137	-26.939	5.086	-27.199	5.139	-33.688	5.272	-37.515	5.320
% change in % lean	0.507	0.908	1.566	0.901	1.495	0.876	1.458	0.902	-1.656	0.908	1.624	0.933

^aAt ~8 weeks of age body composition measures were taken immediately prior to (in) and following (out) 6 days of wheel access. Percent body fat (and lean) was calculated as (fat mass/body mass)*100. Percent change variables were calculated as [(out - in)/in]*100.