Fig. S1. Swimming performance of female offspring. Full data set of U_{crit} (A, B) and sprint (C, D) performance of female offspring from mothers raised at 21°C (left panels) and at 28°C (right panels), and matched with fathers raised at 21°C (open blue circles) and 28°C (closed red circles). Means ± s.e. are shown as horizontal and vertical lines, respectively, and data points from individual fish are shown (n = 18-20 fish per treatment).
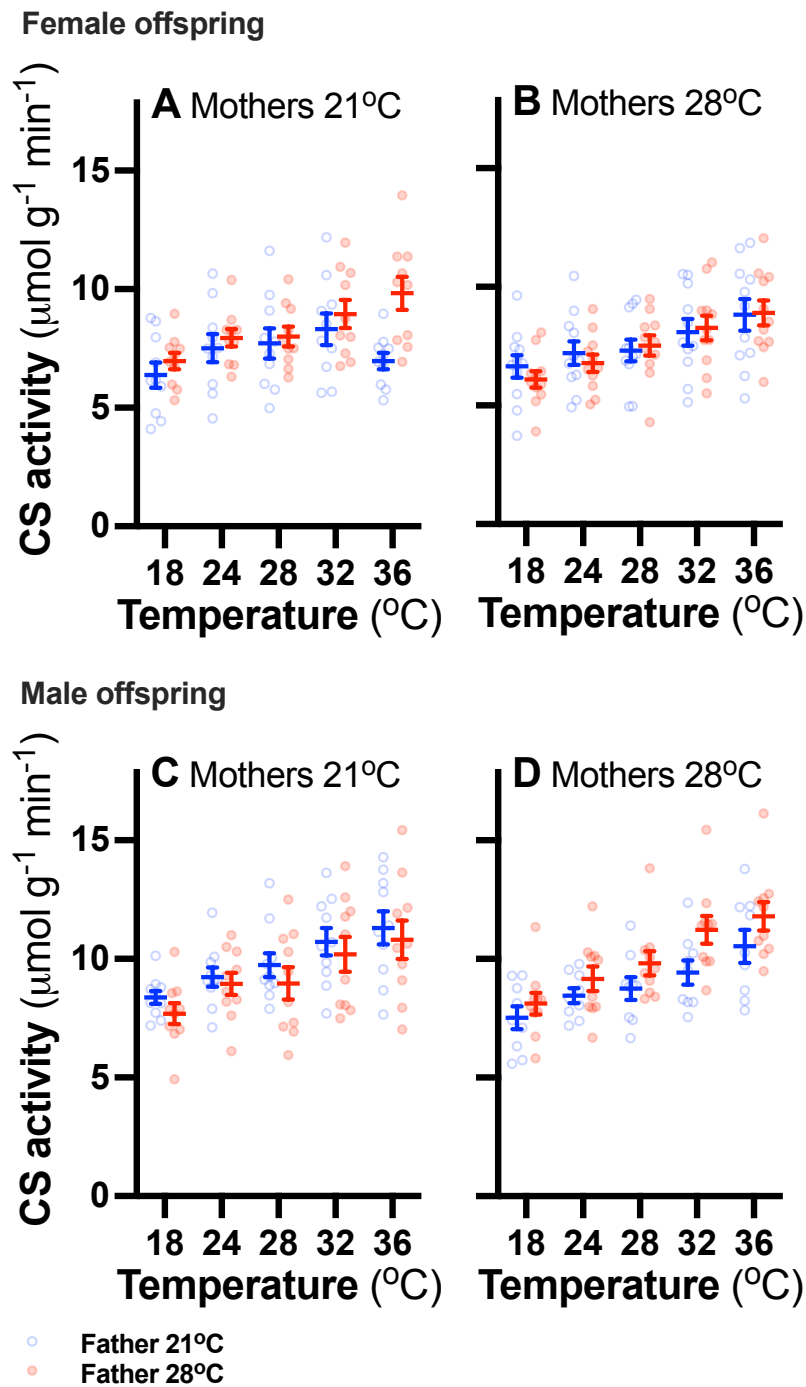
Female offspring

Male offspring

Fig. S2. Citrate synthase activity. Thermal performance curves of female (A, B) and male (C, D) offspring from mothers raised at 21°C (left panels) and 28°C (right panels), and matched with fathers raised at 21°C (open blue circles) and 28°C (filled red circles). Citrate synthase (CS) activity, an indicator of mitochondrial abundance, was affected by interactions between offspring sex, parental developmental temperatures, and acute test temperature (Table S2). Means ± s.e. and data points from individual fish are shown (n = 9-11 fish per treatment).

Female offspring
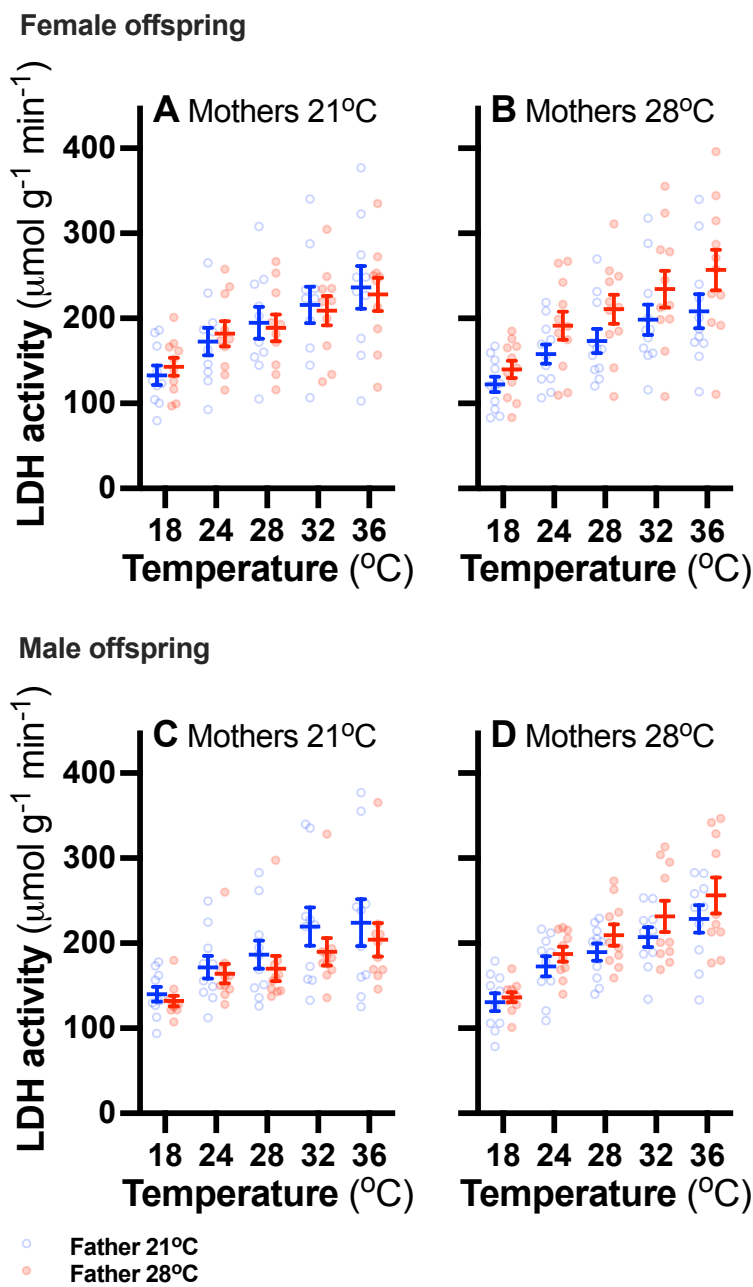

Male offspring

Father 21ºC
Father 28ºC

Fig. S3. Lactate dehydrogenase activity. Thermal performance curves of female (A, B) and male (C, D) offspring from mothers raised at 21ºC (left panels) and 28ºC (right panels), and matched with fathers raised at 21ºC (open blue circles) and 28ºC (filled red circles). Lactate dehydrogenase (LDS) activity was affected by interactions between offspring sex, parental developmental temperatures, and acute test temperature (Table S2). Means ± s.e. and data points from individual fish are shown (n = 9-11 fish per treatment).

Table S1. Results from the full model permutational analysis of body mass and length. Probabilities from analyses of independent factors (mother T and father T = temperatures at which mothers and fathers were raised, respectively; sex = offspring sex), and the random factor parent family (parent id; p-values and % of total variance) are shown. Residual df = 153.

Source	Length	Mass
sex	<0.0001	<0.0001
mother T	<0.0001	<0.0001
father T	<0.0001	0.48
mother T*father T	0.12	0.28
sex*mother T	0.21	0.38
sex*father T	0.0044	1
sex*mother T*father T	0.15	0.20
parent id	<0.0001	<0.0001
	27.0%	38.0%

Table S2. Results from the full model permutational analysis of swimming performance and enzyme activities. Probabilities from analyses of independent factors (mother T and father T = temperatures at which mothers and fathers were raised, respectively; sex = offspring sex; test T = acute test temperature), and the random factor parent family (parent id; p-values and % of total variance) are shown. The four-way interaction was not included in the analysis. Individual id was used as a random factor; within residual df = 620 and 296 for swimming performance and enzyme activities, respectively.

Source	U_{crit}	Sprint	CS	LDH
sex	0.015	0.23	<0.0001	0.90
mother T	0.22	0.016	0.27	0.47
father T	0.00040	0.13	<0.0001	<0.0001
test T	<0.0001	<0.0001	<0.0001	<0.0001
sex*mother T	0.24	0.33	0.35	0.92
sex*father T	0.64	0.55	<0.0001	<0.0001
sex*testT	0.045	0.27	0.0038	1
mother T*father T	0.00020	0.0084	0.68	0.17
mother T*test T	0.019	<0.0001	0.98	0.064
fatherT*test T	0.0020	0.33	0.078	0.66
sex*mother T*father T	1	0.37	0.034	0.58
sex*mother T*test T	0.72	0.51	1	0.61
sex*father T*test T	0.64	1	0.99	1
mother T*father T*test T	<0.0001	1	0.18	0.042
parent id	<0.0001	<0.0001	<0.0001	<0.0001
	36.8%	11.3%	33.3%	21.7%