

Table S1: Correlation between maternal behaviors and *Oxtr* methylation, Table S2: The development of F1 female rats, Table S3: The litter size and sex ratio in F2 offspring, Table S4: Primers sequences.

Supplementary Materials Table S1
Correlation between maternal behaviors and *Oxtr* methylation

		CpG sites											
	<i>Oxtr</i>	1	2	3	4	5	6	7	8	9	10	11	12
<i>Oxtr</i> expression	1.00	-0.31	-0.30	-0.29	-0.28	-0.22	-0.16	0.10	-0.10	-0.43*	-0.27	-0.16	-0.35
First retrieval latency	-0.63***	0.38	0.28	0.40	0.45*	0.05	0.03	-0.25	0.24	0.32	0.35	0.19	0.35
Retrieval time	0.61***	-0.24	-0.10	-0.26	-0.31	-0.14	-0.20	0.14	-0.06	-0.30	-0.25	-0.11	-0.25
Retrieved pups	0.37	0.04	0.13	0.06	-0.20	-0.09	-0.16	0.00	-0.11	-0.21	0.08	-0.07	-0.12
Licking time	0.62***	-0.38	-0.39	-0.25	-0.39	-0.27	-0.21	-0.05	-0.29	-0.43*	-0.26	-0.31	-0.38
Nursing time	-0.31	-0.15	-0.09	0.02	-0.26	-0.14	-0.07	-0.21	-0.30	-0.08	-0.02	-0.11	-0.15
Self-grooming time	0.08	0.08	0.11	0.20	-0.07	0.03	0.12	0.03	0.03	0.07	0.13	0.19	0.08

		CpG sites												
		13	14	15	16	17	18	19	20	21	22	23	24	25
<i>Oxtr</i> expression	-0.35	-0.36	-0.33	-0.41*	-0.45*	-0.34	-0.32	0.10	0.05	-0.19	-0.04	0.15	-0.01	
First retrieval latency	0.23	0.39	0.31	0.52*	0.46*	0.34	0.20	-0.05	0.07	0.21	0.12	-0.23	-0.11	
Retrieval time	-0.25	-0.28	-0.28	-0.34	-0.27	-0.30	-0.41*	0.08	-0.15	-0.13	-0.02	0.17	0.03	
Retrieved pups	-0.17	-0.05	-0.23	-0.21	-0.17	-0.22	-0.13	-0.06	-0.04	-0.18	-0.21	0.09	0.08	
Licking time	-0.34	-0.29	-0.47*	-0.57***	-0.61***	-0.46*	-0.16	-0.04	0.00	-0.37	-0.14	0.31	0.17	
Nursing time	0.01	0.11	-0.17	-0.13	-0.07	-0.19	-0.03	0.13	-0.10	-0.23	-0.26	0.03	0.17	
Self-grooming time	-0.19	0.21	0.00	-0.02	-0.17	-0.25	-0.08	-0.10	0.07	-0.15	0.04	0.34	0.29	

-1.001.00

Correlation coefficient

Supplementary Materials Table S2
The development of F1 female rats

Table S2: Effects of prenatal DEHP exposure and childhood exercise on body weight of F1 females

Observed categories	Groups (Mean ± SEM)				Effect (F value)	
	C	Cex	D	Dex	DEHP	Exercise
Postnatal 3 weeks	40.26±0.96	40.35±1.03	38.69±0.34	38.57±0.36	5.007*	0.000
Postnatal 4 weeks	60.16±0.96	61.43±0.84	59.53±0.85	58.38±0.75	4.677*	0.006
Postnatal 5 weeks	95.66±2.34	93.71±1.95	92.53±1.45	91.79±1.20	1.978	0.564
Postnatal 6 weeks	140.82±3.02	135.37±2.84	136.73±3.07	132.13±3.57	1.366	2.566
Postnatal 7 weeks	180.70±3.11	172.40±3.21	178.04±2.70	171.07±2.70	0.460	6.740*
Postnatal 8 weeks	235.66±2.92	224.38±4.08	231.33±4.02	222.66±4.23	0.616	6.722*

C: vehicle control; Cex: exercised vehicle; D: DEHP exposure; Dx: exercised DEHP
*: p < 0.05

Supplementary Materials Table S3
The litter size and sex ratio in F2 offspring

Observed categories	Groups (Mean ± SEM)				Effect (F value)	
	C	Cex	D	Dex	DEHP	Exercise
Number of male offspring	6.08±0.36	5.75±0.35	5.83±0.32	5.50±0.38	0.501	0.891
Number of female offspring	6.50±0.23	5.75±0.39	6.58±0.29	6.17±0.32	0.637	3.466
Male-to-female ratio	0.93±0.04	1.07±0.11	0.91±0.07	0.91±0.07	1.385	0.825

C: vehicle control; Cex: exercised vehicle; D: DEHP exposure; Dx: exercised DEHP

Supplementary Materials Table S4
Primers sequences

Primer Name	Primer Sequence
Primers for RT-PCR	
Forward	5'-CTGGATATGCGCAAGTGTCTTC-3'
Reverse	5'-GAAGGAAGCGCCCTAAAGGTAT-3'
Bisulfite specific primers	
Oxtr_rn_CpG1-17_BSP-255bp-F	5'-GGAAGTTGTATTGTAGTGGATGGTTTT-3'
Oxtr_rn_CpG1-17_BSP-255bp-R	5'-AATACTACAACCTCCRACTCCAACATAA-3'
Oxtr_rn_CpG10-25_BSP-291bp-F	5'-GGATGTYGTAGGAAGATAAGAGAGAGTT-3'
Oxtr_rn_CpG10-25_BSP-291bp-R	5'-CACTTTCCAAAATTCCAATATCTCTAAA-3'
Illumina primer overhang universal adapter	5'-AATGATACGGCGACCACCGAGATCTACACTCTTTCCCTACACGACGCTCTTCCGATCT-3'
Illumina primer overhang index adapter	5'-GATCGGAAGAGCACACGTCTGAACTCCAGTCAC-XX XXXXXX-ATCTCGTATGCCGTCTTCTGCTTG-3'