

## ELECTRONIC SUPPLEMENTARY MATERIAL (ESM)

**ESM Table 1: Offspring energy intake**

	Con	Ob	Ob-Met	p-value
<b>Males (kJ)</b>	785 [746-866] n=12	839 [801-914] n=9	849 [741-928] n=12	ns
<b>Females (kJ)</b>	690 [676-707] n=12	696 [659-751] n=12	709 [658-790] n=11	ns

Energy intake data was collected between 11 and 11.5 months of age.

**ESM Table 2: Adipose tissue weights**

	Male offspring				Female offspring			
	Con n=12	Ob n=8	Ob-Met n=11	p	Con n=12	Ob n=12	Ob-Met n=11	p
<b>Absolute weight (mg)</b>								
<b>BW (g)</b>	37.2 ± 1.0	41.8 ± 1.9	40.5 ± 2.1	ns	29.9 ± 0.9	31.0 ± 1.1	35.1 ± 1.4**,+†	<0.001
<b>gWAT</b>	1771 [1206-2170]	2437** [2255-2920]	2288 [1569-2307]	<0.01	1203 ± 102	1504 ± 135	2053 ± 147***,+†	<0.001
<b>iWAT</b>	539 ± 44	933 ± 80**	854 ± 99*	<0.01	466 ± 42	621 ± 51	809 ± 73***	<0.001
<b>rWAT</b>	409 ± 37	410 ± 32	379 ± 32	ns	244 ± 28	274 ± 21	341 ± 23*	<0.05
<b>sWAT</b>	782 ± 111	1264 ± 115	1239 ± 186	<0.05	795 ± 81	1083 ± 115	1632 ± 182***,+†	<0.001
<b>VAT</b>	2603 ± 242	3834 ± 231*	3237 ± 301	<0.05	1913 ± 165	2376 ± 208	3203 ± 235***,+†	<0.001
<b>BAT</b>	111 ± 8	158 ± 16	157 ± 21	0.058	74 ± 5	80 ± 6	114 ± 10**,+††	<0.001
<b>Relative to BW (%)</b>								
<b>gWAT</b>	4.47 ± 0.33	5.95 ± 0.20**	5.12 ± 0.20*	<0.01	3.96 ± 0.23	4.76 ± 0.29	5.78 ± 0.21***,+†	<0.001
<b>iWAT</b>	1.46 ± 0.09	2.21 ± 0.14**	2.04 ± 0.16**	<0.01	1.53 ± 0.10	1.98 ± 0.12*	2.26 ± 0.11***	<0.001
<b>rWAT</b>	1.09 ± 0.08	0.99 ± 0.08	0.92 ± 0.05	ns	0.80 ± 0.07	0.86 ± 0.05	0.97 ± 0.04	ns
<b>sWAT</b>	2.04 ± 0.25	3.00 ± 0.19	2.90 ± 0.35	<0.05	2.61 ± 0.19	3.42 ± 0.26	4.53 ± 0.33***,+†	<0.001
<b>VAT</b>	7.01 ± 0.52	9.15 ± 0.31**	8.22 ± 0.29	<0.01	6.29 ± 0.38	7.87 ± 0.33***	9.01 ± 0.32†	<0.001
<b>BAT</b>	111 ± 8	158 ± 16	157 ± 21	<0.05	235 [220-275]	240 [220-310]	300***,+† [280-370]	<0.01

All data reflects depot weights from 16-hour fasted animals at 12 months of age. \* $p < 0.05$ , \*\* $p < 0.01$ ,

\*\*\* $p < 0.001$  vs Con offspring, † $p < 0.05$ , †† $p < 0.01$ , ††† $p < 0.001$  vs Ob offspring on one-way ANOVA with

Tukey's multiple comparison test or Kruskal-Wallis test for non-parametric data (absolute male gWAT

and relative female BAT weight). Con = offspring of control-fed dams, Ob = offspring of obese dams,

Ob-Met = offspring of obese metformin-treated dams. BAT = brown adipose tissue, gWAT = gonadal

WAT, iWAT = intraperitoneal WAT, rWAT = retroperitoneal WAT, sWAT = inguinal subcutaneous

WAT, VAT = visceral adipose tissue (combined gWAT, rWAT and sWAT), WAT = white adipose

tissue (combined VAT + sWAT).

**ESM Table 3: Age-related changes in epididymal adipocyte number**

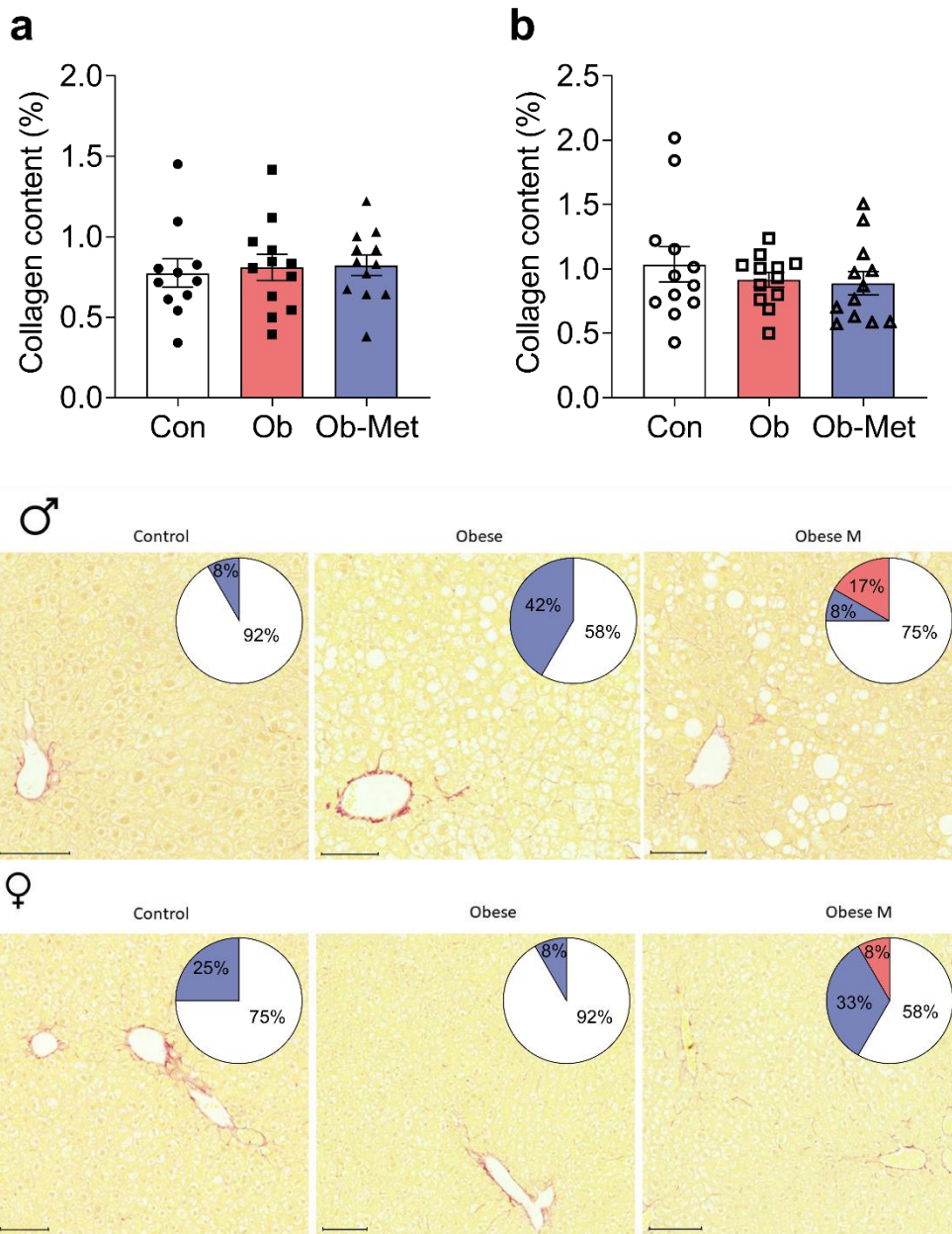
Male offspring							
x 10 <sup>6</sup> cells	Con	Ob	Ob-Met	p-value	Two-way ANOVA		
					Age	Group	Interaction
8 weeks	9.1 ± 0.2	11.8 ± 0.4***	13.3 ± 0.5***,†	<0.001			
12 months	13.9 ± 1.2 <sup>§</sup>	18.2 ± 0.8*, <sup>§§</sup>	14.9 ± 1.4	0.0393	p<0.001	p=0.0015	p=0.045 Con <sup>§</sup> , Ob <sup>§</sup>

Female offspring							
x 10 <sup>6</sup> cells	Con	Ob	Ob-Met	p-value	Two-way ANOVA p-values		
					Age	Group	Interaction
8 weeks	9.5 [8.1–10.7]	10.1 [8.1–11.2]	10.8 [8.8–11.5]	ns			
12 months	11.5 ± 0.4	10.9 ± 0.6	13.2 ± 0.6 <sup>†</sup>	0.0169	p<0.001	p=0.0227 Ob vs Ob-Met***	ns

<sup>§</sup>p<0.01, <sup>§§</sup>p<0.001 for age-related change in cell number. \*p<0.05 vs Con, \*\*\*p<0.001 vs Con, †p<0.05 vs Ob offspring on one-way (left columns) or two-way ANOVA (right columns). Data from 8-week-old mice was previously published by Schoonejans *et al.* 2021 [10].

**ESM Figure 1: Hepatic collagen content in male (a) and female (b) 12-month-old offspring assessed by picrosirius red staining.**



No significant differences were found. Pie charts refer to outcomes of pathological scoring for hepatic fibrosis: white = absent, blue = mild, light red = moderate. An outlier was excluded from (a) male Con (Grubb's method, outlier excluded value 2.30%). Con (white bars, circles) = offspring of control-fed dams, Ob (pink bars, squares) = offspring of obese dams, Ob-Met (blue bars, triangles) = offspring of obese metformin-treated dams. Closed symbols denote male offspring, open symbols denote female offspring. Scale bar = 100µm.