Oestrogen-dependent oxytocin dynamics in the hypothalamus of female rats

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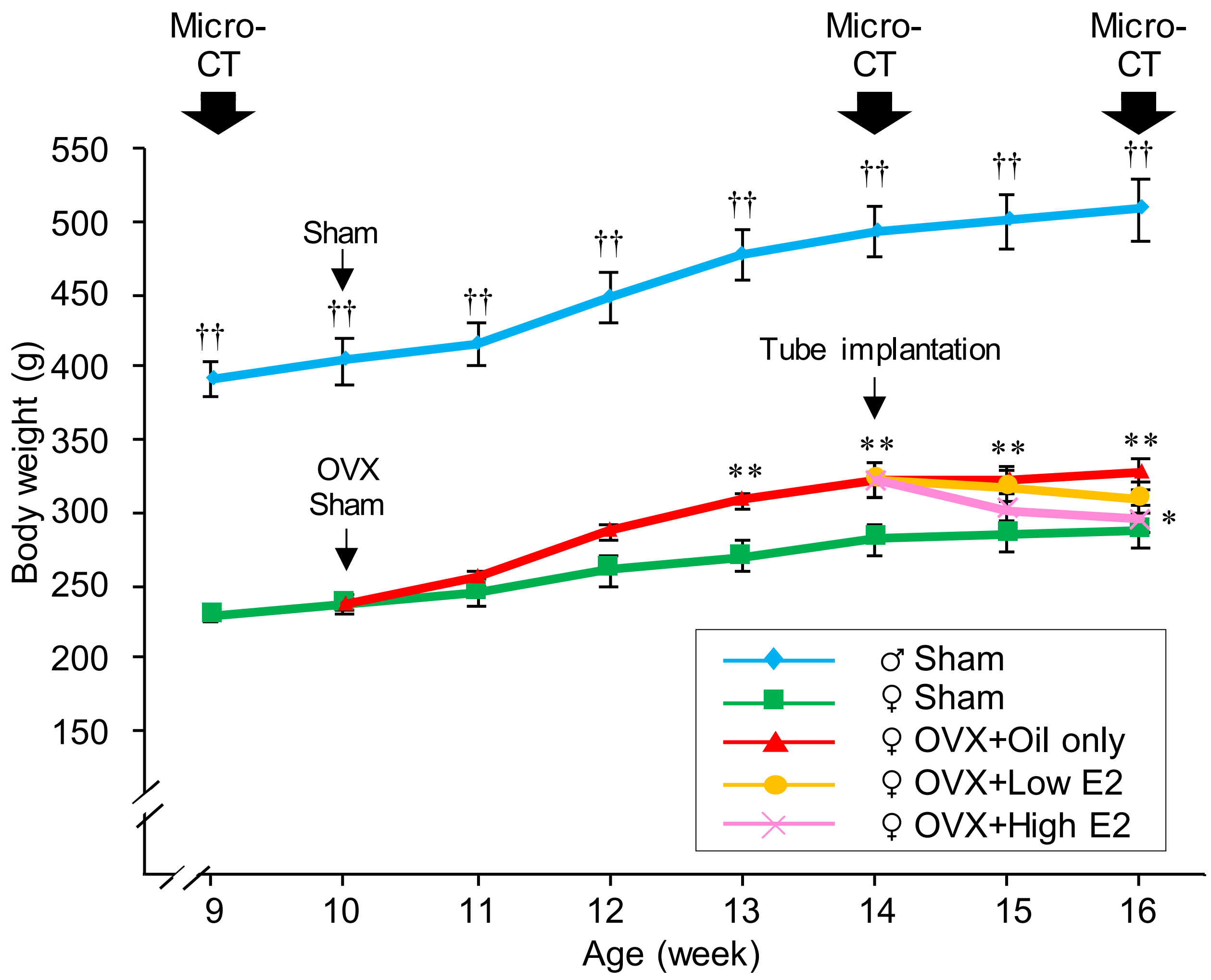
Supplement figure 1



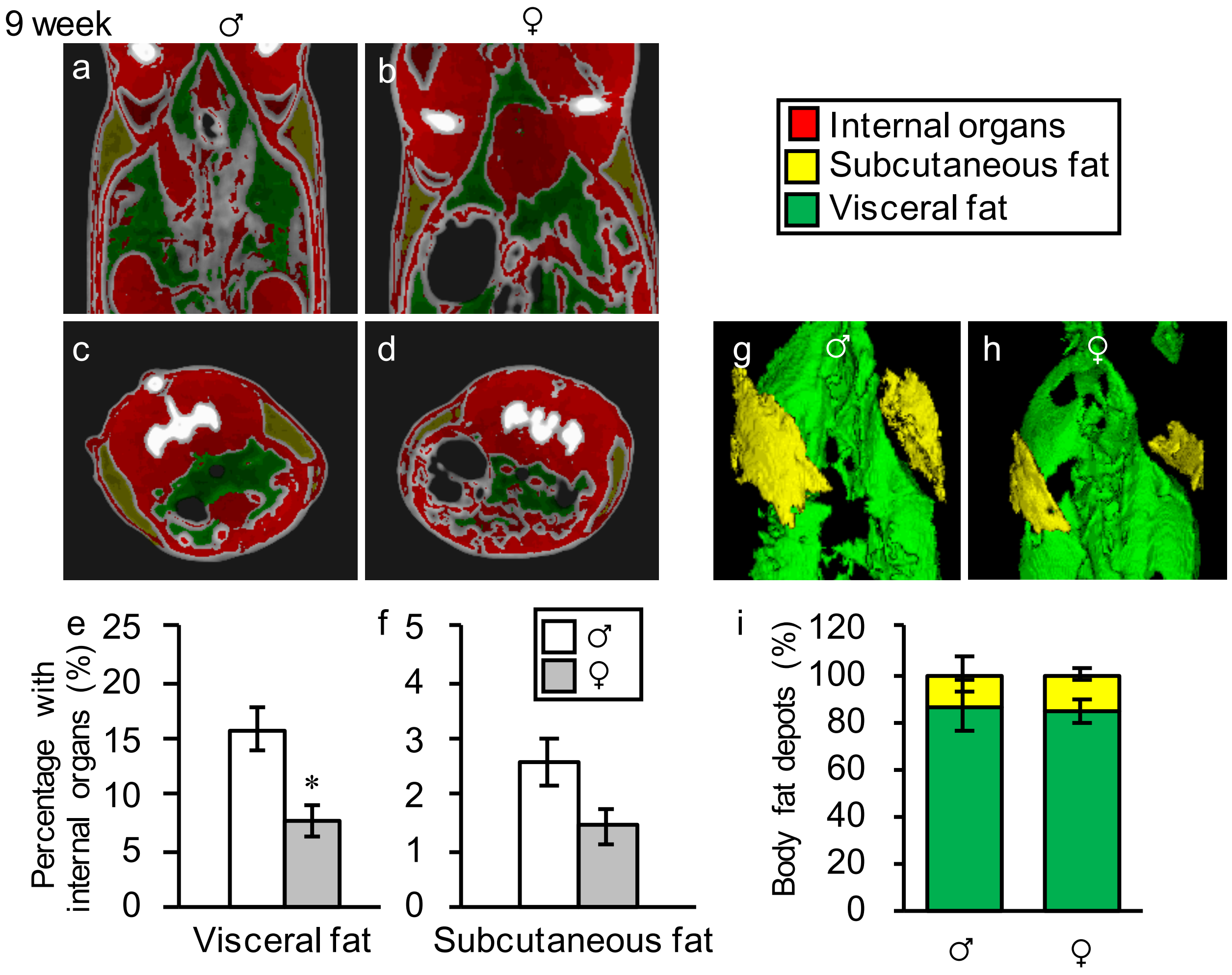
Supplementary Fig. 1
Relationship between body fat mass, sex, and oestrogen

Changes in body weight after treatment. Sham-operated male, sham operated female, and OVX female rats at 10 weeks of age. Tube implantation was performed for OVX female rats (oil only, low E2, and high E2 groups) at 14 weeks of age. Microcomputed tomography (micro-CT) was taken at 9, 14, and 16 weeks of age. The data are presented as the mean±SEM (repeated-measures ANOVA) (*P<0.05, compared with OVX + oil only and OVX + high E2 female rats; **P<0.01, compared with sham-operated female rats; ††P<0.01, compared with all female rats).

Micro-CT

Rats were anesthetised with an i.p. injection of a cocktail of three different anaesthetic agents (0.3 mg/kg of medetomidine, 4.0 mg/kg of midazolam, and 5.0 mg/kg of butorphanol) before undergoing micro-CT scanning. Body fat images were acquired by a micro-CT system (CosmoScan GX; Rigaku, Tokyo, Japan) with a resolution of 148×148×148 μm^3 (90 kVp, 88 μA, 555.33 ms integration time)[57]. The CT images of body fat were visualized using Analyze 12.0 software (AnalyzeDirect, Inc., KS, USA). The total fat volume in the body was measured from the base of the ensiform cartilage to the pelvic floor, and the fat volume was further distinguished into visceral and subcutaneous fat.

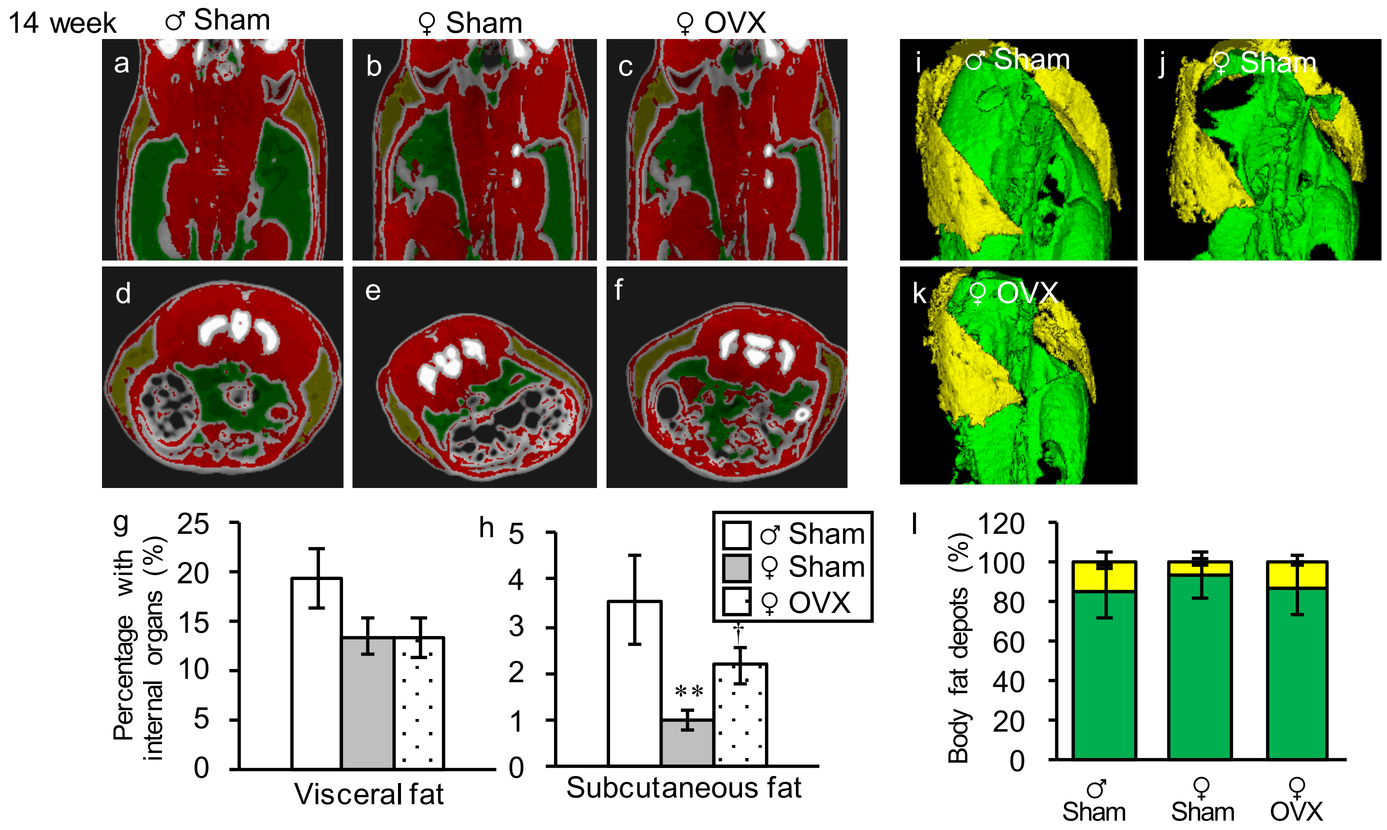
Supplement figure 2



Supplementary Fig. 2
Micro-CT images of 9-week-old male and female rats

Percentages of visceral (green in colour) and subcutaneous fat (yellow in colour) to internal organs (red in colour) in male and female rats are shown. Three-dimensional imaging of visceral (green in colour) and subcutaneous fat (yellow in colour) and assessment of body fat proportions were performed using micro-CT. The data are presented as the mean±SEM (one-way ANOVA) (*P<0.05, compared with visceral fat of male rats).

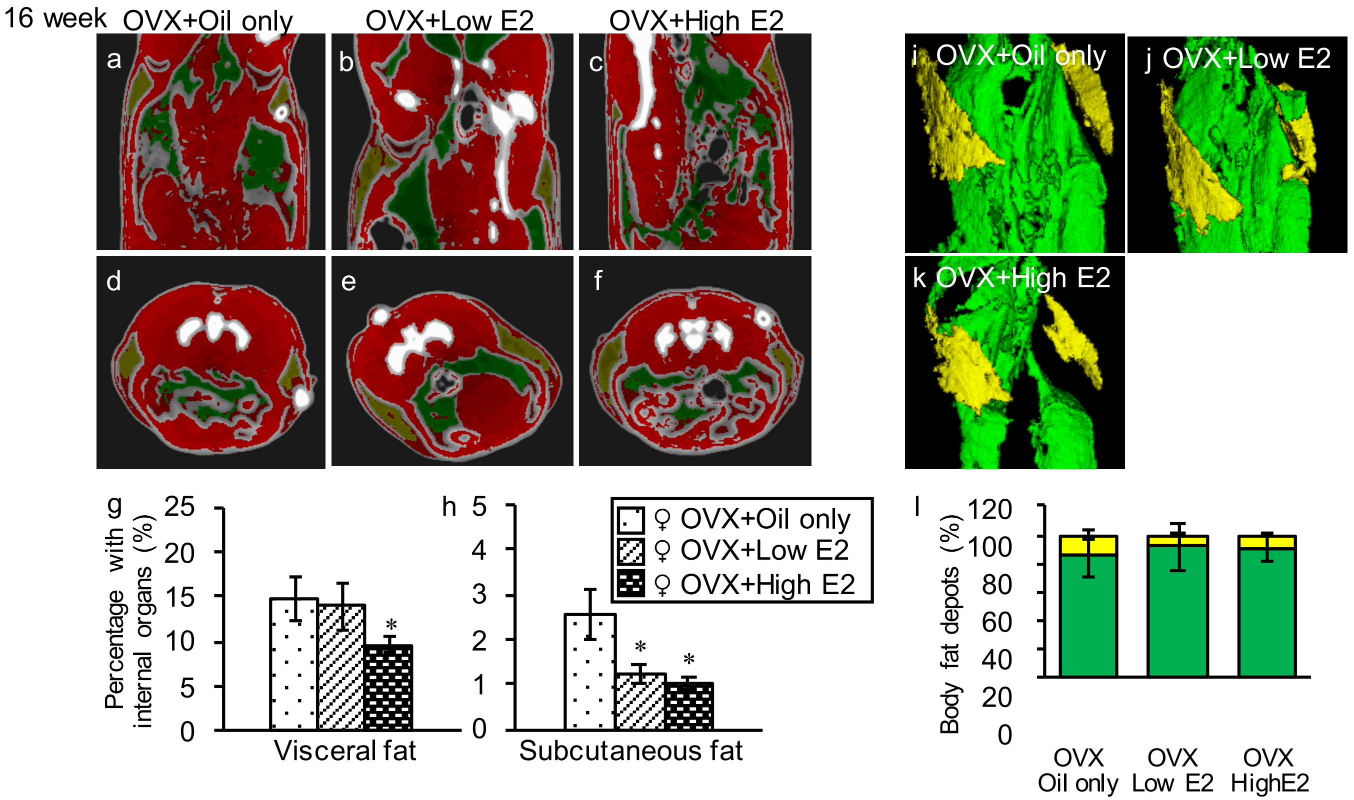
Supplement figure 3



Supplementary Fig. 3
Micro-CT images of 14-week-old sham-operated male, sham-operated female, and OVX female rats

Percentages of visceral (green in colour) and subcutaneous fat (yellow in colour) to internal organs (red in colour) in sham-operated male, sham-operated female, and OVX female rats are shown. Three-dimensional imaging of visceral (green in colour) and subcutaneous fat (yellow in colour) and assessment of body fat proportions were performed using micro-CT. The data are presented as the mean±SEM (one-way ANOVA) (**$P<0.01$, compared with sham-operated male rats; †$P<0.05$, compared with sham-operated female rats).

Supplement figure 4



Supplementary Fig. 4

Micro-CT images of 16-week-old rats in OVX + oil only, OVX + low E2, and OVX + high E2 groups

Percentage assessment and three-dimensional imaging of visceral (green in colour) and subcutaneous fat (yellow in colour) were performed using micro-CT. The data are presented as the mean±SEM (one-way ANOVA) (*P<0.05, compared with OVX + oil only group).