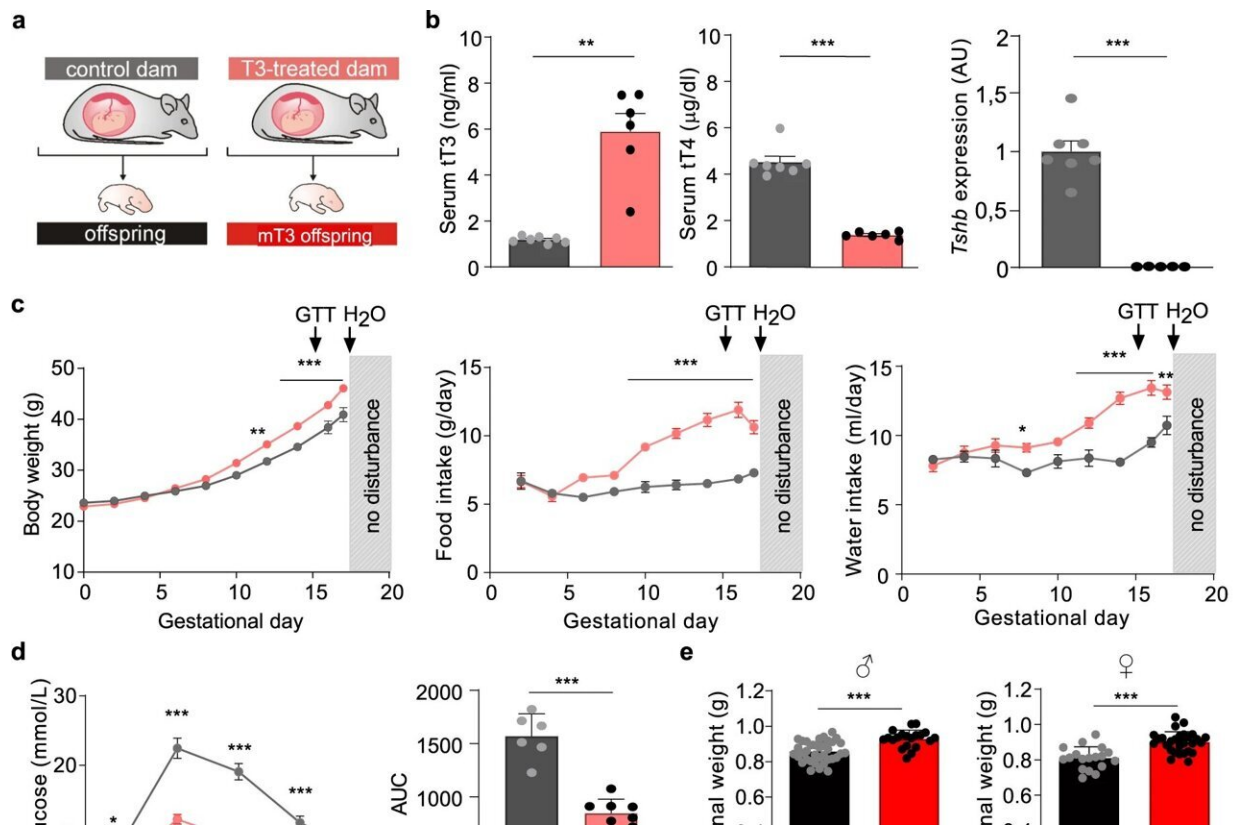


# Thyroid hormones in pregnant women found to control brown adipose tissue in offspring

October 25 2023



Effects of maternal T3 on dams and pups. **a** Breeding scheme of the T3-treated and control dams. **b** Serum levels of total T3 and T4 as well as pituitary *Tshb* mRNA expression in pregnant T3-treated (light red,  $n = 6$  for T3/T4 and  $n = 5$  for *Tshb*) and control (gray,  $n = 7$ ) dams at gestational day 17 (GD17). **c** Body weight development, food and water intake during pregnancy until GD17 with the timing of the glucose tolerance test (GTT) and the end of the T3 treatment indicated by H<sub>2</sub>O ( $n = 10$  per group). **d** Glucose i.p. tolerance test at GD14–15 (left panel) with area under the curve (AUC, right panel) in the pregnant dams ( $n$

= 6 (control) and 8 (T3-treated dams)). **e** Weight of the male and female embryos from control (black,  $n = 36$  males and  $n = 18$  females) or T3-treated mothers (red,  $n = 20$  males and  $n = 28$  females) at embryonic day E17.5. **f** Litter size ( $n = 12$  (control) and 10 (T3-treated dams)) and **g** birth weight ( $n = 29$  control males and 31 control females,  $n = 15$  males of T3-treated dams and  $n = 19$  females of T3-treated dams) in both groups. **h** Pup retrieval test indicating the time after removing the litter from the nest to first sniff or retrieval of the respective pup, showing same maternal care in both mothers ( $n = 6$  control dams and  $n = 4$  T3-treated dams). **i** At postnatal day 5 (P5) the offspring was removed from the nest for 2 min and studied by infrared thermography with **j** quantification of iBAT surface temperature ( $n = 30$  control males and 18 control females,  $n = 10$  males of T3-treated dams and  $n = 15$  females of T3-treated dams). All values are mean  $\pm$  SEM with individual values in circles. \* $p$

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