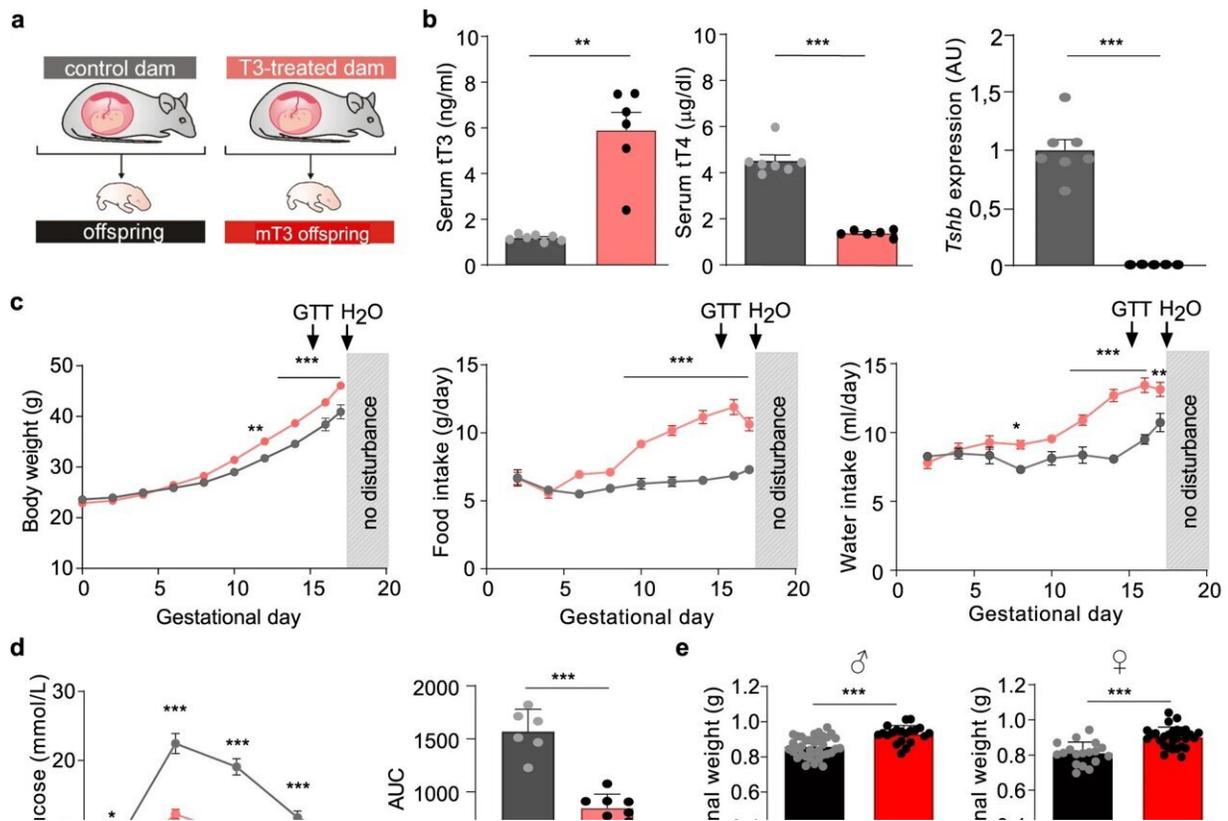


Thyroid hormones in pregnant women found to control brown adipose tissue in offspring

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 H₂O ($n = 10$ 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

Citation: Thyroid hormones in pregnant women found to control brown adipose tissue in offspring (2023, October 25) retrieved 10 May 2024 from <https://medicalxpress.com/news/2023-10-thyroid-hormones-pregnant-women-brown.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.