

ADMINISTRATION OF 3,5 DIIODOTHYRONINE DOES NOT PREVENT BODY WEIGHT GAIN AND RETROPERITONEAL FAT ACCUMULATION IN MALE WISTAR RATS DURING AGING

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Wistar rats naturally develop overweight and insulin resistance during aging. 3,5-diiodothyronine (3,5 T₂) administration was shown to impair weight gain in rats submitted to high fat diet, while not causing undesirable cardiac effects. Thus, we aimed to compare the effects of food restriction (40%) and 3,5 T₂ (25µg/100g body weight, daily) administration in male Wistar rats for 3 months, during the development of overweight. Rats of 6 months-old were significantly heavier and had a higher retroperitoneal fat content than 3 months-old rats. Food restriction significantly reduced body weight gain, but T₂ treatment did not produce any change in body weight gain. While T₂ treatment did not produce any change in the retroperitoneal fat content, FR significantly decreased it. Serum TSH concentrations were significantly lower in animals under FR and treated with 3,5 T₂. We conclude that 3,5 T₂ was not able to impair body weight gain during aging in rats. The 3,5 T₂ dose used herein was high and previously reported to impair body weight gain induced by high fat diet. Thus, we suggest that different mechanisms might be involved in the genesis of overweight produced by high fat diet and aging.

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