

## عنوان مقاله:

Compare the Relative Frequency of Thyroid Function Disorders in Obese and Overweight Children with Non-Obese Children; a Case-Control Study

## محل انتشار:

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## خلاصه مقاله:

Background Childhood obesity has become a global epidemic. In the recent studies has reported risk of thyroid dysfunction due to obesity. Therefore, this study intends to compare the relative frequency of thyroid function disorders in obese and overweight children with non-obese children. Materials and Methods This case-control study during 2015 to 2016 in Birjand, Iran was done on 137 children and adolescents (6 to 18 years), with overweight and obesity as case group and 137 non-obese subjects as control group. Body mass index (BMI), thyroid stimulating hormone (TSH), free triiodothyronine (FT3) and free thyroxine (FT4) were measured, and analyzed using SPSS software version 19. Results TSH level in obese children was significantly more ( $P < 0.001$ ), and FT4 ( $P < 0.001$ ) and FT3 levels ( $P = 0.003$ ), less than non-obese subjects. In the control group, 0.73% and in the case group, 2.92% of patients showed hypothyroidism disorder, that difference was not significant ( $P = 0.177$ ). In the control group, there was significant relationship between TSH with FT4 ( $P < 0.001$ ) and FT3 ( $P < 0.001$ ). Moreover, in the case group, there was significant relationship between TSH with FT4 ( $P < 0.001$ ) and FT3 ( $P = 0.001$ ), and also, between FT4 with FT3 ( $P < 0.001$ ). Conclusion Overweight and obesity in children and adolescents can be effect on increase of TSH and decrease of FT4 and FT3. Long-term studies with larger sample size is suggested.

## کلمات کلیدی:

BMI, Children, Obesity, Overweight, Thyroid function disorders

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