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Effects of six weeks consumption of *Hoodia gordonii* on food intake and body weight in obese *Wistar* rats.

Liliane Barreto Teixeira^{1*}; Geraldo Thedei Júnior²; Jéssica Campos Sousa²; Welber Sousa Oliveira².

1Universidade Federal do Triângulo Mineiro. 2 Pró-reitoria de Pesquisa, Pós-graduação e Extensão da Universidade de Uberaba. *liliane.teixeira@uniube.br

Introduction: *Hoodia gordonii* is a succulent plant, grows primarily in the deserts of South Africa, Botswana, Namibia e Angola that is traditionally used by the San people to suppress hunger and thirst while on long hunting trips or in time of famine. Thus, commercial interest was sparked by its anti-obesity activity. Researchs showed that *H.gordonii* contained steroid glycosides that decreased food intakes and body weight in animals. Other studies demonstrate that the inhibition of food consumption and weight loss are independent of diet nutrient content and also occur in obese animals. Based on this findings we undertook further studies with the extracts from *H.gordonii* to determine the effects of six weeks consumption of *H.gordonii* associated with low carbohydrate, hyperlipidic and hyperproteic diet (HLPD) on body weight and food intake in obese *Wistar* rats. **Objective:** The purpose of the study was to observe the effect of *H.gordonii* in adults male *Wistar* rats induced to obesity by a low carbohydrate, hyperlipidic and hyperproteic diet (HLPD) on body weight and food intake. **Methods:** Male *Wistar* rats (n=21) (body weight 173,57±5,42g) were induced to obesity by consumption of a low carbohydrate, hyperlipidic and hyperproteic diet (45% TG, 45% casein and 5% sucrose) for six weeks. Thereafter animals were divided into three groups, accordingly to the diet at second phase of the experiment: EC group (n=7), receiving a balanced diet, EE group (n=7), receiving the same HLPD used to induced obesity and EH group (n=7), receiving the same HLPD supplemented with *H.gordonii* (360mg/Kg de ração). The body weight and food intake from the 3 groups were monitored over six weeks. **Results:** The supplementation with *H.gordonii* did not affect the health of the animals during the study period. We found that EH group reduced total food intake in comparison with EC and EE groups (p<0,05). This result suggest the appetite-suppressing effect of *H.gordonii* extract, but comparison at each week do not show a significant reduction on food intake, except for the 6th week of the study. Meanwhile, the weight loss was significant only for the EC group, suggesting that the return to a balanced diet is the best choice to weight loss. The body weight of the animals from EE and EH groups were not reduced. **Conclusion:** *H.gordonii* may reduce food intake in a long period of time, but it was not enough to induce a significant body weight loss, suggesting that this effect may be dependent on diet nutrient content.

Keywords: *Hoodia gordonii*, obesity, hiperlipidic diet, *Wistar* rats.

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