

PHARMACOLOGICAL CONTROL OF OBESITY: A ADJUNCTIVE TOOL IN THE PROCESS OF RESTRUCTURING OF HABITS OF PATIENT IN STATE OF OVERWEIGHT AND/ OR OBESITY

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Received: 06/15/2014; Accepted: 07/27/2014

ABSTRACT

Obesity is a heterogeneous group of conditions with multiple causes that ultimately reflect the obese phenotype. The positive energy balance, which occurs when the calorie intake is higher than the expense, is very important to the development of obesity since it promotes an increase in stocks of energy and body weight. The beginning of maintaining a positive caloric balance on the needs of the body, may be the result of an increase in caloric intake, as the reduction in total caloric expenditure, or both factors combined. However, it should be emphasized that the positive caloric balance is not always function as it acquires the diet. Moreover, the feeding behavior is a complex phenomenon that goes beyond the act of eating and may be related to internal and external stimuli, whereas organic factors, psychological and social. For these and many other reasons, including bringing the motivation of the patient, the use of drugs that promise to reduce weight without much effort, seems simple and a shortcut to reach the patient. But, the drugs used in weight loss should be considered as a therapy assistant, with precise indications. The limited effect of these drugs requires that patients maintain the same effort on a diet with low calories, permanent changes in diet and a program of activities and physical preparation. However, the anorexigenic are also indicated for overweight patients who are unable to lose weight without medical support and to have comorbidities such as hypertension, diabetes and dyslipidemia, with disease associated with weight gain. In such cases, as the reduction in weight may represent a better control of comorbidities, the risks of the use of these drugs are at least mitigated. Thus, the objective of this study is to suggest that drugs that promote weight reduction be used as adjuvants in weight management of obese individuals, for a limited time, so that a balanced diet and regular physical activity incorporated the daily life of the patient.

KEYWORDS: obesity, drugs, food education.

1. INTRODUCTION

The obesity is not a single disease but a heterogeneous group of conditions with multiple causes that ultimately

reflect in the obese phenotype. The positive energy balance, which occurs when the ingested calorie value is higher than the expenditure, is an important contributor to the development of this disease, since it promotes an increase in the energy stores and body weight. The onset of maintaining a positive caloric balance on the body's needs, can be a consequence of increased caloric intake, as the reduction in total energy expenditure, or both factors combined^{1,2}.

The obese subject, besides being the target of diseases caused by excess weight, is often excluded from society worshiper of the body, where there is a default "standard of beauty", predominantly thin. Thus, the feeling of discomfort with the appearance of the body, even in non-obese or overweight subjects, is observed due to the requirements imposed by the media, especially cultists "lean beauty"³. Thus, given the importance of image and appearance is noticeable nowadays. Increasingly a model of beauty is gaining strength despite the real needs and possibilities of the vast majority of people; the ideal of a thin or well-designed body, which is not always achieved, providing discomfort to the individual who seeks him. In contrast, overweight is increasing alarmingly, including among children and adolescents, presenting itself as a public health problem in Brazil³.

Given this context of increasing overweight, it is necessary to spread the basic knowledge about what is the "calorie balance" of an individual. When the subject can estimate indirectly, by calculating the BMI (Body Mass Index), which has a positive caloric balance, ie, that the intake of calories in the diet is greater than your daily requirement, and that this actually promotes weight gain, they gain the ability to awaken this individual the need to reeducate themselves about their eating habits. The BMI is calculated by dividing body mass (kg - kg) by the square of height (meters - m²). So, have befitting BMI and stature, people with less than 24.9 kg / m² BMI.

The subjects are considered overweight individuals who have BMI between 25.0Kg / m² and 29.9 kg / m². Subjects who have already exceeded 30.0Kg/ m² BMI are considered obese. Within the group considered obese, the subdivision is possible in moderate obesity (30.0 – 34.9Kg / m²), severe obesity (35.0 – 39.9Kg / m²) and very severe obesity (above 40.0 Kg/ m²)⁴.

It should be noted that the positive caloric balance of a person is not always a function of which is acquired through diet. Incidentally, eating behavior is a complex phenomenon that goes beyond the act of eating. Castillo *et al.* (1990)⁵ also relate food intake to internal and external stimuli, whereas organic, psychological and social factors. Thus, the act of eating transcends the nutritional value and sensory characteristics of food, possessing ulterior motives related to the psychological and emotional needs and conflicting experiences that are independent of hunger^{6,7}.

For these and numerous other reasons, including passing the patient's motivation, the use of drugs that promise weight loss without much effort seems a simple butcher and within reach of the patient. However, the drugs available to help lose weight should be considered as an auxiliary therapeutic measure, with precise indications⁸. There is no particular strategy or medication that should be recommended for routine use there. Thus, the obese subject should be thoroughly evaluated as to errors in dietary habits and physical activity, depressive symptoms, complications or diseases associated with obesity and the possibility of developing side effects⁹.

The Pharmaceutical products used in weight loss, with anorectic characteristics should be used for a limited time only with the goal of helping the patient to increase adherence to diet, with nutritional and behavioral changes as well as the introduction of a physical activity program, whose purpose would be the fitness and energy expenditure. This is because, the anorectic drugs, decrease the patient's perception in terms of difficulty of maintaining a new, more regulated than the eating routine that led to overweight or obesity⁹.

The objective of this study is to suggest that drugs that promote weight reduction be used as adjuvants in weight management of obese individuals, for a limited time, so that a balanced diet and regular physical activity incorporated the daily life of the patient.

2. MATERIAL AND METHODS

For the development of this integrative review we chose the proposal of Ganong (1987)¹⁰, according to the following steps: 1) identification of the research question, followed by a search of the descriptors or keywords; 2) determining the criteria for inclusion or exclusion of research in online databases; 3) categorization of studies, summarizing and organizing relevant information; 4)

assessment of studies for critical analysis of the extracted data; 5) discussion and interpretation of the examination results, contextualizing theoretical knowledge and evaluating their applicability as; 6) presentation of the integrative review and synthesis of knowledge of each article reviewed briefly and systematic way.

In the present study the guiding question of the integrative review was: to review the literature for evidence that the anorectic drugs, thermogenic or fat absorption inhibitors should be used as aids in weight control in obese subjects, for a limited time, until the diet balanced and incorporated into the daily practice of regular physical activity of the patient.

Bases (Latin American and Caribbean Literature on Health Sciences) LILACS, SciELO (Scientific Electronic Library on Line) and PubMed (- NCBI US National Library of Medicine National Center for Biotechnology Information) were consulted. Studies that have addressed the thematic, published from 1987 to 2011, regardless of the languages of publication were included. The following controlled for the search and also used as keywords descriptors were used: obesity, anorexigens, food reeducation.

3. LITERATURE REVIEW

Obesity as a disease

As survival requires a continuous supply of energy to the maintenance of homeostasis, even when dietary supplementation is discontinuous in evolution provide a mechanism to retain adipose tissue excess latent energy from food. An example are triglycerides rich in energy, which can easily be deployed when food is absent or is less abundant. However, the combination of a sedentary lifestyle, genetic susceptibility, cultural influences and unrestricted access to an ample supply of high-calorie foods, is leading to a global obesity epidemic¹¹. According Vries (2007)¹², one in five children is overweight or obese in the United States and Europe. For this reason, every year, the number of reports and studies on obesity is rising, especially in developed countries¹³.

The high prevalence of overweight and obesity in children and how quickly these numbers increase every year, cause concern. Although there is little scientific evidence linking excess body fat with damage to the health of children, alarming data about the risk of morbidities related to obesity in adults generate suspicions that children can present a serious risk of developing a range of diseases with obesity, such as occurs in the adult population. Some studies suggest that obese children has about 6-7 times more likely to become obese adults, depending on the age at which children become obese¹⁴. In this sense, the increase in cases of type II diabetes in children, seems to confirm these concerns¹⁵.

The obesity is not a single condition, but rather a heterogeneous group of conditions with multiple causes that ultimately reflect in the obese phenotype. This disease should be considered the result of a complex set of behavioral choices related to decisions regarding nutrition and exercise. Increasingly, people are living in an environment called "obesogenic", where the intake of high calorie foods is associated with a time availability dwindling for physical activity, resulting in increased body mass¹⁴. Indeed, the positive energy balance, which occurs when the ingested calorie value is higher than the expenditure, is a major contributor to the development of body mass gain, since it promotes an increase in the energy stores and body weight. The onset of maintaining a positive caloric balance on the body's needs, can be a consequence of both increased caloric intake, as the reduction in total energy expenditure, or both factors combined^{1,2}.

In May 2004, the United States Department of Health determined that obesity were to become recognized as a disease¹⁶, requiring, obesity, medical care¹⁷. More specifically, obesity should be defined as a chronic disease¹⁸, which can be assessed by systematic scanning of body weight gain. In this sense, an indirect way to assess whether body mass gain of an individual is positive, it is through BMI - Body Mass Index. With this index, it is possible to infer, for example, if caloric intake in the diet is greater than the daily requirement, promoting body weight gain.

Some studies show that perhaps there should be a direct relationship between increasing BMI and mortality. This is because, in relation to a person with a BMI around 24 kg / m², it is observed that overweight people seem to have less chances of reaching old age; The life time also appears to be greater for individuals with mild overweight compared with those moderately obese phenotypes (BMI 30.0 - 34,9Kg / m²). Interestingly, people underweight for their height (BMI <23 kg / m²) also have lower life expectancy¹⁹. It is even intriguing to note that the treatment of obesity through weight reduction can result in damage to the organs and tissues resulting in higher mortality when compared with the life expectancy of people who never tried to lose weight, although were obese²⁰. Overweight people or obese who are relatively active, who do not diet to lose weight, and do not continue to increase the weight gradually seem to be as healthy in the long run, as those individuals who make attempts to lose weight²¹.

There is strong scientific evidence that children are tending to obesity²². The high rates of childhood obesity care professionals in health and therefore related to prevention research, the causes and treatment of childhood obesity are being made²³. An important issue for the collection of these data lies in the fact that in some countries, most notably in the Mediterranean countries,

children with a BMI above the ideal weight for their height are normally considered healthy. In addition, it is precisely in those countries where the prevalence of childhood obesity is higher. In Italy, for example, more than a third of children are considered too heavy²⁴, although the prevalence of adult obesity in this country is very low compared to other European countries²⁵. Away from indicating a contradiction, the observation made in Italy can illustrate the novelty of an epidemic of childhood obesity, which in the future could result in increasing obesity for adult population.

The obese subject

If obesity is a disease, the obese would be a patient, or someone who has a condition that predisposes other diseases triggered by obesity? To answer this question, it would be necessary to turn our attention to the study of childhood obesity²⁶.

The prevalence of childhood obesity is rapidly increasing in recent decades, and is characterized as a worldwide epidemic. The major concern generated by this fact should be the association of obesity with metabolic abnormalities such as dyslipidemia, hypertension and glucose intolerance, which are considered risk factors for diabetes mellitus type 2^{27,28,29,30}. The consequences of childhood obesity may be noted in both short and long term. In the short term, we have orthopedic disorders, respiratory disorders, diabetes, hypertension and dyslipidemia, in addition to psychosocial disorders. Already in long-term mortality have increased particularly from coronary heart disease in adults who were obese during childhood and adolescence³¹.

In addition, the obese subject, besides being the target of secondary diseases caused by excess weight, is excluded from society, where the cult of the body beautiful and is predominant. This extreme valuation of thinness, which occurs mainly in women, is influenced by the requirements imposed by the media and contrary to the real nutritional needs of that individual^{3,6,32}. Increasingly a model of beauty is gaining strength despite the real needs and possibilities of the population; the ideal of a thin or well-designed body, which is not always achieved, providing discomfort to the person who seeks Him. In contrast, overweight is increasing alarmingly, including among children and adolescents, presenting itself as a public health problem in Brazil³. For this reason, individuals are influenced to start diets and inadequate practices of weight control for a standard set by the media, which conveys images of success, control, acceptance, love and conquest of psychological stability, associated with thinness. In the event of failure to control weight gain, the person can be seen as incapable and lacking self control. Thus, obese or overweight subjects make use of inappropriate practices for reducing body

mass, such as smoking, self-induced vomiting, use of laxatives and / or weight-loss drugs⁶.

It should be emphasized, however, that the positive caloric balance of a person is not always a function of what is acquired by diet. Incidentally, eating behavior is a complex phenomenon that goes beyond the act of eating. Castillo *et al.* (1990)⁵ also relate food intake to internal and external stimuli, whereas organic, psychological and social factors. Thus, the act of eating transcends the nutritional value and sensory characteristics of food, possessing ulterior motives related to the psychological and emotional needs and conflicting experiences that are independent of hunger^{6,7}. Considering these factors, appropriate treatment for obesity should aim at maintaining a healthy weight, prevention of weight gain and stabilization, management of comorbidities and weight loss³³.

Dietary reeducation for obese subjects

It is commonly believed that obesity is merely the result of poor diet, or the fact led to overeat purposely disease known as hyperphagia. In fact, the situation is much more complex because many people subject to the same choices in diets did not become obese, suggesting the presence of some intrinsic homeostatic system that works to keep certain predetermined weight. Furthermore, two-thirds of obese consume carbohydrates to combat stress, anxiety, depression, mental fatigue, and not only just to alleviate hunger^{6,11,32}.

The search for food, which arises from the need of the metabolic process, is determined by sensory processes associated with smell and taste³². Other influences include the price and the prestige of food, religion, geography, and storage ability in the preparation of food, and personal preferences and intolerances, as well as affective factors, beliefs and values³⁴.

The possibility of controlling the problem depends mainly on the patient's motivation and efficiency of the treatment plan used and dedication, competence and experience of the professionals involved. This allows teaching and helping the patient to promote permanent changes in your lifestyle habits, especially in the way they eat and relate to food, with saciamento and satisfaction with less food intake and development of a plan of regular physical activity aiming to improve and maintain their fitness³⁵. The rational goal of dietary intervention is the reduction of body fat so that there is an improvement in health status or reduce the risk of complications, to prevent or reduce the morbidity related to overweight³⁶.

Dietary habits are the result of experience gained throughout life. Thus, it is possible to reformulate these habits in order to correct possible nutritional disorders. For example, diets high in fiber can reduce the risk of cardiovascular disease due to a reduction of total and LDL serum cholesterol. Thus, it appears that the combi-

nation of an individualized diet and nutritional education in groups help to reduce the consumption of fats, cholesterol, and simple carbohydrates that impair the body's energy balance and its oxidative metabolism³⁷.

If we change habits such as balanced diet, regular practice of physical exercise, stress management and not use drugs to produce weight loss, the individual could live better with quality, preventing the onset of diseases. For this reason, work with power needs to take into account and respect the regional and personal peculiarities of the patient, whenever possible, in addition to assessing the risks and factors that contributed or predisposed the onset of disease³⁶, demystifying the idea of food as a only source of gratification. It is also seldom mentioned the possibility of relapse or how to address it in weight reduction programs, depriving individuals to develop skills to cope with these situations or minimize their damage. In this case, the nutritionist and the psychologist may be valuable^{34,38}.

Regular physical activity

Regarding proposals to control obesity, exercise, united to balance energy intake has been shown to be an important determinant in this process, since low levels of physical activity may be related to increased risk, especially cardiovascular³³. The exercise probably early, aids in weight loss and long term has the advantage of contributing to the maintenance of weight, in addition to other health benefits³⁸. However, most studies do not present a consensus on the types, duration and which are best suited to each individual exercise levels and diet, reinforcing the idea that the treatment of obesity should be a restructuring of the behavior of these individuals, seeking a healthy way of life^{37,45}. According to Sousa Junior & Virtuoso (2005)⁴⁵, the most recommended exercises for fat loss are aerobic exercise and resistance against those. These have the function to keep the basal metabolism of the organism or increase energy expenditure in the body leading to a negative calorie imbalance that, in turn, contributes to the loss of body weight⁴⁵.

Emotional support

Since obesity is a difficult disease to control, with high percentage of therapeutic failures and relapses, the growing emergence of eating disorders, insecurity and dissatisfaction about the body, and may have serious organic and psychosocial effects, especially in the more severe forms^{32,47}.

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your lifestyle habits, especially in form eating and relating to food, with saciamento and satisfaction with less food intake and development of a plan of regular physical activity in order to improve and maintain their fitness³⁵.

To get motivated, emotional balance and ability to modify eating habits permanently, many patients need a psychotherapeutic approach. Cognitive-behavioral psychotherapy associated with guidance, counseling and rehabilitation may lead the patient to a process of nutritional, sensory, emotional and remodeling learn how to rebalance do with being, teaching him to "*deal with their feelings instead of eating them*"³⁵. In this sense, the family has an important role in both nutritional as part in physical activities, participating together, encouraging, suggesting alternatives and pointing failures. As well as praising the advances achieved, providing support in times of difficulties and discouragement³⁵.

It is known that most obese individuals eat to solve problems or offset of which, at times, unaware. Obese comes to see food as a major source of pleasure, which, because of prejudice, therefore, restricts and further impoverishes their affective and social relations. Furthermore, depreciation of the physical picture itself leads to the inability to maintain the weight loss. The lack of confidence, feelings of isolation, and humiliation, to which obese individuals are subject, refer enormous psychological burden to them. This process leads to a progressive weight gain and increasing loneliness³².

Pharmacological control of obesity

Currently, the vast majority of obese people, the rational use of drugs that induce weight loss is considered indispensable when there is a major health risk, although it should be seen as an adjuvant³⁹.

In the anxiety to reduce weight, they accept any kind of suggestion, especially when it comes to miraculous formulas with quick results, without taking into account the risks of a treatment without adequate guidance⁴⁰.

The addition of anorectic, thermogenic or inhibitory drugs absorption of fats to a program of weight reduction increases the ultimate weight loss after 6 months to 1 year of continuous treatment, on average, only 2-6 kg, although a significant financial cost, side effects and increased risk of rebound quickly regained weight⁸. However, the anorectic are also indicated for patients who are overweight who can not lose weight without medical support and to have comorbidities such as hypertension, diabetes and dyslipidemia, injury associated with weight gain. In these cases, such as weight reduction may represent an improvement possibility to control these comorbidities, the risks of using these drugs are mitigated by the benefits obtained with the control or elimination of health hazards produced by comorbidities^{41,42}.

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The use of drugs that promise weight loss without much effort seems a simple shortcut to reach the patient, especially for those little incentive for a non-pharmacological treatment. However, medications are available to help you lose weight must be considered as an auxiliary therapeutic measure, with precise indications⁸. The limited effect of these drugs requires that the patient keep the same effort of low-calorie diet, permanent changes in eating habits and program Activity and Fitness.

However, the anorectic are also indicated for patients who are overweight who can not lose weight without medical support and to have comorbidities such as hypertension, diabetes and dyslipidemia, with aggravation associated with weight gain. In these cases, such as weight reduction may represent an improvement in the control of these comorbidities, the risks of using these drugs are at least mitigated^{42,43}. Then it follows that pharmacotherapy should always be used in conjunction with a program of change in lifestyle, as an aid in changing eating habits and regular physical activity³⁹.

The drugs used in the pharmacological control of obesity can be divided into three different categories, the main drugs are cited: 1 lipase inhibitors (orlistat), 2 combined serotonergic and adrenergic receptors (Sibutramine) and 3-adrenergic agonists (diethylpropion, phentermine, and maindole fenproporex). Other drugs such as fluoxetine, sertraline, topiramate zonisamida and will not be discussed here because they are not considered as anti-obesity drugs. However, we emphasize that fluoxetine and sertraline are useful in the treatment of depressive states associated to obesity^{39,43}. Also diuretics, chorionic gonadotropin, amphetamine, dexamphetamine and thyroxine are not considered suitable for the treatment of obesity drugs. The metformin and acarbose may be useful in the treatment of obese diabetic patients, but have proven to obese non-diabetic efficacy³⁹.

Moreover, the results so far the pharmacological treatment of obesity has been disappointing. Some drugs have been withdrawn from the market by exhibiting unfavorable risk-benefit relationship and the long-term effectiveness mainly of appetite suppressants, is questionable. While causes weight loss in the first week of treatment, such loss compared that achieved by diet and exercise, is often modest, but a partial weight recovery occurs when used for more than one year. Note also that in almost all cases, the weight loss achieved with appetite suppressants is reversed when the drug is discontinued. Thus, the association of this fact plus the fact that obesity is a chronic condition, it is likely that patients take these drugs for life⁴⁴.

Above all, the drugs should be used as a characteristic effect on adipose tissue and not on the water or on the body lean mass, should be tolerated in the short and long

term and should be theoretical and reputable scientific studies that permit the use³³.

It should be emphasized that the medicines should only be used under medical supervision and after a careful assessment of the risk-benefit ratio for each patient especificamente³⁹. Other forms of treatment used, but which are not recommended by the lack of scientific evidence of effectiveness, are acupuncture, creams for cellulite and obesity, herbal medicine, mesotherapy, yoga, hypnotherapy, the masterful said natural formulas, diuretics and laxatives³⁹.

Perspectives of pharmacotherapy for obesity

Studies involving the discovery of leptin, produced by adipocytes and ghrelin, produced in the stomach, opening new fields of study for the control of obesity, especially in the areas of nutrition and metabolism⁴⁷.

The action of leptin in the central nervous system, the hypothalamus in mammals, promotes the reduction of food intake and increased energy expenditure, and neuroendocrine function and regulate the metabolism of glucose and fats⁴⁷. The expression of leptin is controlled by various other substances, such as insulin, glucocorticoids, and pro-inflammatory cytokines. Infectious states and endotoxins can also increase plasma concentrations of leptin. Conversely, testosterone, exposure and catecholamines reduces the synthesis of leptin, as well as situations of stress imposed on the body, such as prolonged fasting and strenuous exercise⁴⁷.

This hyperleptinemia found in obese people, is attributed to changes in the leptin receptor or a deficiency in its transportation system in the blood-brain barrier, a phenomenon known as leptin resistance⁴⁷. The therapeutic benefits of treatment with leptin, in obese subjects, are still controversial.

This observation is due to plasma leptin concentration be partly related to the size of adipose tissue mass in the body⁴⁷. Leptin reduces appetite from inhibition of appetite related neuropeptides such as neuropeptide Y and also the increased expression of anorectic neuropeptides (α-melanocyte stimulating hormone (α-MSH), corticotropin releasing hormone (CRH) and substances synthesized in response to amphetamine and cocaine⁴⁸. Thus, high levels of leptin reduces food intake while low levels induce hyperphagia. This is proven in obese lab animals have low levels of leptin deficiency or complete⁴⁷.

However, obese subjects have elevated plasma levels of leptin, about five times more than those found in lean subjects⁴⁷. Following this line of thinking, Friedman & Hallaas (1998)⁴⁸ found that four weeks of administration of exogenous leptin in both normal individuals as obese experienced significant weight loss. However, the reduction was only observed when the subjects had no hyper-

leptinemia, because the administration of leptin in obese patients with hyperleptinemia (leptin resistance) did not cause any change in body weight of these subjects⁴⁷.

Recent studies in rodents suggest that the hormone ghrelin, administered peripherally or centrally decreases fat oxidation and increases food intake and adiposity⁴⁹. As this hormone appears to be involved in stimulus to start a meal, your levels are influenced by acute changes and chronic nutritional status, lying in a state of high nervous anorexia and reduced in obesity⁵⁰. Furthermore, ghrelin acts as releasing growth hormone (GH) by stimulating the secretion corticotrophic lactotrófica and coupled to the control of energy expenditure orexígena activity, controlling acid secretion and gastric motility, influencing pancreatic endocrine function and glucose metabolism and even cardiovascular actions and antiproliferative effects in neoplastic cells⁵⁰.

For all these regulatory functions ghrelin are directly involved in regulating short-term energy balance. Circulating ghrelin levels are increased during prolonged fasting and in states of hypoglycemia, while its concentration is decreased after the meal or intravenous glucose⁵⁰.

Previous studies involving release of this hormone in humans show that they are the types of nutrients in the meal, not its volume, those responsible for the increase or decrease in postprandial plasma ghrelin levels⁵⁰. Thus, the plasma concentration is decreased ghrelin after meals rich in carbohydrates, concomitantly with the elevation of plasma insulin. Moreover, increased plasma ghrelin levels were found after meals rich in protein and animal lipids, associated with a small increase in plasma insulin⁵⁰.

4. CONCLUSION

The would recommend that everyone knew exactly what your ideal weight and make an effort to lose weight every time accumulates an excess of 3 or 4kg, even before it reaches the limits of the concept of overweight.

The education of eating habits depends on knowledge of the subject that is correct in his feeding, as well as the risks involved with the promotion of obesity. Thus, it is necessary to unrestricted use of information easily accessible and understandable by everyone using: public programs and collective control of obesity, based in health centers, schools, churches, clubs, and the use of material print, video, or available in digital media, conducting group meetings, explanatory talk with doctors, nutritionists, culinary expert, physical education teachers, psychologists.

The use of anorectic agents for medical indication or self-medication is rarely accompanied by nutritional education, resulting in regained weight after the drug treatment, and often emotional imbalances related to

dissatisfaction with physical appearance. As seen, the effect of drugs with reduced weight does not have significant efficacy per se, should be used as adjuvants in the treatment of this patient, the shortest time possible, but long enough for your everyday eating habits should be restructured definitivamente time.

ACKNOWLEDGMENT

The authors thank the financial support of the Faculty Ingá, for funding the research project and CNPq for the provision of scientific initiation scholarship via PI-BIC-CNPq.

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