41 - APPLICATION OF THE LOW CARB FOOD METHODOLOGY ALLIED TO AEROBIC WHOLESOME PRACTICES: LIMITS AND POSSIBILITIES

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1.INTRODUCTION

The search for the perfect body has been shown to be a relevant issue in several market niches, where there is a risk of committing and propagating a number of errors which adversely affect health and life quality, given the propagation of information and greater accessibility to corporal modification practices (SANTOS, 2011). Seeingthe dissatisfaction with the body or insufficient self-esteem aspects becoming more evident, the increasing strengthening of diets, regimens and practices for fast and excessive weight loss without proper professional follow-up is possible to verify (SCAGLIUSI et al. 2012; VOLP et al., 2017).

According to Dunker, Fernandes and Carreira Filho (2009) these food self-regulation practices, besides dangerous, stimulate the malformation of growing organisms - contributing to the worrisome estimation of eating disorders and vitamin deficiencies in children and adolescents. These disturbances may be the decisive factors for adult life, ranging from gestation in women with low multivitamins rate, even to bone and muscle obstruction after general physical activity practices (SCAGLIUSI et al., 2012).

Accompanied diets by qualified professionals recognized by the health area, according to specific studies for each situation, allow better food utilization, resistance to sports practices and maximization of the life quality elements (FERREIRA; BURINI; MAIA, 2006). To this, the diets and regimens focus that are under discussion allows to focus on food quality in front of nutrients, added to the ease and practicality - considering the fast pace and people unique routines.

The Low Carb food methodology, also known as Low Carb, High Fat (LCHF), initially proposed by the cardiologist Robert Atkins in the late 1960s, presents a revolution in food regulation, largely consisting in carbohydrate abstention in food routine and regular consumption of proteins, fats and fibers with a high hydrate content (KIRSCHENBAUM, 2005; NORDMANN et al., 2006). This methodology, also known as ketonic diet or paleolithic diet - paleo diet - is highly recommended for people who need to regulate diabetes, cholesterol and triglycerides, as well as to lose weight fast and without major sacrifices (KIRSCHENBAUM, 2005). Emphasizing this methodology should only be applied after the health and nutritional aspects responsible's endorsement is important,to not harm people health and life qualily.

Based on the presented scenario, the present research aims to verify the results obtained after the low carb food methodology application, illustrating the possible interferences to the studied population health . This population is composed by clients of an aerobic gym from Guarapuava-PR (Brazil), with similar physiological characteristics. As results, health improvements as well as the body fat reduction and better life quality are expected.

2. SAMPLE AND METHODOLOGICAL PROCEDURES

To verify the applied food methodology results, the correct individuals selection who will compose the analysis is fundamental, to approximate the effects and to establish comparative outlooks with each other individual (MELLO; LAAKSONEN, 2009). Firstly, the authorization of the aerobic gym's responsible was obtained to accomplish the research. The gym is located downtown in Guarapuava-PR (Brazil) and offers the modalities: Zumba®; Pilates; Functional training; Rhythms; as well as nutritionist and endocrinologist follow-up, from a partnership network signed with the municipal health clinics. It currently has 88 registered students who perform classes and procedures according to availability, personal interest and medical recommendations.

After this authorization, the selecting process of volunteer students for the research participation was started. The disclosure to select of sample occurred through posts on the gym's social networks and posters distributed in the space, disclosing the possibilities and limitations for the experiment - in a challenging style. The figure 1 represents the disclosure posters.

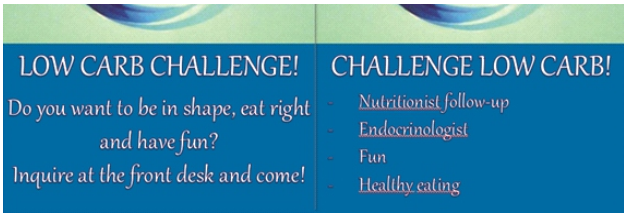

Figure 1 - Disclosure poster for volunteer selection
Source: Research data (2017).

After concluded the disclosure, explain to the interested parties the experiment steps was possible. As a initial result of registrations, a total of 11 students for the project were registered - with different body statures, weights and aerobic capacities. From this, the standards and screening establishment of the registered ones was considered important.

After the sample's screening and selection, according to the examinations and collections required by the health professionals associated to the gym, the selected students should go through a 01-month period for the low carb methodology, following the nutritionist recommendations – with specific recipes and directions at least twice a week. In addition, these students should take Zumba® classes at nighttime and three times a week.

Thus, standards were established for activities and in this way, better results monitoring. As an award, at the end of the experiment, the winner would receive three months of free monthly and two lymphatic drainage sessions from another associated company to the gym. After the screening, the sample, according to the characterizations shown in Table 1, was possible to be established:

Screening Standard	Student 01	Student 02	Student 03
Age at collection time	31	30	34
Height - in meters	1.65	1.72	1.71
Weight - in kilograms	73	75	69
BMI - response to table	26.8 – OW*	25.4 – OW*	23.60 – NO*
Body fat (%)	25.20	24.98	22.91
Total lean mass - in kg	54.75	57.00	53.82
HDL cholesterol - in mg / dL	78	66	59
LDL cholesterol - in mg / dL	105	114	99
Smoker - consumption / day	No	No	No
Alcohol consumption	No	No	No
General health problems	No	No	No
Physical exercises - week	twice**	once**	twice**

* OW - Overweight / NO – Normal.
** Light to Moderate Intensity - Zumba®, Pilates, routine efforts and sporadic walking.
Table 1 - Equity standards established for research andividuals
Source: Research data (2017).

According to the approximation of these characteristics, draw specific plans and goals was possible to analyze the development, effectiveness and application of this methodology until the end of the experiment. With about thirty-days duration- one month - the students should follow some activities / recommendations necessary for the progress, as shown in Frame 1:

Activities to be developed in the L ow Carb Challenge
- Participate in Zumba ® classes on Mondays, Wednesdays and Fridays at 7:00 p.m.
- Do weekly body weight measurements
- Register the increases or decreases in body weight weekly
- Participate in the Zumba ® event that will occur on a date to be informed
- Establish a significant reduction of carbohydrates in the diet, following the nutritional plan
- Keep health professionals informed about any disconfort or needs encountered.
- Follow rigorously the plans delivered by the nutritionis t and the endocrinologist
- Have a sufficient hydration and obtain proper rest to the exercises practices

Frame 1 – Challenge's recommendations and activities for participating girls
Source: Research data (2017).

After that, the students were asked to sign a consent form, claiming full understanding and responsibility for the actions taken in the process. Thus, the process of results measurements began with the analysis and quantification of data in weekly indexes.

3. RESULTS AND DISCUSSION

Nordmann (2006) reinforces Low Carb methodology monitoring importance for possible interferences or interruptions, if necessary. Each organism reacts to this change in the food routine in a different way, therefore it is not predictable like other diets and methodologies.

The students' commitment to fulfill all the stages and responsibilities attributed during the challenge was visible. The three participants had direct contact with the health professionals associated to the gym, recording the whole food routine and assisting each other looking to the focus and discipline. By creating a instant messages group through mobile application, the participants allowed direct follow-up and constant help, in front of questions that come up, sharing recipes and activities to be performed in their residences, in order to intensify the caloric expenditure and improvements in the weight loss process.

The participation at nighttime Zumba® classes was registered, with the number of absenteeism by the three students less than 10%, in other words, only one student absented - student 02 - in one night, due to issues related to her job. At the end of each week, the photos at the end of classes were published on the gym's social networks, in order to stimulate the participants and disclose the challenge to the community and other clients.

In the challenge's third week, the community - in partnership with the gym - was provided with the Zumba® charity event, as shown in Figure 2, below. This event was attended by about 75 people from the external community - dance groups and charidable organizations from the region - as well as the participation of the students involved in the challenge. The event lasted approximately two hours and thirty minutes, mixing the Latin program's songs and other general dances, with the help of teachers from other gyms and associated spaces.

Figure 2 - Zumba® event held in partnership with the gym to help in the challenge.
Source: Research data (2017).

In the last week, therefore, assess the participants' results in the challenge was possible. Figure 3, below, reflects the main changes brought by the experiment, when acquiring new habits of the Low Carb methodology.

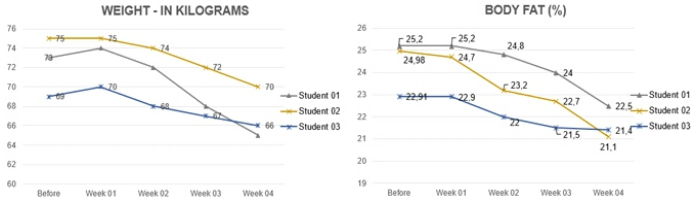

Figure 3 – indicators overview - weights in kilograms and body fat percentages.
Source: Research data (2017).

The students' weight - in kilograms - had a significant decrease, considering the short time. Kirschenbaum (2006) points out that this weight variation is normal when applying the low carb methodology, where, in a short period of time - if all indications and elements are respected - concrete results and satisfaction are possible to obtain with the panorama of weight loss. To corroborate this assertive, the percentages of body fat in slope for the three students were still visible in Figure 3, where, again, a very satisfactory percentage of decrease was obtained. The other indicators, such as the HDL and LDL Cholesterol indices, did not show a significant decrease because of the short period of time, thus considering the ketosis process the students' body weight and body fat to establish the panorama.

The students were also able to provide their testimonies on the development of the food methodology. In general terms, the greatest difficulty was found in drinking coffee without sugar and replacing it with natural sweeteners; fruit abstention and high fructose levels in the food routine; and the fear of eating fats in protein meals.

4. FINAL CONSIDERATIONS

The low carb food methodology has gained adherents all over the world, being a center of contradictions and resistance (Kirschenbaum, 2005; Nordmann et al., 2006). The present research had as its main purpose this methodology's application methodology and verification or proof of its effects in three students of a gym and well-being.

As the main research's results, focus on the weight loss of those involved is possible, as well as the reduction of body fat percentage, contributing to the life quality, both in the diet routine and in the participants' self-esteem. Emphasizing that these results were only possible when accompanying by qualified health professionals, and focus and discipline establishment for those involved is worth.

For future work, the other analysis indicators is suggested, associating to the methodology exercises that stimulate the gain of total lean mass, body toning and strengthening and aerobics of greater intensity. In addition, the ketosis process could be worked over a longer period and with a distinct sample - considering several ages and different body indices.

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APPLICATION OF THE LOW CARB FOOD METHODOLOGY ALLIED TO AEROBIC WHOLESOME PRACTICES: LIMITS AND POSSIBILITIES

Abstract: The emergence of food methods and diets is visible in recente years. The acessibility to digital medias and the lack of qualified professionals to guide the procedures and limits may be worrisome. The presente paper mainly aims results lifting and the panorama obtained after the Low Carb food methodology's application, showing the selected public's performance. Through a one-month experience in a body care gym – selecting willing students to apply the methodology and actively participate under the imposed requires – all the methodology's process was possible to be deeply analyzed. As the results, a considerable weight and body fat decrease was visible, taking into account the short period of activities and dietary regulation.

Keywords: Food methodology, Low Carb, Food.

APPLICATION DE LA MÉTHODOLOGIE ALIMENTAIRE PAUVRE EN GLUCIDES ALLIÉE AUX PRATIQUES AÉROBIES SALUTARES: LIMITES ET POSSIBILITÉS

Résumé: L'émergence de méthodes et de régimes alimentaires ces dernières années est visible. Ce facteur peut être inquiétant, en raison du fait qu'il est accessible depuis les médias numériques et il peut y avoir une absence de professionnels formés pour guider dans les procédures et les limites. Le présent travail a comme objectif principal d'enquêter sur les résultats et les perspectives obtenus après l'application de la méthodologie des aliments à faible teneur en glucides, afin de démontrer sa performance à un public sélectionné. Avec un mois d'expérience dans une salle de sport et de soins corporels - sélection d'étudiants désireux d'appliquer la méthodologie et de participer activement aux exigences imposées -, il a été possible d'analyser de manière plus approfondie l'ensemble du processus dans lequel la méthodologie a été mise en œuvre. Il est apparu qu'une perte considérable de graisse corporelle et de poids est visible, en tenant compte de la courte période d'activités et de la réglementation alimentaire.

Mots-clés: Méthodologie alimentaire, Pauvre en glucides, Low Carb, Food.

APLICACIÓN DE LA METODOLOGÍA ALIMENTARIA LOW CARB ALIADA A LAS PRÁCTICAS AERÓBICAS SALUTARES: LÍMITES Y POSIBILIDADES

Resumen: Es evidente el surgimiento de métodos y dietas alimentarias en los últimos años. Este factor puede ser preocupante, por el hecho de la accesibilidad ante los medios digitales y la ausencia de profesionales capacitados para orientar los procedimientos y límites. El presente trabajo tiene como principal objetivo el levantamiento de resultados y del panorama obtenido después de la aplicación de la metodología alimentaria low carb, demostrando su desempeño al público seleccionado. Ante una experiencia de duración de un mes en una academia de gimnasia y cuidados con el cuerpo - seleccionando alumnas dispuestas a aplicar la metodología y participar activamente en las exigencias impuestas -, fue posible analizar de manera más

profunda todo el proceso en que la metodología está inserta. Como resultados, fue visible una pérdida considerable de peso y grasa corporal, teniendo en cuenta el período corto de actividades y regulación dietética.

Palabras clave: Metodología alimentaria, Low Carb, Alimentación.

APLICAÇÃO DA METODOLOGIA ALIMENTAR LOW CARB ALIADA ÀS PRÁTICAS AERÓBICAS SALUTARES: LIMITES E POSSIBILIDADES

Resumo: É visível o surgimento de métodos e dietas alimentares nos últimos anos. Esse fator pode ser preocupante, pelo fato da acessibilidade diante das mídias digitais e ausência de profissionais capacitados para orientar os procedimentos e limites. O presente trabalho tem como principal objetivo o levantamento de resultados e do panorama obtido após a aplicação da metodologia alimentar low carb, demonstrando seu desempenho ao público selecionado. Diante de experiência com duração de um mês em uma academia de ginástica e cuidados com o corpo – selecionando alunas dispostas a aplicar a metodologia e participar ativamente das exigências impostas -, foi possível analisar de maneira mais aprofundada todo o processo em que a metodologia está inserida. Como resultados, foi visível uma perda considerável de peso e gordura corporal, levando em consideração o período curto de atividades e regulação dietética.

Palavras-chave: Metodologia alimentar, Low Carb, Alimentação.

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