

178 - ANTHROPOMETRIC FOR OBESITY OLDER WOMEN IN THE CITY OF PERDIZES - MINAS GERAIS.

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1 - INTRODUCTION

Until recently, talk about longevity in Brazil would speculate on a topic only projective calculations. Today sociologists, statisticians, demographic, occupational health care has been dedicated to talk about it. In Brazil, the same phenomenon occurred about fifty years, a period regarded as relatively short compared to the period where this phenomenon occurred in developed countries (BERQUÓ, 1996).

Aging is accompanied by organic changes and growth factors. Occurs gradual reduction of muscle features, people tend to become less active, because their physical abilities are diminished, the psychological state becomes altered, and get sick more often, causing the process to increase graduadamente (WOLINSKY; HICKSON, 2002).

Obesity is considered a disease, and is receiving increasing attention from doctors and health institutions, this fact arises due to the increasing number of obese people throughout the world, including Brazil. A sedentary lifestyle is a characteristic of the modern world, the stress of everyday life in places different feeding habits, the main meal is playing an ever smaller in our workload, with sandwiches and snacks and a prominent place in our food and thus left out meals rich in nutrients (WOLINSKY; Hickson, 2002).

The individual is considered obese when the amount of fat on the body mass equals or exceeds 30% in women and 25% in men. The severe obesity is characterized by a body fat content exceeding 40% in women and 35% in men. Because the body mass index (BMI) shows the ratio between height and weight, not by measuring the body fat, Linschitz, 1994 apud Cuppari 2002 by SISVAN adopted by the Ministry of Health, characterized the BMI for the elderly following follows: underweight (BMI less than or equal to 22 kg / m²), normal / healthy weight (BMI greater than 22kg / m² and less than 27kg / m²) and obesity (BMI greater than or equal to 27kg / m²) (CUPPARI, 2002).

So we hope through this study meet the anthropometric profile of elderly in the city of Partridges, and can then provide subsidies for the population that was the object of our study.

2 - METHODOLOGY

The study included 75 volunteer, female, aged over 60 years, who attended the health centers of the City of Partridges.

The random sample was defined in 3 stages. At first, 12 volunteers were selected randomly and proportional to the number of individuals in the industry, the second stage, 33 volunteers were selected randomly and proportional to the number of individuals within the sector and the third stage, 30 volunteers were selected so random and proportional to the number of individuals in the industry. The Sample size calculation assumed a prevalence of 20% of elderly women in the city of Perdizes - Minas Gerais.

Anthropometry

The measurement of the measures was performed in health centers of voluntary participants, the researcher. We analyzed the anthropometric measurements of body mass (kg), height (m), waist circumference (cm), hip circumference (cm). The assessment of body composition was obtained by measuring the thickness of subcutaneous adipose tissue. To this end we measured the fold thickness (mm), suprailiac (mm) and abdominal (mm).

For the anthropometric data of body mass (BM) and height (E), we used a balance of Filizola, coupled with a stadiometer.

The classifications of BMI of the elderly were: underweight, normal / healthy weight and obese by body mass index (BMI), a product division of body weight by height squared (MC / A^2). The criteria used for diagnosis was established Linschitz, 1994 apud Cuppari, 2002, adopted by the Ministry of Health, through the evaluation SISVAN for the elderly, according to the following characterization: underweight (BMI less than or equal to 22 kg / m²), normal / healthy weight (BMI greater than 22kg / m² and less than 27kg / m²) and obesity (BMI greater than or equal to 27kg / m²) (CUPPARI, 2002).

The waist and hip circumferences were measured with an anthropometric tape. For the measurement of waist circumference, the tape was placed around the smallest circumference between the ribs and the iliac crest, above the navel. The measurement of hip circumference was performed by positioning the tape around the hip region, the area of greatest prominence.

The distribution of body fat was estimated by waist-hip ratio (WHR) were assessed using the classification by Bray, Gray (1988) in women 60 years ahead, where classified into low risk (less than or equal to 0.76), risk moderate (from 0.76 to 0.83), high risk (0.84 to 0.90) and very high risk (greater than or equal to 0.90), by dividing waist circumference by hip circumference (C / Q).

The evaluation of skin folds is obtained by measuring the thickness of subcutaneous adipose tissue. To this end, the folds were measured suprailiac (SI), triceps (TR) and abdominal (AB) for women and the amount of fat was estimated by the predictive model proposed by Jackson, Pollock (1985) and Siri (1961).

The body density was obtained by the prediction equations:

a) (Jackson, Pollock, 1985 apud MARINS; Giannichi, 2003, p. 50).

Body density = $1.089733 - 0.0009245 (\Sigma * 3 \text{ folds}) + 0.0000025 (\Sigma * 3 \text{ folds})^2 - 0.0000979 (\text{age})$;

* Skinfolds (triceps + suprailiac + abdominal)

Σ - Sum

The percentage of fat (% BF) was obtained from the equation:

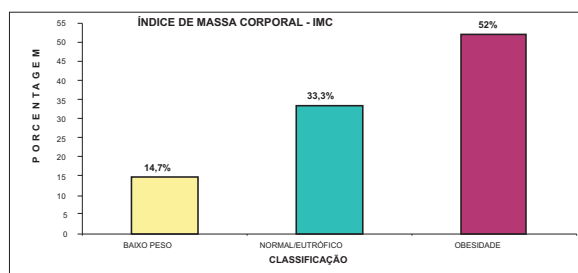
a) (SIRI, 1961 apud MARINS; Giannichi, 2003, p. 51).

% G = $[(4.95 / DC) - 4.50] \times 100$.

3 - RESULTS

3.1-Mass Index - BMI

With respect to BMI, we observed that the volunteers presented with 14.7% with low weight, 33.3% were normal / eutrophic and 52% was the prevalence of obesity, the following classification criteria Linschitz (1994).

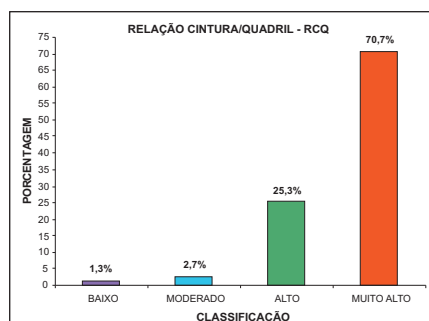


3.1 - Body mass index - BMI: Underweight (<or = 22 kg / m²) Normal / eutrophic (> 22kg / m² and <27kg / m²), obesity (> or = 27kg / m²) (Linschitz, 1994 apud CUPPARI, 2002).

3.2. Waist / Hip - WHR

In relation to WHR, we can see that the volunteers presented with only 1.3% with low, 2.7% in moderate condition, 25.3% were in the high rating and 70.7% of volunteers studied was considered very high, and thus considers risks of cardiovascular disease, diabetes, hypertension, joint disease, etc..

Chart 2

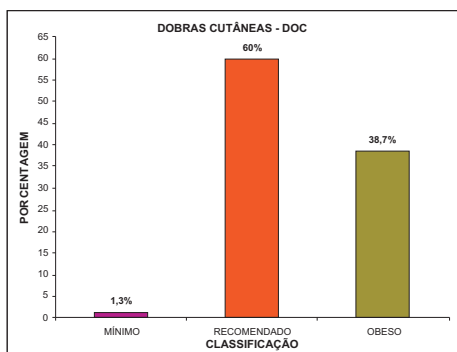


3.2 - WHR - Low risk (<0.76), Moderate Risk (0.76 - 0.83), High risk (0.84 - 0.90), Very high risk (> 0.90) (BRAY, GRAY , 1988 apud MARINS; Giannichi, 2003 p. 74).

3.3. Skin folds - DOC

Regarding the percentage of body fat, as indicated by skinfold - DOC, we observed that only 1.3% of this population meets the minimum percentage of fat, 60% is the percentage of fat in the recommended level and 38.7% of volunteers are with the percentage of fat above recommended, so obese.

Chart 3



3.3 - DOC -% G: Low (<20%), Recommended (20% to 40%) Obese (> 40%) (ACSM Fitness Healt J., 2001 apud SCOOT, G., Davis, R. 2003, p.400)

4. DISCUSSION

4.1. Body Mass Index - BMI

With respect to BMI, we observed that the volunteers were presented with 14.7% with low weight, 33.3% were normal / eutrophic and 52% had a high prevalence of obesity.

A recent study by Marques et al. (2005), population in northeastern Brazil (Pernambuco), with 224 elderly, found a prevalence of 25.6% were obese, aged 60-79 years.

In the elderly, the BMI classification differ from those suggested by WHO for the adult population, where the limits of underweight BMI less than 18.5 kg / m², eutrophic BMI is between 18.5 kg / m² to 25 kg / m² and overweight BMI greater than or equal to 25 kg / m².

The loss of lean body mass, increased body fat, changes in the curvature of the spine, with implications for reducing the height, changes in skin elasticity and relaxation of abdominal muscles are factors inherent to the aging process which cause limitations in the validity to traditional anthropometric measurements. Therefore this study was concerned to assess other

variables.

4.2. Waist-hip ratio - WHR

In relation to WHR, we can see that the volunteers presented with only 1.3% with low, 2.7% in moderate condition, 25.3% were in the high rating and 70.7% of volunteers studied was considered high.

Study Umersbach et al., 2006), analyzing the distribution of fat in women of different age groups by means of computed tomography, showed that aging leads to the redistribution and internalization of abdominal fat, especially among women.

In the elderly is the increase of 20 to 30% in total body fat (2 to 5% per decade after 40 years) and changes in its distribution, tending to be more central, abdominal and visceral. In females, the fat is deposited more in the buttocks and thighs (appearance of "pear").

4.3. Skinfold - DOC

Regarding the percentage of body fat, as indicated by skinfold - DOC, we observed that only 1.3% of this population meets the minimum percentage of fat, 60% is the percentage of fat in the recommended level and 38.7 % of volunteers are with the percentage of fat above recommended, so obese.

Lean body mass in the elderly is 30 to 40%, it shows the loss of both muscle protein as visceral and results in functional and metabolic changes. The physiological changes of aging change over the years, so the body composition and the consequences of these changes are evident in the elderly.

Some experts discourage the use of the DOC to assess the body composition of elderly. With aging, the fat is redistributed, with relatively higher levels of internal fat and deposited in the trunk and not the ends. The decrease in elasticity and skin hydration, related to age and the decrease in the size of fat cells may increase the compressibility of subcutaneous fat and connective tissues. Experts, however suggest the use of alternative methods, such as a circle or BIA to study body composition in elderly (HEYWARD, Stolarczyk, 2000).

5 - CONCLUSION

We conclude that the elderly women of the city of Partridges - Minas Gerais have a tendency to develop a framework for obesity. Complex physiological, genetic, cultural and psychological factors contribute to the problem and it can not be attributed solely to a lack of willpower or a personal deficit. Exercise is an important predictor of success for weight reduction, which is why a greater physical activity is a key goal for those wishing to lose weight.

Keywords: Elderly, anthropometric measures, obesity.

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ANTHROPOMETRIC FOR OBESITY OLDER WOMEN IN THE CITY OF PERDIZES - MINAS GERAIS.

ABSTRACT

The promotion of a more active life in old age has been used as a strategy to promote improvement in health standards and quality of life. The aim of this study was to diagnose the number of obese women by anthropometric measures, residents in the city of Partridges - Minas Gerais. The sample consisted of 75 women, 60 to 86 years of age, thus constituting 20% of the resident population as of August 2006 Perdizes - Minas Gerais.

Were assessed for body mass index - BMI (P / M^2), waist and hip circumference - WHR (C / Q), skinfold thickness triceps, suprailiac and abdominal - DOC.

For the classification of obesity, we used the BMI criteria Linschitz (1994) adopted by the Ministry of Health through the SISVAN. The ratings of WHR (waist / hip ratio) were diagnosed according to (Gray, Bray, 1988 apud MARINS; Giannichi, 2003, p.74). The amount of fat was estimated by the predictive model proposed by Jackson, Pollock (1985) and Siri (1961). With respect to BMI, 52% of the volunteers showed obesity, 33.3% were normal / healthy weight and 14.7% with low weight. The prevalence of inadequate waist-hip ratio was 70.7% of volunteers surveyed found themselves in rank very high, the WHR. About 38.7% of the volunteers studied had become obese by using skinfold method - DOC.

We conclude that the elderly women of the city of Partridges have a tendency to develop a framework for obesity. Obesity is a significant health problem. Exercise is an important predictor of success for weight reduction, which is why a greater physical activity is a key goal for those wishing to lose weight.

KEYWORDS: Elderly, anthropometric measures, obesity.

ANTHROPOMÉTRIQUES POUR OBESITE FEMMES AGEES DE LA VILLE DE PERDIZES-MINAS GERAIS**RÉSUMÉ**

La promotion d'une vie plus active au troisième âge a été utilisée comme une stratégie visant à promouvoir l'amélioration des normes de santé et de la qualité de vie. L'objectif de cette étude est de diagnostiquer le nombre de femmes obèses par des mesures anthropométriques, les résidents de la ville de perdrix - Minas Gerais. L'échantillon se composait de 75 femmes, 60 à 86 ans d'âge, constituant ainsi 20% de la population résidente en août 2006 Perdizes - Minas Gerais. Ont été évalués pour l'indice de masse corporelle - IMC (P / M^2), de la taille et la circonférence de la hanche - WHR (C / Q), l'épaisseur du pli cutané du triceps, abdominaux et suprailliac - DOC.

Pour le classement de l'obésité, nous avons utilisé les critères de l'IMC Linschitz (1994) adoptée par le ministère de la Santé par le SISVAN. Les cotes de WHR (rapport taille / hanche) ont été diagnostiqués après (Gray, Bray, 1988 MARINS apud; Giannichi, 2003, p.74). La quantité de gras a été estimée par le modèle prédictif proposé par Jackson Pollock (1985) et Siri (1961).

En ce qui concerne l'IMC, 52% des volontaires ont montré l'obésité, 33,3% étaient normaux / poids saine et 14,7% avec un faible poids. La prévalence de la taille insuffisante-ratio de la hanche était de 70,7% des bénévoles interrogés se sont retrouvés dans un rang très élevé, le WHR. Environ 38,7% des volontaires étudiés étaient obèses en utilisant la méthode des plis cutanés - DOC.

Nous concluons que les femmes âgées de la ville de perdrix ont tendance à développer un cadre pour l'obésité. L'obésité est un problème de santé important. L'exercice physique est un prédicteur important de succès pour la réduction de poids, ce qui explique pourquoi une activité physique plus importante est un objectif clé pour ceux qui souhaitent perdre du poids.

MOTS-CLÉS: personnes âgées, les mesures anthropométriques, l'obésité.

ANTROPOMÉTRICAS OBESIDAD PARA MAYORES DE MUJERES EN LA CIUDAD DE PERDIZES-MINAS**GERAIS****RESUMEN**

La promoción de una vida más activa en la vejez se ha utilizado como una estrategia para promover la mejora de los estándares de salud y calidad de vida. El objetivo de este estudio fue diagnosticar el número de mujeres obesas por las medidas antropométricas, los residentes en la ciudad de Perdices - Minas Gerais. La muestra consistió de 75 mujeres, 60 a 86 años de edad, lo que constituye el 20% de la población residente en agosto de 2006 Perdizes - Minas Gerais. Fueron evaluados para el índice de Masa Corporal - IMC (P / M^2), la circunferencia de la cintura y la cadera - RHO (C / Q), grosor del pliegue cutáneo del tríceps, suprailiaco y abdominal - DOC.

Para la clasificación de la obesidad, se utilizaron los criterios de índice de masa corporal Linschitz (1994) aprobada por el Ministerio de Salud a través del SISVAN. Las calificaciones de la RCC (relación cintura / cadera) fueron diagnosticados de acuerdo a (Gray, Bray, 1988 MARINS apud; Giannichi, 2003, p.74). La cantidad de grasa fue calculado por el modelo de predicción propuesto por Jackson Pollock (1985) y Siri (1961).

Con respecto al IMC, el 52% de los voluntarios mostraron la obesidad, el 33,3% fueron normales o saludables de peso y el 14,7% con bajo peso. La prevalencia de la cintura inadecuada-ratio de la cadera fue del 70,7% de los voluntarios estudiados se encontraban en el rango muy alto, el WHR. Aproximadamente el 38,7% de los voluntarios obesos se ha estudiado usando el método del pliegue cutáneo - DOC.

Llegamos a la conclusión de que las mujeres mayores de la ciudad de perdices tienen una tendencia a desarrollar un marco para la obesidad. La obesidad es un problema de salud significativo. El ejercicio es un predictor importante de éxito para la reducción de peso, por lo que una mayor actividad física es un objetivo clave para aquellos que desean perder peso.

PALABRAS CLAVE: Ancianos, medidas antropométricas, la obesidad.

INDICADORES ANTROPOMÉTRICOS PARA OBESIDADE DE MULHERES IDOSAS NA CIDADE DE PERDIZES**- MINAS GERAIS.****RESUMO**

A promoção do estilo de vida mais ativo na terceira idade tem sido utilizada como estratégia de desenvolver melhores padrões de saúde e qualidade de vida. O objetivo do presente estudo foi diagnosticar o número de mulheres obesas, através das medidas antropométricas, residentes na cidade de Perdizes - Minas Gerais. A amostra foi composta de 75 mulheres, de 60 a 86 anos de idade, constituindo assim 20% da população residente até agosto de 2006 em Perdizes - Minas Gerais.

Foram avaliadas quanto ao índice de massa corporal - IMC, (P/H^2); perímetro da cintura e perímetro do quadril - RCQ (C/Q); espessura das dobras cutâneas tricipital, suprailiaca e abdominal - DOC.

Para classificação da obesidade utilizou-se o IMC e os critérios de Linschitz (1994) adotados pelo Ministério da Saúde através do SISVAN. As classificações do RCQ (relação cintura /quadril), foram diagnosticadas de acordo com (Gray; Bray, 1988 apud MARINS; GIANNICHI, 2003, p.74). A quantidade de gordura foi estimada pela equação preditiva proposta por Jackson; Pollock (1985) e Siri (1961).

Com relação ao IMC, 52% das voluntárias apresentaram obesidade, 33,3% estavam normal/eutrófico e 14,7% na condição de baixo peso. A prevalência de inadequação da relação cintura/quadril foi de 70,7% das voluntárias pesquisadas encontraram-se na classificação muito alto, pela RCQ. Cerca de 38,7% das voluntárias estudadas apresentaram-se obesas, utilizando método de dobras cutâneas - DOC.

Concluimos que as idosas avaliadas da cidade de Perdizes possuem uma tendência para desenvolver um quadro de obesidade. A obesidade é um problema de saúde significativo. O exercício físico constitui um importante prognosticador do sucesso para a redução de peso, razão pela qual uma maior atividade física é um objetivo-chave para os que desejam perder peso.

PALAVRAS-CHAVE: Idoso, medidas antropométricas, obesidade.

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