39 - BODY COMPOSITION OF ELDERLY GOERS RESISTIVE EXERCISE AND HEALTH PROJECT (LERES/UEPA) IN 2012.

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INTRODUCTION

The age distribution of the world population has brought visible changes in recent decades, due to the increase in life expectancy and the consequent increase in the elderly, which poses new challenges in the field of nutritional research (CAMPOS; MONTEIRO; ORNELAS, 2000). According to the classification of the World Health Organization (WHO), the Elderly (2003) and IBGE, are considered elderly individuals aged over 60 years (WHO, 2002).

Aging is a natural process, but in the body causes changes in both the structure when the functional repercussions in health and nutrition of the elderly. Some changes are slow, leading to effective reductions in functional capacity, since the sensitivity to tastes by primary metabolic processes of the body (CAMPOS; MONTEIRO; ORNELAS, 2000).

Among the changes with aging, we highlight the decline in basal metabolic rate coupled with lower energy expenditure, decreased the percentage of lean body mass and increase in adipose tissue (CAMPOS; MONTEIRO; ORNELAS, 2000). All these factors provides implications for healthcare systems and society that are not yet prepared to handle such situations, because there is no infrastructure needed to meet the demands of this socio-medical group, in terms of facilities, programs and specific training adequate human resources (CALDAS, 2003).

Strength training was a practice not well seen in the elderly population, but several studies has shown that resistance exercise has significant benefits in the lives of the elderly, may contribute to the decrease in body fat percentage and increase in the percentage of muscle mass, as well to help in the prevention of falls, injuries, and degenerative diseases, improving and compensating honesty and muscle weakness, thereby improving the quality of life (VALE; NOVAES; DANTAS, 2005; ALMEIDA, 2011; BRANDALIZE et al., 2011; MOREIRA et al., 2011). The aim of this study was to evaluate the body composition of elderly regulars Project Resistance Exercise and Health.

MATERIAL AND METHODS

It was a cross-sectional study and the universe total of 22 participants, aged less than 60 (sixty), of both sexes, project participants Resistance Exercise and Health you read / UEPA, practicing resistance exercise, with frequency 2 (two) days a week and 50 minutes per training session.

The location of data collection was in the Laboratory of Exercise Resistance and Healthcare (you read), which is located on the premises of the University of Pará (UEPA) - Campus III, located at Avenida John Paul II, s / n º, District of Marco . We first carried out the dissemination of research showing the objectives, benefits and clarifications. After acceptance of the practitioners in the project, all signed a consent form, which will accept and participate in the study will be submitted to anthropometric evaluations on-site project (UEPA), between April and May 2012. This research has the appreciation and approval of the Ethics Committee of the Universidade da Amazônia (UNAMA) according to the protocol n ° 01366612.2.0000.5173/2012.

The survey instrument used was a standardized questionnaire, applied in the form of interview for data collection during the evaluation of the project participants, which will include data on age, weight, height, skinfold thickness and body circumferences. Among the anthropometric variables were measured body weight and height to calculate body mass index (BMI), triceps, midaxillary, pectoral, subscapular, suprailiac, abdominal and thigh circumferences beyond the calf, hip, waist to data from the waist / hip ratio for subsequent estimation of the percentage of body fat and risk of cardiovascular disease in the elderly.

After all procedures and reviews the study, information was tabulated and entered into a database for statistical analysis thereof. According to the nature of the variables apply the statistical analysis, the percentage values are reported of the results obtained in this study and the mean and standard deviation (SD). The results were statistically evaluated by Bio Stat Program 5.0.

RESULTS

In this study were evaluated 22 elderly patients in which 8 (36%) patients were male and 15 (64%) females, which may show that the mean age was 70.2 ± 6, 2 years (Table 1). A study by Sacon (2011), State of Rio Grande do Sul with 53 elderly practitioners of resistance exercises, it was observed that the mean age was 65.8 years. In the study by Silva et al. (2009) in São Paulo with 57 elderly practitioners of exercise, found the average age was 68.2 years.

Already in search of Ribeiro et al. (2012), in Belém, one of the 11 respondents were males and 10 females with ages ranging from 60 to 70 years. These results are similar to this research

Table 1- General characteristics of n = 22 elderly Project Resistance Exercise and Health LERES/UEPA. Belém-PA, 2012.

	AGE	HEIGHT	WEIGHT
Minimum	60,0	56,0	157,0
Maximum	85,0	85,3	175,5
Average	70,2	65,7	156,7
Standard Deviation	6,2	9,7	6,1

Source: Research Protocol, 2012

According to Table 1, the average body weight was found to be 65.7 ± 9.7. In studies conducted by Silva et al. (2009) and Fugulin (2009) found that the average body weight of elderly patients was 68.5 and 70.9 kg for both sexes, respectively.

Table 2 - Distribution of anthropometry n = 22 elderly Project Resistance Exercise and Health LERES/UEPA. Belém, PA, 2012.

Anthropometric		**n**	**%**	**p-valor**
Calf Circumference				<0,0001*
	malnutrition	1	5,5	
	eutrophic	21	95,5	
Waist / Hip				0,1175
Males	No risk	8	36,5	
	Risk	0	0,0	
Females	No Risk	6	27,3	
	Risk	8	36,5	
Body Mass Index				0,0555
	malnutrition	2	9,1	
	eutrophic	10	55,5	
	overweight	10	55,5	

Source: Research Protocol, 2012
* Qui-quadrado.

In Table 2, the calf circumference, indicative of loss of lean mass in the elderly showed 21 participants (95.5%) with a tendency to Normal weight. A similar result was found in the study of Cachoni et al. (2010), which evaluated 60 elderly practicing regular physical activity in the State of São Paulo, noted that more than 80% of the study population presented circumference ⩾ 31 cm, ie the elderly are without loss of muscle mass.

The relationship Waist / Hip (Table 2) showed 15 (63.8%) individuals diagnosed with No Risk, which were 8 (36.5%) males and 6 (27.3%) females. This same variable, it is important to show that 8 (36.55%) women were diagnosed Risk. However, it is interesting to demonstrate that the number of women participating in the study is superior male participation. Ribeiro et al. (2011) conducted a survey of 37 women, aged over 60 years practicing moderate physical activity in the State of São Paulo, in which they gained an average of 0.81, ranking the elderly population without nutritional risk. In the study conducted by Silva et al. (2009) with 57 elderly men and women, physically active, the waist-hip ratio was 0.90 ± 0.07, classifying these individuals with risk.

According to Table 2 the mean BMI was 26.7 kg found / m² and can show that the nutritional diagnosis of greater significance was normal weight (55.5%) and overweight (55.5%). In the study by Moura et al. (2009) evaluated 28 patients of both sexes who do resistance exercise in the State of Roraima, the average BMI was 27.87 kg / m² classifying the population overweight. In the study by Ribeiro et al. (2012), held in Belém, with 11 seniors who do physical conditioning, the mean BMI was 28.9 kg / m² and 27.6 ± 3.5 kg / m², of men and women, respectively, values that are higher than desired. Different results of the current study.

Table 3 - Distribution of % body fat elderly Project Resistance Exercise and Health LERES/UEPA. Belém, PA, 2012.

	% Body Fat	
	Males	Females
n	8	15
Minimum	11,3	21,1
Maximum	23,8	36,0
Average	19,3	28,7
Standard Deviation	5,5	5,1

Source: Research Protocol, 2012

The body fat percentage (BF%) in the study you read, averaged 19.3 ± 5.5 for males and 28.7 ± 5.1 for females (Table 3), values within normality according to sex and age presented in benchmark used in this study. Ribeiro et al. (2012) evaluated 11 subjects at a gym in Bethlehem, and noted that the% BF was higher in men compared to women, 16.7 and 26.9, respectively. These data corroborate those found in this study.

CONCLUSION

The present study had a sample of 22 elderly, and 64% were female and 36% male, mean age 70.2 years, range 60-85 years, mean weight of 65.7 kg and average height of 156.7 cm.

In relation to anthropometric, seniors were eutrophic in calf circumference with a percentage of 95.5%, with waist / hip ratio 63.9% of the participants are out of risk for developing cardiovascular disease and 100% of men are below values of risk. As for BMI, most volunteers are among normal weight (45.5%) and overweight (45.5%), with 100% of the elderly with% BF appropriate for the age group of both sexes.

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BODY COMPOSITION OF ELDERLY GOERS RESISTIVE EXERCISE AND HEALTH PROJECT (LERES/UEPA) IN 2012.

ABSTRACT

Aim of the study was to evaluate the body composition of elderly goers resistive exercise and health project (LERES/UEPA) in 2012.Pointing percentage of caloric adequacy of macro and micronutrients, assessing 22 seniors enrolled in the program, aged less than sixty (60) years, of both sexes. Anthropometric assessment was performed by checking the values of body weight and height to calculate body mass index (BMI), skinfolds, circumferences waist / hip ratio for subsequent estimation of the percentage of body fat and risk of cardiovascular disease of the elderly; and calf circumference to estimate the loss of muscle mass. BMI showed low percentages of malnutrition (9.1%), and the majority is divided between Normal weight (45.5%) and overweight (45.5%). Already the circumference of the calf 95.5% of elderly people lies on eutrophy. In relation to waist / hip ratio 63.7% of participants showed no risk of developing cardiovascular disease and 36.3% of the elderly are above the reference value, presenting the risk of developing cardiovascular disease.

KEYWORDS: elderly, resistance exercise, health, quality of life.

COMPOSITION DU CORPS DE L'EXERCICE AMATEURS PERSONNES ÂGÉES ET RÉSISTIVE PROJET DE SANTÉ (LERES/UEPA) EN 2012.

RÉSUMÉ

But de l'étude était d'évaluer la composition corporelle de l'exercice habitués Résistance personnes âgées de projet et de la santé que LERES/UEPA en 2012. Pourcentage de pointage de l'adéquation calorique de macro et micronutriments, l'évaluation de 22 aînés inscrits au programme, âgé de moins de soixante (60) ans, des deux sexes. Évaluation anthropométrique a été réalisée en vérifiant les valeurs de poids et de taille pour calculer l'indice de masse corporelle (IMC), plis cutanés, circonférences taille / hanches pour une estimation ultérieure du pourcentage de graisse corporelle et le risque de maladie cardio-vasculaire des personnes âgées; et la circonférence du mollet pour estimer la perte de la masse musculaire. IMC a montré un faible pourcentage de la malnutrition (9,1%), et la majorité est divisée entre le poids normal (45,5%) et le surpoids (45,5%). Déjà la circonférence du mollet 95,5% des personnes âgées repose sur eutrophie. En ce qui concerne la taille / hanche 63,7% des participants n'a révélé aucun risque de développer une maladie cardio-vasculaire et 36,3% des personnes âgées sont au-dessus de la valeur de référence, présentant le risque de développer une maladie cardiovasculaire.

MOTS-CLÉS: personnes âgées, des exercices de résistance, la santé, la qualité de vie

COMPOSICIÓN CORPORAL DE EJERCICIO ASISTENTES ANCIANOS Y RESISTENTE AL PROYECTO DE SALUD (LEER / UEPA) EN 2012.

RESUMEN

Objetivo del estudio fue evaluar la composición corporal del ejercicio de resistencia habituales ancianos y Salud del Proyecto de leer / UEPA en 2012. Señalando porcentaje de adecuación calórica de macro y micronutrientes, la evaluación de 22 adultos mayores inscritos en el programa, de menos de sesenta (60) años, de ambos sexos. Evaluación antropométrica se realizó mediante la comprobación de los valores de peso y talla para calcular el índice de masa corporal (IMC), pliegues cutáneos, perímetros cociente cintura / cadera para la estimación posterior del porcentaje de grasa corporal y el riesgo de enfermedad cardiovascular de las personas mayores; y la circunferencia de la pantorrilla para estimar la pérdida de masa muscular. IMC mostraron bajos porcentajes de desnutrición (9,1%), y la mayoría se divide entre el peso normal (45,5%) y el sobrepeso (45,5%). Ya la circunferencia de la pantorrilla 95,5% de las personas de edad avanzada se encuentra en la eutrofia. En relación con el índice cintura / cadera 63,7% de los participantes mostraron ningún riesgo de desarrollar enfermedad cardiovascular y el 36,3% de las personas mayores están por encima del valor de referencia, presentando el riesgo de desarrollar enfermedad cardiovascular.

PALABRAS CLAVE: anciano, ejercicio de resistencia, salud, calidad de vida.

COMPOSIÇÃO CORPORAL DE IDOSOS FREQUENTADORES DO PROJETO EXERCÍCIO RESISTIDO E SAÚDE (LERES/UEPA) EM 2012.

RESUMO

Objetivo do estudo foi avaliar a composição corporal de idosos frequentadores do Projeto Exercício Resistido e Saúde do LERES/UEPA no ano de 2012. Apontando o percentual de adequação calórica, de macro e micronutrientes, avaliando 22 idosos matriculados no programa, com idade igual ou superior a 60 (sessenta) anos, de ambos os sexos. Foi realizada a avaliação antropométrica verificando os valores do peso corporal e estatura corporal para o cálculo de Índice de Massa Corporal (IMC), dobras cutâneas, circunferências cintura/quadril, para posterior estimativa do percentual de gordura corporal e riscos de doenças cardiovasculares dos idosos; e circunferência da panturrilha, para estimativa de perda de massa muscular. O IMC apresentou baixos percentuais de Desnutrição (9,1%), e a maioria está dividida entre Eutrofia (45,5%) e Sobrepeso (45,5%). Já a circunferência da panturrilha 95,5% dos idosos encontra-se em eutrofia. Com relação à cintura/ quadril 63,7% dos participantes não apresentaram risco de desenvolver doenças cardiovasculares e 36,3% dos idosos estão acima do valor de referência, apresentando risco de desenvolver doenças cardiovasculares.

PALAVRAS-CHAVE: idoso; exercício resistido; saúde; qualidade de vida.