# 105 - ANTHROPOMETRIC PROFILE OF AGED PRACTITIONERS OF PHYSICAL ACTIVITY

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## INTRODUCTION

The excess of weight and/or accumulation of corporal fat are associated with some problems of health, having included the hypertension, diabetes, cardiovascular, renal, digestive illnesses, hepatics and orthopedics problems (Nahas, 2003). In accordance with the author, the excess of corporal fat is one of the biggest problems of health in many countries, especially the most industrialized, being that in the last decade this picture of increasing population obesity started to worry developing countries.

Thus, for the advances of the health technology and to the low taxes of natality he had an increase of the life expectancy that led to the aging of the population, fact that increases the prevalence of chronic-degenerative illnesses.

With the advance of the age alterations of corporal composition in the aged one occur. In relation to the stature, this is remained until the 40 years and to leave of this age it is scrumbled after about 1 centimeter per decade, accenting itself the 70 years. This fact is consequence of the alterations of the column (resulted of kyphosis dorsal, flattening of the vertebrae and reduction of intervertebral records), of the incurvation of the inferior members and of the flattening of Arco plantar, being more accented in the feminine sex (CARVALHO FILHO, 2002).

In relation to the weight, Carvalho Filho (2002) affirms that it after has a trend to the reduction of this the 60 years. When, after this age, the weight is remained unchanged or is raised, must it the accumulation of fat. One still adds that it generally has reduction of the free mass of fat and, increase of the fat mass, being this stored intra-abdominal and intramuscular.

In this way, the calculation of the Body Mass Index (BMI) is a simple way and practical to determine if the individual it is inside of the recommendable one for the health. The BMI exactly being a rudimentary index of obesity, classify the individual and predict the risk of illnesses (Mazo et al. 2004). However, precaution in interpreting the result of the BMI must be had as factor of risk for chronic illness, particularly in comparison with different age and ethnic groups (DEURENBERG et al. 1998).

One adds that the calculation of the BMI does not show the ample variation in the fat distribution, thus being able; to underestimate the real increase of the corporal fat, especially the central fat, in individuals of more advanced age (PRENTICE and JEBB, 2001; WHO, 1998).

It is important to remember that there are few studies on standardizations of classifications for BMI of the aged ones and the importance of each country are incipient to have the specific classification for its population, had the cultural and ethnic differences. For in such a way, the recommendation of the Expert Committee of the World Health Organization is not the use of universal data, in view of this known existing difference between the peoples.

In Brazil, it is verified inexistence of anthropometrics values of reference for the aged population. However, exactly without specific classifications one becomes necessary to investigate such indices, as form of evaluation of the aged ones, preventing the appearance of other illnesses proceeding from the weight excess, as well as evaluation of programs of physical activity.

Thus, the present study it has for objective to verify the BMI of participant men of the Project Dances Folkloric and Gymnastic for Third Age of the CDS/UFSC, by means of the classifications of the World-wide Health Organization (WHO) and American Pan Organization of Health (APOH).

## METODOLOGICS PROCEDURES

The sample was composed for 48 aged physically independent ones, with age it enters the 60 and 90 years (x 71, 02 anos; ± 6, 93) participant of the project "Dances Folkloric and Gymnastic for Third Age of the CDS/UFSC".

This Project of Extension was created in August of 1989, in the Center of Sports of the Federal University of Santa Catarina. Currently aged ones are taken care of approximately 630. The offered physical activities are: gymnastics, hidroginastica, dances folkloric, swimming, volley adapted. The modality more practised by the aged ones is the gymnastics, totalizing 14 groups. Already for the hidroginastica they are 2 groups and 1 group for the too much modalities (swimming, dances folkloric, volley adapted).

The choice for the masculine sex was random and intentional, since another study on the variable it contemplated the feminine sex.

The anthropometrics data had been collected in março/2006. The anthropometrics measures had been: weight, height, perimeter of the arm, waist and hip. However, one only used for the present study weight and height, since they are the measures used for the calculation of the BMI.

One adopted the points of cut recommended by WHO (1997) and APOH (1997), as tables to follow:

**Table 1:** Classification of the BMI in accordance with the WHO.

| BMI | Classification |
|---|---|
| Even 18,4 | Low Weight |
| 18,5 - 24,9 | Recommendable |
| 25 - 29,9 | Overweight |
| 30 - 34,9 | Obesity I |
| 35 - 39,9 | Obesity II |
| 40 or more | Obesity III |

Source: WHO (1997), apud NAHAS (2003).

**Table 2:** Classification of the BMI in accordance with the APOH.

| BMI | Classification |
|---|---|
| BMI < 23 | **Low Weight** |
| 23< BMI > 28 | **Normal Weight** |
| 28 d" BMI < 30 | **Overweight** |
| BMI > 30 | **Obesity** |

Source: APOH (1997)

The analysis was of the descriptive type, by means of frequency and percentage in Program SPSS will be Windows 11.0.

**RESULTS and DISCUSSION**

In accordance with the classification of the WHO (table 3), the majority of the aged ones (54,2%) is classified with overweight, having been the age group of 65-69 years the one that presented greater percentage (50%) and 29.2% are with normal weight.

Already, according to APOH, 16.7% is with overweight; 50% meet with the normal weight, being age group 65-69 years with percentile greater (22, 9%). However 18.8% are with low weight and 14.6% are classified in obese (table 4).

**Table 3.** Classification of the BMI according to age group, in accordance with the WHO.

| | 60 - 69 anos | 70 - 79 anos | > 80 anos | Total |
|---|---|---|---|---|
| Low Weight | _____ | _____ | 2,1% (1) | 2,1% |
| Normal Weight | **12,5% (6)** | 14,6% (7) | **2,1% (1)** | 29,2% |
| Overweight | 31,3% (15) | 16,7% (8) | **6,2% (3)** | 54,2% |
| Obesidade degree I | 6,2% (3) | 6,2% (3) | 2,1% (1) | 14,6% |
| Total | 50% | 37,5% | 12,5% | 100% |

* Percentile and frequency

**Table 4**. Classification of the BMI according to age group, in accordance with the APOH.

| | 60 - 69 anos | 70 - 79 anos | > 80 anos | Total |
|---|---|---|---|---|
| **Low Weight** | 6,2% (3) | 8,3% (4) | 4,2 % (2) | 18,8% |
| **Normal Weight** | 22,9% (11) | 22,9% (11) | 4,2 % (2) | 50% |
| **Overweight** | 14,6% (7) | _____ | 2,1% (1) | 16,7% |
| **Obesidade** | 6,2% (3) | 6,2% (3) | 2,1% (1) | 14,6% |
| **Total** | 50% | 37,5% | 12,5% | 100% |

One observes in all the age group, raised taxes of overweight and obesity. These high taxes can be related to the significant increase in the ingestion of fat and sugar, beyond the reduction of the consumption of staple fibers and complex carbohydrate (PENA and BACALLAO, 2000). The behavior change is still cited, of the life style, of the feeding; leading to the sedentariness, stress it, amongst others.

Taking in consideration the inexistence of specific points of cut for the Brazilian aged population, studies have pointed different values with respect to prevalence of overweight and low weight.

Tavares and Anjos (1999) from the analysis of the anthropometric profile of the Brazilian aged population carried through in the study National Research on Health and Nutrition, had registered a prevalence of obesity of 5,7% in the men. In relation to the overweight (BMI 25kg/m2) it was found percentage of 30, 4% and low weight of 7, 8% in men.

Martins et al. (1999) using the same points of cut, they had verified that the prevalence of overweight was of 34, 1% and of low weight was of 7, 3%.

The study of Cruz et al. (2004) with the aged of Veranopolis, it verified prevalence of obesity of 23, 3%. The prevalence of overweight and obesity degree I was of 59%, being that of this found result, 55% were detected in the men.

In accordance with the classification of the WHO, in the present study verified 54.2% of the citizens with overweight and 2.1% with low weight.

On the other hand, for the classification of the APOH, the gotten data they portray that 50% of the citizens had presented classification of normal weight. Exactly using a classification with international, however specific values for the aged population. It seems that the classification suggested for the APOH more is adjusted when is mentioned to the aged ones. It is still inferred that one parcels out of 18, 8% of the citizens of the present study is classified with low weight. Attention of the professionals of the health is suggested and to that they are involved directly with the aged ones.

Comparing the data gotten in the two classifications, it is verified that for the WHO more aged it has classified with overweight and consequently for the APOH more aged has classified with low weight.

Still, it can be observed that by WHO 68.8% of the aged ones they are classified with overweight and obesity and for the APOH this percentage reduces for 31,3%, a frightful difference if treating only to change in the cut points. This bias evidenced with the same citizens stirs up immediate actions for development of studies with standardizations of points of cut of BMI specific for the Brazilian aged population.

**CONCLUSION**

The results suggest that it has difference between the classifications, especially between normal weight and overweight.

Although the two point a significant obesity and aged classifications number with overweight. However the classification proposal for the APOH is specific for aged, being higher the cut points, while for the WHO the values of classification are same for all the age group. In this way it is indicated classification of the APOH for this age group, exactly that this is not specific for the population of Brazil. The necessity is still distinguished to develop points of specific cut for the Brazilian population.

Another evaluation of this group is suggested, to compare the results presented with gotten after the participation of 10 months, in a systemize program of physical activity.

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**ANTHROPOMETRIC PROFILE OF AGED PRACTITIONERS OF PHYSICAL ACTIVITY**

**Abstract**

**Introduction:** The excess of weight and/or accumulation of corporal fat are considered factors of risks for the development of illnesses. **Objective:** To verify the BMI of participant men of the Project Dances Folkloric and Gymnastic for Third Age of the CDS/UFSC, by means of the classifications of the World-wide Health Organization (WHO) and American Pan Organization of Health (APOH). **Methodology:** The sample was composed for 48 men, with age enters the 60 and 90 years (x 71,2 years; ±7, 8). The anthropometrics data of corporal mass and stature had been collected in março/2006. One used the points of cut recommended by WHO (1997) and APOH (1997). The analysis was of the descriptive type, by means of frequency and percentage. **Results:** In accordance with the classification of the WHO, the majority of the aged ones (54,2%) are classified with overweight, having been the age groups of 65-69 years the one that presented greater percentage (50%) and 29.2% are with normal weight. Already according to APOH 16.7% is with overweight; 50% meet with the normal weight, being age group 65-69 years with percentile greater (22, 9%). However 18.8% are with low weight and 14.6% are classified in obese. **Conclusion:** The results suggest that it has difference between the classifications, especially between normal weight and overweight. Although the two indicate a significant obesity and aged classifications number with overweight. However the classification proposal for the APOH is specific for aged, being higher the cut points, while for the WHO the values are equal for all the age group. In this way it is indicated classification for the APOH for this age group, exactly that this is not specific for the Brazilian population.

**Key words**: BMI, aged, physical activity.

**PROFIL ANTROPOMETRIC DES PERSONNES ÂGÉES DE PRATICIENS DE L'ACTIVITÉ PHYSIQUE**

**Rèsumé**

**Introduction:** L'excès du poids et de l'accumulation de la graisse corporelle est considéré des facteurs des risques pour le desencadeamento des maladies. **Objectif**: Pour vérifier le BMI des hommes de participant de Projet Danses Folkloriques et gymnastiques pour le troisième âge du CDS/UFSC, au moyen des classifications de l'Organisation Mondiale de Santé (WHO) et de l'Organisation Pan Américaine de la Santé (APOH). **Méthodologie**: L'échantillon s'est composé pour 48 hommes, avec l'âge écrit les 60 et 90 années (x 71,2 ans ; ±7, 8). Les données d'antropometrics de la masse et de la stature corporelles avaient été rassemblées en março/2006. A employé les points de coupe recommandés par WHO (1997) et APOH (1997). L'analyse était du type descriptif, au moyen de fréquence et pourcentage. **Résultats**: Selon la classification de l'WHO, la majorité de âgée (54.2%) sont classifiées avec le poids excessif, après avoir été la bande d'etaria de 65-69 ans celui qui ont présenté un plus grand pourcentage (50%) et 29.2% sont avec le poids normal. Déjà selon APOH 16.7% est avec le poids excessif ; rencontrer de 50% le poids normal, étant bande d'etaria 65-69 ans avec le percentile plus grand (22.9%). Cependant 18.8% sont avec le bas poids et 14.6% sont classifiés dans les obesos. **Conclusion**: Les résultats suggèrent qu'elle ait la différence entre les classifications, particulièrement entre le poids et le poids excessif normaux. Bien que les deux indiquent un obesidade significatif et des classifications âgées numérotent avec le poids excessif. Il est standed hors de celui que la proposition de classification pour l'APOH est spécifique pour âgé, étant plus haut les points de coupe, alors que pour l'WHO les valeurs sont égales pour toutes les bandes d'etarias. De cette façon que c'est classification indiquée pour l'APOH pour cet estrato d'etário, exactement ce ceci n'est pas spécifique à la population brésilienne.

**Mots clés**: personnes âgées, activité physique.

**PERFIL ANTROPOMETRICO DE LOS ANCIANOS PRACTICANTES DE ACTIVIDAD FISICA**

**Resumen**

**Introducción:** El exceso del peso y/o la acumulación de la grasa corporal son considerados factores de riesgos para el desarolo de enfermedades. **Objectivo:** Verificar el IMC de los ancianos participantes del proyecto Danças Folclóricas y Gimnasia para Tercera Edad CDS/UFSC, por medio de las clasificaciones de la Organización Mundial de la Salud (OMS) y de la Organización Pan - Americana de la salud (OPAS). **Metodología:** La muestra fue compuesta por 48 ancianos, con edad entre

60 y 90 años (X 71,02 anos; ±6,93). Los datos antropometricos de masa corporal y de estatura fueron recogidos en marzo/2006. Utilizó los puntos de corte recomendados por la OMS (1997) y OPAS (1997). El análisis fue del tipo descriptivo, por medio de frecuencia y de porcentaje. **Resultados**: De acuerdo con la clasificación de la OMS, la mayoría de los ancianos (54.2%) está clasificada con exceso de peso, siendo la venda etaria de 65-69 años la que presentó el mayor porcentaje (50%) y 29.2% está con el peso normal. Ya según la OPAS 16.7% está con exceso de peso; 50% encuentrase con el peso normal, siendo venda etaria 65-69 años con el porcentaje mayor (el 22.9%). Sin embargo 18.8% están con bajo peso y 14.6% estan clasificados en obesos. **Conclusión**: Los resultados sugieren que hay diferencia entre las clasificaciones, especialmente entre peso normal y exceso de peso. Aunque los dos clasificaciones indican un numero significativo de envejecidos con exceso de peso y obesidad. Resaltase que la clasificación propuesta por la OPAS es específica para ancianos, siendo más alto los puntos del corte, mientras por la OMS los valores son iguales para todas las vendas etarias. De esta manera se indica la clasificación por la OPAS para este estrato etário, mismo que esta no sea específica para la población brasileña.

**Palabras claves**: IMC, ancianos, actividad física.

**PERFIL ANTROPOMÉTRICO DE IDOSOS PRATICANTES DE ATIVIDADE FÍSICA**

**Resumo**

**Introdução:** O excesso de peso e/ou acúmulo de gordura corporal são considerados fatores de riscos para o desencadeamento de doenças. **Objetivo:** Verificar o IMC de idosos participantes do Projeto Danças Folclóricas e Ginástica para Terceira Idade do CDS/UFSC, por meio das classificações da Organização Mundial da Saúde (OMS) e Organização Pan Americana de Saúde (OPAS). **Metodologia:** A amostra foi composta por 48 homens, com idade entre 60 a 90 anos (X 71,02 anos; ±6,93). Os dados antropométricos de massa corporal e estatura foram coletados em março/2006. Utilizou-se os pontos de corte recomendados pela OMS (1997) e OPAS (1997). A análise foi do tipo descritiva, por meio de freqüência e percentual. **Resultados:** De acordo com a classificação da OMS, a maioria dos idosos (54,2%) está classificada com sobrepeso, sendo a faixa etária de 65-69 anos a que apresentou maior percentagem (50%) e 29,2% está com peso normal. Já segundo a OPAS 16,7% está com sobrepeso; 50% encontra-se com o peso normal, sendo a faixa etária 65-69 anos com maior percentual (22,9%). No entanto 18,8% estão com baixo peso e 14,6% estão classificados em obesos. **Conclusão:** Os resultados sugerem que há diferença entre as classificações, especialmente entre peso normal e sobrepeso. Embora as duas classificações indicam um número significativo de idosos com sobrepeso e obesidade. Ressalta-se que a classificação proposta pela OPAS é específica para idosos, sendo mais alto os pontos de corte, enquanto pela OMS os valores são iguais para todas as faixas etárias. Desse modo indica-se a classificação pela OPAS para este estrato etário, mesmo que esta não seja específica para a população brasileira.

**Palavras-chave:** IMC, idosos, atividade física.