116 - ADIPOSITY AND RISK OF HYPERTENSION OF THE JUDO ATHLETES

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INTRODUCTION

The practical one of physical activity, has basic importance for the human beings, helping to regulate it the functions metabolic of our organism. With the great development of the technology, the physics activities are substituted by the sedentary, therefore everything is automatized, rolling, elevating stairs, electric machines, hydraulically direction, everything in favor of the comfort human being. The sedentary is a factor of risk for cardiovascular illnesses, between them the systemic arterial hypertension. The relation waist x hip also is related to the riots of the cardiovascular function as the hypertension (GRANDSON, 2001). According to Nahas (2001), the excess of fat and corporal weight is followed by bigger susceptibility to a variety of chronic-degenerative dysfunction that extraordinary raise the indices of morbid and mortality. Of this form, the extreme increase of the amount of fat and the corporal weight will have to reverberate in negative way in the quality and life expectancy them individuals.

As judo is divided in category of weight, it is important esteem how much the athlete possess of corporal fat and lean mass. The evaluation of the corporal composition allows to follow the athlete in the reduction of weight with purpose to fight in category of lighter weight, without that reduction of the muscular mass or dehydration occurs. Therefore these can harm the performance, to the step that one low amount of fat is associated with the success in the majority of the sportive modalities (FRANCHINI and TAKITO, 2001). In this way, the objectives of this work are to analyze the nutrition state of the junior and senior athletes, to identify the presence of factors of risk for degenerative illnesses chronics between the athletes and to compare the risk factors in accordance with the nutrition state.

MATERIAL AND METHODS

The population of the study characterizes itself for athletes of judo of Maringá who were in activity and had agreed to participating of the study signing for that the Term of Free Assent and Information. The participants had at the very least seven years of practical of the modality and in its majority they belonged the middle class. The date had been collected in the months of October and November of 2005. To attainment of the date was used as instrument a Filizola scale with precision of 0,1kg, a stethoscope Premium, one sphygmomanometer BD, one adipometer scientific Sanny and a metric ribbon Sanny. To diagnosis the percentage of corporal fat it was used formulates it of Yuhasz (1992) for adult athletes, from the measures of the coetaneous folds, as it follows: %Fat = 4,975 + 0,1066 (CH +TR +SE +SI +AB +TF). For the analysis of the date they had been used the descriptive statistical method with measures of position (central trend and dispersion) and frequency and calculation of the percentage, being demonstrated through tables. In the comparison between groups test t of student with level of significance of ($p<0,05$).

ANALYSIS AND QUARREL OF THE DATA

In table 01 the data gotten in the evaluation of judokas of Maringá are presented.

	Age	Height	Weight	ICM	SAP	DAP	Waist	RWH	% FAT
Average	**21,6**	**1,7665**	**82,65**	**26,299**	**127**	**74,5**	**87,115**	**0,8705**	**16,609**
S.L.S	3,36	0,07	19,77	5,10	11,29	15,72	13,10	0,06	6,23
V.C.	15,57	4,10	23,93	19,38	8,89	21,10	15,03	7,30	37,49
Maximum	28	1,9	145,4	42,25	160	80	124	1,05	30,8
Mínimum	18	1,64	58,4	20,14	120	10	70	0,8	6,5

The variables as feeding and ingestion of salt had not been analyzed, however, know that with a reduction in the consumption of salt and alimentary re-education, it can be controlled the levels of arterial pressure (ALLSEN and HARRISON, 2001). Overweight in 60% of the athletes of the categories was detected junior and senior of the city of Maringá, being that the levels for cut of ICM, had been above of 25 Kg/m2. Already the prevalence of obesity (ICM above of 30 Kg/m2), were observed in two athletes, or either, 10% of the sample. Considering that these athletes are of the category weighed, this result does not arrive to surprise (SILVA and SANTOS, 2004). As it demonstrates to the table 2 athletes of the categories heavy and super weighed they present indices you ponder superiors the 100 kilograms, being, therefore, frequent this classification in these categories.

Table 2. Category for weight of athlete of junior and senior the classrooms.

Super fast	Fast	Half-light	Light	Half-medium	Average	Half-heavy	Heavy
-55kg	-60kg	-66kg	-73kg	-81kg	-90kg	-100kg	+100kg

According to HANS et al (1995), circumferences of the waist (CW), greater that 102 cm are considered a factor of risk increased for the degenerative illnesses chronics. Two athletes (10% of the sample) had surpassed this limit, with 109 cm and 124 cm, respectively. Already in the relation waist x hip, we find three individuals (15%) with measures above of 0,95 cm that are the point of indicative cut of risk for in degenerative illnesses chronics the masculine sex. In these cases the fat is distributed of central and subcutaneous form (Android), characterizing itself for an accumulation of abdominal fat, particularly in the intra-abdominal region. It is related with the increase of incidence of some problems of health, such as bigger propensity the cardiac attacks, hypertension and diabetes (POLLOCK, 2003). As It Silva and Santos (2004), the percentage of fat of the senior brazilian champion of 2004 was of 5,84% in the fast classroom (up to 60 kg), in the half-light classroom (up to 66 kg) of 6,46%, in the light classroom (up to 73 kg) of 7,11%, in the category half-medium (up to 81 kg) was of 7,87%. Already in the average category (up to 90 kg) the percentage of fat was of 8,61%. In the category half-heavy (up to 100 kg), it was of 12,54% and in the category heavy (above of 100 kg) it was of 22,97%. To leave of these results, one perceives that it has a relation enters the weight of the athlete and the percentage of fat. However, these values are sufficiently low. In the evaluation carried through in Maringá, only one athlete, or either, 5% of the sample if it equalizes, in terms of adiposity, to the brazilian champion athlete.

The average of the percentage of fat was of 16,61%, minimum 6.5% and maximum 30,8%. Amorim et al (1994) considers that the level of physical conditioning influences significantly in the competitive performance of the athlete, or either,

how much lesser the percentage of fat, greater physic/competitive performance, thus resulting, in one better classification in competition. That is necessary to attempt against for the fact of that some athletes of the category heavy present percentage of corresponding fat the obesity for the masculine sex (above of 25%), indicating the necessity of reduction of this picture, not only for the advantage associated with the performance as also to prevent health problems associates to this high level of corporal fat (McARDLE et al., 2003).

Table 3. Characteristics of the athletes of the Junior category (up to 21 years old).

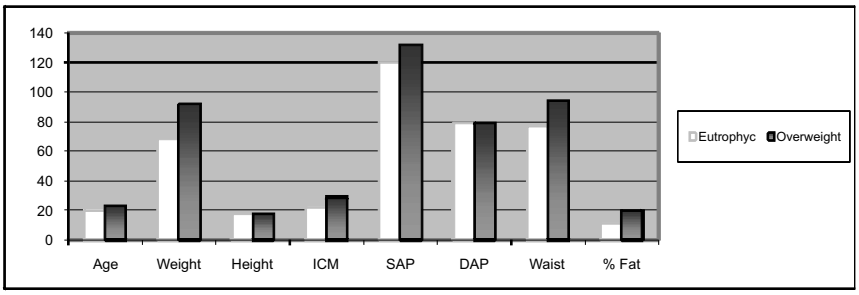
	Age	Height	Weight	ICM	SAP.	DAP.	Waist	RWH	% Fat
Average	**18,8**	**1,775**	**81**	**25,455**	**126**	**72**	**85,03**	**0,846**	**16,57**
S.L.S	0,42	0,09	24,93	6,40	13,50	22,01	15,45	0,04	6,75
V.C.	2,24	4,96	30,78	25,14	10,71	30,57	18,17	5,11	40,76
Max	19	1,9	145,4	42,25	160	80	124	0,96	30,8
Min	18	1,64	58,4	20,14	120	10	70	0,8	9,16

Analyzing the junior category we find raised levels of systolic arterial pressure in 20% of the sample, are fit in risk for ten degenerative illnesses chronics percent of the sample is fit in moderate hypertension, when the levels of systole reach 160-179 MmHg (GHORAYEB and CARVALHO, 1999). One evidences that 20% of judokas possess S.A.H. (systemic arterial hypertension). In this case, one sends regards aerobics exercises, of low and average intensity (of the order of 50 to 70% of the maximum capacities), excluding sports as the weight survey, with at the very least three sessions of 30 to 60 minutes per week (AMORETTI and BRION, 2004). Moreover, it is proven necessity of a periodic monitoring of the A.P. to follow this pointer of cardiovascular risk.

Table 4. Characteristics of the athletes of the Senior category (above of 21 years old).

	Age	Height	Weight	ICM	SAP.	DAP.	Waist	RWH	% Fat
Average	**24,40**	**1,76**	**84,30**	**27,14**	**128,00**	**77,00**	**89,20**	**0,90**	**16,65**
D.p.	2,5	0,1	14,1	3,5	9,2	4,8	10,7	0,1	6,0
C.v.	10,3	3,2	16,7	12,9	7,2	6,3	11,9	8,1	36,2
Max.	28,0	1,9	110,0	34,3	140,0	80,0	109,0	1,1	25,6
Min.	21,0	1,7	60,3	22,1	120,0	70,0	71,0	0,8	6,5

In the senior category overweight is observed that 80% of the sample possess ICM above of 25 Kg/m2, considered. In the case of judokas, this is not the best pointer, therefore the athletes possess greater muscular mass that sedentary individuals. In the eutrophycs individuals (ICM >18,5 e < 25 kg/m^2), it is noticed that the average percentage of fat is relatively low, with 11,35% of corporal fat. The pressure arterial systolic did not suffer alterations, therefore these individuals are normotenses. The relation waist-hip inside had index of the normal standards, in view of that the point of indicative cut of risk is above of 0,95 for men. In synthesis, it can be affirmed that the eutrophy is associated with a lesser risk of hypertension and also of excess of adiposity. On the other hand, the individuals classified as in weight excess (ICM > 25 kg/m^2), they had presented superior values significantly ($p<0,05$), for the majority of the variable. The only variable that they had not differed statistically had been the age, the stature and the diastolic arterial pressure, in excessively, the group with weight excess (overweight + obese) presented significant differences. You enter these, are distinguished the factors of risk for degenerative illnesses chronics (ICM, percentage of fat and systolic arterial pressure). To illustrate such differences better they are presented in graph 1 to follow.



Graph 1. Comparison between eutrophycs athletes and with excess of weight.

Analyzing graph 1 we evidence significant differences in 5 of the variables analyzed between the categories of ICM (* = $p<0,05$). In this way, it can also be affirmed that the weight excess represents, between judokas, a risk factor that must be carefully analyzed.

CONCLUSION

The presented results strengthen the necessity of a more effective control of the anthropometric, hemodynamic variables and the factors of risk of the athletes, over all, in the weighed categories more. He is evidenced that the weight excess has influence on the cardiovascular risks. Thus, it is suggested, to leave of these evidences, that the teams receive the attention from professionals of physical education enabled to accomplishment of periodic evaluations of these components. With the gotten results to leave of these evaluations it is possible to provide to the athletes, individual programs for reduction of the corporal fat, increase of the physical conditioning, improves in the cardio respiratory condition, reduction of the degenerative illnesses chronics risk, with consequences on the a positive health and results in the half sportive.

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ADIPOSITY AND RISK OF HYPERTENSION OF THE JUDO ATHLETES

ABSTRACT

The Judo uses the weight/age to separate in categories. Actions for the improvement in the performance are very frequents can be obtained by lighter category changing, who generates risk of dehydration and loss of muscle mass, that will go to harm, beyond the health the competitive performance. The objective of this study was to verify the body composition of the athletes of Maringá/PR and to analyze if this if relates with factors of risk for cardiovascular diseases. For this propose a sample of 20 male athletes with age of 18 years in the academies of Maringá was selected. A scale was used, a scientific calipter, a stethoscopes and a sphygmomanometer. The results had indicated a high prevalence of weight excess (overweight + obesity), with 60% of the sample in this condition. It was verified that this condition is related to a risk of hypertension and excess of adiposity. In this way, suggests that the teams receive the attention from professionals of physical education to accomplishment of periodic evaluations.

KEY WORDS: judo, body composition, hypertension.

ADIPOSITY ET RISQUE D'HYPERTENSION DES ATHLÈTES DE JUDO

RESUMÉ

Les utilisations de judo le weight/age de séparer dans les catégories. Les actions pour l'amélioration de l'exécution sont fréquente très peuvent être obtenues par une catégorie plus légère changeant, qui produit du risque de déshydratation et de la perte de la masse de muscle, qui ira nuire, au delà de la santé l'exécution concurrentielle. L'objectif de cette étude était vérifier la composition de corps des athlètes de Maringá/PR et de l'analyser si ceci si se relie avec des facteurs de risque pour les maladies cardiovasculaires. Pour ceci proposez un groupe de 20 athlètes masculins avec l'âge de 18 ans dans les académies de Maringá a été choisi. Une balance a été employée, un calipter scientifique, des stéthoscopes et un sphygmomanometer. Les résultats avaient indiqué une forte présence d'excès de poids (poids excessif + obésité), avec 60% de l'échantillon en cette condition. On l'a vérifié que cette condition est liée à un risque d'hypertension et à l'excès de l'adiposity. De cette façon, suggère que les équipes suscitent l'attention des professionnels d'éducation physique à l'accomplissement des évaluations périodiques.

MOTS CLÉS : judo, composition en corps, hypertension.

ADIPOSITY Y EL RIESGO DE LA HIPERTENSIÓN DE LOS ATLETAS DEL JUDO

RESUMEN

Las aplicaciones del judo el weight/age de separarse en categorías. Las acciones para la mejora en el funcionamiento son muy frecuentan se pueden obtener por una categoría más ligera que cambia, que genera el riesgo de la deshidratación y la pérdida de masa del músculo, que irá a dañar, más allá de la salud el funcionamiento competitivo. El objetivo de este estudio era verificar la composición del cuerpo de los atletas de Maringá/PR y analizarla si esto si se relaciona con factores del riesgo para las enfermedades cardiovasculares. Para esto proponga una muestra de 20 atletas masculinos con la edad de 18 años en las academias de Maringá fue seleccionado. Una escala fue utilizada, un calipter científico, estetoscopios y un sphygmomanometer. Los resultados habían indicado un alto predominio del exceso del peso (exceso de peso + obesidad), con el 60% de la muestra en esta condición. Fue verificado que esta condición está relacionada con un riesgo de la hipertensión y el exceso del adiposity. De esta manera, sugiere que los equipos reciban la atención de profesionales de la educación física a la realización de evaluaciones periódicas.

PALABRAS CLAVES: judo, composición del cuerpo, hipertensión.

ADIPOSIDADE E RISCO DE HIPERTENSÃO EM JUDOCAS ADULTOS

RESUMO

O judô usa categorização dos atletas por peso/idade, sendo freqüentes ações para melhora nos resultados através da mudança para categoria inferior. Este tipo de estratégia, no entanto, gera riscos como o de desidratação e perda de massa muscular, prejudiciais à saúde e ao desempenho. O objetivo desse estudo foi verificar a composição corporal dos atletas de Maringá e analisar a relação com fatores de risco para doenças cardiovasculares. Para tanto, foi selecionada amostra de 20 atletas masculinos, acima de 17 anos. Utilizou-se como instrumento para obtenção dos dados balança, estetoscópio, esfigmomanômetro, adipômetro científico e fita métrica. Os resultados indicaram prevalência de excesso de peso (sobrepeso + obesidade) em mais de 60% da amostra. Verificou-se que essa condição está relacionada a risco de hipertensão e excesso de adiposidade. Assim, sugere-se que as equipes recebam a atenção de profissionais de educação física para realização de avaliações periódicas. PALAVRAS-CHAVE: Judô, composição corporal, Hipertensão arterial.