101 - THE AVERAGE ARTERIAL PRESSURE IN MILITARY POLICEMEN OF THE COMPANY OF SPECIAL OPERATIONS (COE) OF RONDÔNIA

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Introduction

The military policemen, exactly before being admitted in this profession already must present superior physical qualities to the presented ones for the majority of the common people. The tests of physical aptitude function as a form of eliminatory of competitions of admission for the social cited class, being these applied to the competitors in dispute for the available vacant, which is find described in public note. In this way, all those who present overhead in the physical tests are classified as not apt and consequently are off the selection.

The related tests normally involve parameters neuromuscular and cardiopulmonary, beyond the physical components as, for example, the stature, that is considered of high relevance in the selection to the Military Police, being common the public notes to describe that the competitors will have to present the requirement of the cited variable of the least 1,60 m, duly warned to be declassified.

To carry through this selection, as well as the formation of related professional the State invests time, human resources and financial. Thus, it must be protected the health and well-being of the MP so that these develop satisfactorily its function of protection to the society (RODRIGUEZ-AÑEZ, 2003). In this direction the Physical Education for military policemen has for objective: a) to provide the preventive maintenance of the health; b) to develop, to keep and to recoup the general physical condition of the military; c) to cooperate in the development of moral and professional qualities; and d) to provide a reduction of the acquired levels of stress during the daily of the work (Barboza & Sandes, 2002).

NEGRÃO et alli (2001), in study with rats evidence that physical exercises of low and moderate intensities can provoke autonomics modifications that modify the levels of the arterial pressure. The study contributes with other ones, which they prove that the adhesion to one program of adjusted physical training consists in an important way of not pharmacological treatment of the arterial pressure for human beings. HADDAD 1997; NIEMAN, 1999; ARAÚJO, 2001; FUCHS, MOREIRA, RIBEIRO, 2001; BRAZIL, 2002; FORJAZ, 2003; KETELHUT, FRANZ, SCHOLZE, 2004). UNDER THIS OPTICS, FUCHS, MOREIRA, RIBEIRO (2001) affirm that the physical exercises do not consist only in a way of treatment with no drugs of the arterial hypertension, but in one of the most efficient ways of Prophylaxis, together with an alimentary diet and the ambient factors.

They are considered with hypertension, the people who present the levels of the systolic arterial pressure equal or superior of 14 mmHg and the diastolic arterial pressure superior of 90 mmHg (PITANGA, 2000; BRAZIL, 2002). Still about hypertension, CHOR (1998) detected, in study with employees of the State Bank in Rio De Janeiro, that most of the sample of this research that presented overweight or obesity was hypertensive. In this direction, studies demonstrate that the physical exercises consist in an important element in the treatment with no drugs of the arterial hypertension and obesity (FUCHS, MOREIRA, RIBEIRO, 2001; RONDON, BRUM, 2003).

On this subject, an inquiry of Haddad (1997), demonstrated that after twelve weeks of moderate aerobics exercises of superior members of short duration, paraplegics people with a light degree of hypertension had presented significant improvements in cardiovascular and cardiorespiration vary. Such fact suggests that the training with this characteristic one improves the functional level of the organism and acts of not therapeutically medicaments form in the reduction of the light hypertension in paraplegics. These findings are corroborated by the inquiry of Da Silva (2004), which in study with hypertensions citizens between the age of 45 and 60 years, under medicine use to control the sanguine arterial hypertension, verified significant improvements in the tensional levels of the sanguine arterial pressure to the end of a program of physical exercises associated the manual massage lymphatic draining during five weeks of training.

With relation to the physiological parameter, it can be understood as that one that congregates components and biochemists hemodynamic, in its complex mechanisms that make possible the adequate functioning of organism (PITANGA, 2000; ALMEIDA, 2005).

The Average Arterial Pressure (PAM) is the product of the cardiac debit or the vascular resistance during the cardiac cycle that determines the tax of the sanguine flow through the systemic circulation (POWERS, HOWLEY, 2000).

In this approach, the present study intended to compare the PAM between two groups of military policemen of COE.

Material and Method

Initially an authorization to the Commander of the COE/RO was requested explaining details of the project of research with relation to the nature and importance of the study. After that a meeting with the individuals that compose the sample, in which was made a lecture for the interested in participating of the study, which, after supplied the explanations about the methodology to be used in the research, had been invited to participate voluntaries of the experiment.

With the objective to identify the citizens with high factors of coronariopathy risk, and thus to dissuade them to participate of the study, the individuals had answered to a questionnaire for personal data-collecting and habit of life. After these procedures, with two witnesses they had together been requested to sign an assent term. From now on, they had been submitted to a battery of tests.

In this research two groups of study had been used (GE) composed by 14 organized citizens in the following way: a) Group of Study 1 (GE 1) formed by 8 individuals with ages between 23 and 32 years, and b) Group of Study 2 (GE 2) consisting of 6 citizens with ages varying between 33 and 41 years. Both groups had been submitted to the same procedures of evaluation.

To collect the data was used aneroid sphigmomanometer model PRESSURE, of the trademark CARDIOMED, consisting of a bomb to inflate with a valve of control for entrance and exit of air, an oclusor manguito and a demonstrator of tension in mmHg, a sthetoscopy formed for a hearing receiver, one canicule spreader of the sound and a hearing terminal of the mark CARDIOMED.

It was used the technique of indirect measure of cardiac auscultate with the individual in rest accordingly with the standardization suggested for Mion JR, Silva & Marcondes, apud Almeida (2003). During the test 2 appraisers had been used: 1 appraiser (a) to handle the equipment and to proceed the reading of the measurement; and 1 appraiser (b) to write down the results. The measure was realized with the person comfortably seated, being the arm naked and located at the level of the heart

and the relaxed hand. Appraiser "b" located the oclusor manguito on the brachial region and closed the valve of control of the inflate bomb, after that the brachial artery above of the fold of the elbow pulpous until feeling the cardiac pulse. After this initial procedure, the oclusor garrote was inflated until not feeling more the radial pulse and located the auscultator receiver on the brachial artery and opened the control valve lightly to liberate the air of the manguito and observed in tensemeter the reading of the corresponding values to first (the component systolic) and last one (component diastolic) sonidos.

The average arterial pressure (PAM) was determined, from the equation suggested for Powers and Howley (2000), which is described to follow:

PAM = PAD + 0,33 (PAS - PAD)
Where: PAD = diastolic arterial pressure
0,33 = constant of regression
PAS = sistolic arterial pressure

Results

The PAM of GE 1 and GE 2 reveals in the following table, together with the analysis statistics. Significant difference between the groups is verified statistically (p=0,01).

Table 1. Hemodynamic functional parameter of military of the COE.

VARIABLE	GE 1	GE 2	T	P
PAM (mm Hg)	92,53 ± 4,01	99,51 ± 5,40	-2,78	0,01*

* Significant to the indicated level.

Comparing the referring values the PAM, with the recommended one for consulted literature, GE 1 (92,53 mm Hg) it fits in general in the values adjusted for populations, the same not occurring with the GE 2 (99.51 mm Hg), which, presents props up above of the recommended one (POWERS, HOWLEY, 2000).

Finish Considerations.

In the present study it was realized differences in the referring values of the average arterial pressure (PAM) from the evaluated between GE, being that GE 2 presented the PAM more accented than the ones of GE 1, suggesting a necessity of attention as regards the program of physical exercises and the alimentary diet of the involved people, in an attempt of that this pressure is stabilized.

Bibliographical references

ALMEIDA, H. F. R. Cineantropometria: Princípios e padronizações técnicas. Porto Velho, Departamento de Educação Física/NUSAU/UNIR, Polígrafo, 2003.

_____ Testes e medidas para avaliação da aptidão física: Princípios de padronizações técnicas. Porto Velho (RO): no prelo, 2005.

ARAÚJO, C. G. S. Fisiologia do exercício físico e hipertensão arterial: uma breve introdução. **Rev. Soc. Brás. Hipertens**. 2001. Disponível em: <http://www.sbh.org.br>. Acesso em: 29/12/2004.

BARBOSA, C. H. S., SANDES, W. F. **Educação Física policial militar**: Uma proposta de vida saudável. Mato Grosso: s.n., 2002.

BRASIL, Ministério da Saúde. **Plano de reorganização da atenção à hipertensão arterial e ao diabetes mellitus**: Manual de hipertensão arterial e diabetes mellitus. Brasília, 2002.

CHOR, D. Hipertensão arterial entre funcionários de Banco Estatal no Rio de Janeiro: hábitos de vida e tratamento. Arq. Bras. Cardiol, v. 71, n. 5, p.653-653, 1998.

DA SILVA, P. F. **Efeitos da massagem drenagem linfática manual associada a um progrma de exercícios físicos em parâmetros morfo-funcionais de hipertensos**. Monografia de Conclusão de Curso, Fundação Universidade Federal de Rondônia. Porto Velho: s.n., 2004.

FORJAZ, C. L. M. et alli. Exercício resistido para o paciente hipertenso: indicação ou contra indicação. **Rev. Bras. Hipertens**, v. 10, n. 2, p. 119-124, Abr 2003.

FUCHS, F.; MOREIRA, W., RIBEIRO, J. P. Efeitos do exercício físico na prevenção e tratamento da hipertensão arterial: avaliação por ensaios clínicos randomizados. **Rev. Bras. Hipertens**. 2001. Disponível em: <http://www.sbh.org.br>. Acesso em: 29/12/2004.

HADDAD, S. et alli. Efeitos do treinamento físico de membros superiores aeróbio de curta duração no deficiente físico com hipertenção leve. **Rev. Arq.Brás. de Cardiol**. v. 69, n. 3, 169-173, 1997.

KETELHUT, R. G., FRAKZ, I. W., SCHOLZE, J. Rregular exercise as an effective approach in antihypertensive therapy. **Med Sci Sports Exercise**, v 36, n. 1, 4-8, ja, 2004.

NEGRÂO, C. E. et al. Aspectos do treinamento físico na prevenção de hipertensão arterial. **Rev. Bras. Hipertens**. 2001. Disponível em: <http://www.sbh.org.br>. Acesso em: 29/12/2004.

NIEMAN, David C. **Exercício e saúde: como se prevenir de doenças usando o exercício como seu medicamento**. Tradução: Marcos Ikeda. São Paulo: Manole, 1999.

PITANGA. F. J. G. **Teste, medidas e avaliação em educação física e esportes**. Salvador: UFBA, 2000.

POWERS, S. K., HOWLEY, E. T. **Fisiologia do exercício: teoria e aplicação ao condicionamento e ao desempenho**. Tradução: Marcos Ikeda. 3ª ed. São Paulo: Manole, 2000.

RONDON, Maria U. P. B. e BRUM, Patrícia C. Exercício físico como tratamento não-farmacológico da hipertensão arterial. **Rev. Brás. Hipertens**, v. 10, n. 2, 134-139, abr. 2003.

RODRIGUEZ-AÑEZ, C. R. **Sistema de avaliação para a promoção e gestão do estilo de vida saudável e da aptidão física relacionada à saúde de policiais militares**. Tese de doutorado, Universidade Federal de Santa Catarina. Florianópolis: s.n., 2003.

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AVERAGE ARTERIAL PRESSURE IN MILITARY POLICEMEN OF THE COMPANY OF SPECIAL OPERATIONS (COE) OF RONDÔNIA

ABSTRACT

In this study was proposed the comparing the average arterial pressure of two groups of military policemen of the COE/RO. The sample was composed for 14 policemen divided in two groups: G1, formed for 8 individuals with ages between 23 and 32 years, and consisting G2 of 6 citizens with ages varying between 33 and 41 years. The study identified a PAM of 92,53 + 4,01 mm Hg, for G1 and 99.51 + 5,40 mm Hg for the group G2. It was statistically observed a significant difference between the groups (p=0,01). In the present study, the PAM revealed higher in military with more age.

KEY- WORDS: physical fitness, sedentarism, arterial pressure.

PRESSION ARTÉRIELLE MOYENNE DANS LES POLICIERS MILITAIRES DE LA COMPAGNIE DES OPÉRATIONS SPÉCIALES (COE) DE RONDÔNIA

RESUMÉ

Dans cette étude a été proposé comparer la pression artérielle moyenne de deux groupes de policiers militaires du COE/RO. L'échantillon s'est composé pour 14 policiers divisés dans deux groupes : G1, formé pour 8 individus avec des âges entre 23 et 32 ans, et G2 consistant de 6 citoyens avec des âges changeant entre 33 et 41 ans. L'étude a identifié une PAM de 92.53 + 4.01 millimètres hectogramme, G1 et 99.51 + 5.40 millimètres hectogramme pour le groupe G2. On l'a statistiquement observé une différence significative entre les groupes (p=0,01). Dans la présente étude, la PAM a indiqué plus haut dans les militaires avec plus d'âge.

MOT-CLEFS : santé physique, sedentarism, pression artérielle.

PRESIÓN ARTERIAL MEDIA EN LOS POLICÍAS MILITARES DE LA COMPAÑÍA DE LAS OPERACIONES ESPECIALES (COE) DE RONDÔNIA

RESUMEN

En este estudio fue propuesto comparar la presión arterial media de dos grupos de los policías militares del COE/RO. La muestra fue compuesta para 14 policías divididos en dos grupos: G1, formado para 8 individuos con edades entre 23 y 32 años, y G2 compuesto de 6 ciudadanos con las edades que varían entre 33 y 41 años. El estudio identificó un PAM de 92.53 + 4.01 milímetros hectogramo, para G1 y 99.51 + 5.40 milímetros hectogramo para el grupo G2. Estadístico fue observado una diferencia significativa entre los grupos (p=0,01). En el actual estudio, el PAM reveló más arriba en militares con más edad.

PALABRA-LLAVES: buen salud, sedentarism, presión arterial.

PRESSÃO ARTERIAL MÉDIA EM POLICIAIS MILITARES DA COMPANHIA DE OPERAÇÕES ESPECIAIS DE RONDÔNIA

RESUMO

Este é um estudo se propôs a comparar a pressão arterial média de dois grupos de policiais militares da COE/RO. A amostra foi composta por 14 policiais, divididos em dois grupos: G1, formado por 8 indivíduos com idades entre 23 e 32 anos, e G2 constituído de 6 sujeitos com idades variando entre 33 e 41 anos. O estudo identificou uma PAM de 92,53 + 4,01 mm Hg, para o G1 e 99,51 + 5,40 mm Hg, para o G2, sendo observada diferença estatisticamente significativa entre os grupos (p=0,01). No presente estudo, a PAM mostrou-se mais elevadas em militares com mais idade.

PALAVRAS-CHAVE: exercício físico, sedentarismo, pressão arterial.