

**116 - RISK FACTORS FOR HYPERTENSION IN HIGH FOOTBALL ATHLETES DEVIL PARAIBANO.**<sup>1</sup>LUIZ WILLIAM BARRETO WANDERLEY<sup>2</sup>LEILA ALCINA CORREIA VAZ BUSTORFF<sup>3</sup>ACILEUDO DA SILVA CANDEIA<sup>4</sup>MATHEUS FIGUEREDO NOGUEIRA<sup>5</sup>VALÉRIA PEIXOTO BEZERRA<sup>1,2</sup>mestrando em enfermagem - ufpb; João Pessoa – pb, Brasil.<sup>3</sup>fisioterapeuta, João Pessoa – pb, Brasil.<sup>4</sup>doutora em enfermagem, docente do programa de pós-graduação em enfermagem – ufpb<sup>5</sup>doutora em enfermagem, docente do programa de Pós-graduação em enfermagem – ufpb – João Pessoa – pb – Brasil.<sup>1</sup>e-mail: luizwilliamenf@yahoo.com.br<sup>2</sup>e-mail: leila\_bustorff@yahoo.com.br<sup>3</sup>e-mail: acileudosilva@hotmail.com<sup>4</sup>e-mail: matheusfigueredo@hotmail.com.<sup>5</sup>e-mail: .valeria\_peixoto@hotmail.com.**INTRODUCTION**

Hypertension (HA) is the main cause of cardiac and renal insufficiency and myocardial infarction. In most cases this condition is not sufficiently appreciated by the doctor or patient, that due to its etiology, mostly unknown by its treatment is long and sometimes life and also be asymptomatic until develop complications. In Brazil it is estimated that 20 to 30 million people who do, among children and adult. And possibly 50% of these are unaware of their condition. The disease plagues around 20% of the adult population, reaching around 50% in the elderly. Reaches more men between 45 and 50 years. From this track is more common in women. Its prevalence is higher in individuals of race and those who have family history. Also appears in children and adolescents considerably (PANCOTTI, 2005). According to Dioguardi et al. (2005) whole athlete sports or physically active as a whole person must be assessed in relation to ago. being it diagnosed, cardiovascular risk sports and physical activity must be estimated and treatment established aiming to reduce it. Due to the shortage of theme-related studies, interest in the same approach, since it aims to better understanding of it, in order to collaborate with the expertise of health professionals in assisting customers have hypertension, as well as to prevent the outbreak of the disease in front of risk factors. This search has as its main objective to identify the risk factors that can develop hypertension in athletes; analyze changes in pressóricos before and after levels of physical activity and observe the relationship existing between physical activity and blood pressure control in high football athletes Devil paraibano.

**METHODOLOGY**

The exploratory nature study, field, descriptive quantitative approach. Second Andrade (2003), the search is the first step in any scientific work, it evaluates the possibility of developing a good search on a given issue and it is based on a preliminary work to another search. Field search is one that requires a direct meeting browser, it needs to go to the space where the occurrence of the phenomenon. Aims to seek information directly with the studied population (Gonçalves, 2003). Descriptive research, the facts are observed, that are registered, tested, rated and interpreted, without interference from the researcher (ANDRADE, 2003). This study was developed in football training field, taking account of the criteria for inclusion: athlete said football club and acquiescence to participate in the study. The people chosen for this study was composed of 27 athletes the sample was composed of 25 subject that have consented to participate in the study. Was used to collect data a questionnaire structured according to the objectives of this study. The analysis taking into account the socio-demographic profile of the athlete, history of hypertension, use of alcohol, smoking, eating habits, recorded antropometrico measures, blood pressure and heart rate. The data collected were analysed quantitatively and presented in tables and charts. The results were confronted with the relevant literature, was adopted a stance ethical analysis of the information in accordance with resolution 196/96.

**ANALYSIS AND DISCUSSION OF THE RESULTS**

Table 1 - Distribution of participants according to marital status, family income and breed.

Variables	f	%
<b>Marital status</b>		
Unmarried	15	60
Married	10	40
<b>Family income</b>		
Less than a minimum wage	03	12
A minimum wage	07	28
Two to three minimum wages	03	12
more than three minimum wages	12	48
<b>Race</b>		
White	02	08
Grise	13	52
Black	10	40

In accordance with opposite Siqueira; Veiga (2004) the variable age related to there may be associated with also the living conditions of the population. Second Potter; Perry (2005) normal blood pressure levels vary throughout life, they rise during childhood.

Table 2 – distribution of participants according to age, time of professionalism and schooling.

Variables	f	%
<b>Age</b>		
less than or equal to 20 years	04	16
<b>21-25 Years</b>	<b>11</b>	<b>44</b>
26 – 30 years	06	24
31 - 35 years	04	16
<b>Time professionalism</b>		
Less than or equal to 1 year	03	12
<b>2-5 years</b>	<b>11</b>	<b>44</b>
6 – 10 years	07	28
11 – 15 years	04	16
<b>Schooling</b>		
Incomplete elementary school	05	20
Complete elementary school	02	08
<b>Average incomplete elementary school</b>	<b>07</b>	<b>28</b>
Full average elementary school	09	36
Top incomplete elementary school	02	08

Table 3 – distribution of participants in accordance with the dietary habits, lifestyle and generic factor.

Variables	f	%
<b>Eating habits</b>		
<b>Fruit</b>	<b>25</b>	<b>100</b>
Sodium diet	15	60
Fatty foods	19	76
<b>Lifestyle</b>		
Stress	04	16
<b>Passive smoking</b>	<b>14</b>	<b>56</b>
Alcohol intake	13	52
Generic heredity factor	10	40

In relation to the consumption of fruit 100% of the respondents claim be supporters, which builds a habit of great importance, because one of the pillars of cardiovascular prevention are healthy lifestyle habits, including healthy eating (Brazil, 2006). A diet rich in salt and fat can put in place the health challenges, particularly when linked to pressure levels (MOLINA et al., 2003).

In accordance with Castro et al. (2003), there is evidence of possible psychosocial stress effects on blood pressure stressful conditions related, such as poverty, dissatisfaction social, low schooling, physical inactivity and, in private professional activity characterized by high psychological demands and low control such situations.

Second Gonçalves (2006) persons who are in closed environments upon which smoke are affected by the smoke, these non-smokers can over time, develop the same respiratory and circulatory problems that smokers.

Table 4 – distribution of participants in accordance with abdominal circumference measurements.

Variables	f	%
<b>Circumference abdominal</b>		
70 – 80 cm	10	40
<b>81 – 90 cm</b>	<b>14</b>	<b>56</b>
91 – 100 cm	01	04

Table 5 – distribution of participants in accordance with the outcome of the IMC.

Variables	f	%
<b>Normal</b>	<b>18</b>	<b>72</b>
Sobrepeso	07	28

As lamb and collaborators (2003) showed that obesity provides instance of cardiovascular risk factors, and the centric fat distribution highlights how important factor in the development of hypertension.

Table 6 – the discretion of the sample average age and ( $\pm$  DP) of PAS, PAD and FC before and after exercise.

Variables	= 20	21 - 25	26 - 30	31 - 35
PAS before	110( $\pm$ 11,5)	118,18( $\pm$ 14)	<b>118,33(<math>\pm</math>7,5)</b>	110( $\pm$ 8,1)
PAD before	75,5(5)	<b>80(<math>\pm</math>10,9)</b>	78,33( $\pm$ 7,5)	75,5( $\pm$ 9,5)
PAS after exercise	120( $\pm$ 8,1)	129,09( $\pm$ 10,9)	131,66( $\pm$ 11,6)	<b>135,5(<math>\pm</math>12,5)</b>
PAD after exercise	77,5( $\pm$ 12,5)	80( $\pm$ 7,7)	85( $\pm$ 5,47)	<b>95(<math>\pm</math>5,7)</b>
FC before	67,5(9)	68,81( $\pm$ 10,4)	<b>72(<math>\pm</math>11,3)</b>	66,75( $\pm$ 6,7)
FC after exercise	103( $\pm$ 27,7)	<b>118,54(<math>\pm</math>18,7)</b>	105,76( $\pm$ 19)	90( $\pm$ 16,2)

In accordance with Powers; Howley (2005) changes in PA and FC occurring during physical activity, reflect the intensity, the type of exercise done, its duration and the environmental conditions in which the work was done. Aerobic exercise in people normotensive

PAS lures increased proportional increase in the intensity of the year. The PAD remains stable or decreases slightly. Diastolic hypertensive response to exercise dynamic individual does not hypertension is suggestive that this person can develop in the future, however, this has not yet been confirmed by large studies (DIOGUARDI et al., 2005).

Table 7 – distribution of the population according to the measure of bioimpedance.

Variables	f	%
1 – 5	04	16
6 – 10	08	32
11 – 15	08	32
16 – 20	04	16
21 – 25	01	04

According to Ferreira, Zanella (2000) the existence of obesity Association, experimental studies there and human evidence be obesity a risk factor of pressóricos levels elevation. Although the HA fisiopatogênese associated with obesity is not entirely clear, there is no evidence on the participation of insulin resistance and hiperinsulinemia. The insulin resistance is associated particularly distribution abdominal fatness. It is believed that the high cardiovascular risk assigned intra abdominal obesity is related to the development of metabolic syndrome whereby participating obesity and there are among others.

Table 8 – results of average skin folds (mm) and standard deviation.

Variables	Média	Desvio padrão
Skin folds (mm)		
Triceps	7,56	3,07
Subescapular	11,46	2,09
Above-iliac	10,16	5,5
Abdome	13,9	7,57
Thigh	10,46	3,77

It is noted that the abdominal folds and subescapulares are the greatest thicknesses. According to Marcadale (2003), in adult young about half of total body fat consists of subcutaneous fat, the remainder being organic tenesmus and fat. With progression of age occurs inside a deposition proportionally larger quality that fat tissues.

### FINAL THOUGHTS

This study aimed to identify the risk factors for HA in athletes and thus contribute to the adoption of effective measures in control of pressure levels. On the results obtained, it was noted that different levels of athletes have incurred and are predominant Grise and black breeds. You can see a large number of supporters of a diet high in sodium, popularly known as the challenge of elevation of pressóricos levels, as well as high-fat foods which in turn increases the body weight, which has an interrelation with hypertension. Found – that a meaningful plot has sobrepeso population, which is a very important, since they are known typically BW increased blood pressure control. Pointing to the need for food re-education, since the diet is considered as modifiable risk factor. It was noted that individuals who have the greatest changes in levels of sistólicas and diastólicas pressures are aged above 30 years. It was noted also that a large part of the subject of the survey confirmed the use of alcoholic beverages. By the above noted the importance of control of pressure levels on all individuals, whether or not these athletes, since hypertension is a disease in which a number of factors are responsible for instance, whether they are hereditary or environmental. Said it is necessary to adopt preventive measures to avoid the increase in cases of this disease and its possible complications. Other results may be discovered more in-depth studies, comprising a greater number of possibilities, both informative and professional practice and consequently more comprehensive. Thus hoped that the results obtained and informative titles now presented are not the only, serving as a contribution to this new study and research, working as a useful database for the coming researchers on the subject addressed.

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### RISK FACTORS FOR HYPERTENSION IN HIGH FOOTBALL ATHLETES DEVIL PARAIBANO.

#### ABSTRACT

Hypertension is in one of the largest health problems in the world's population, not responsible for increased morbidity in today. The number of have hypertension is increasing gradually, either by changes in lifestyle or by an ageing

population. This study aimed to identification of risk factors for the development of hypertension in football athletes. Exploratory method was used, field with quantitative approach. The population was composed of Paraíba athletes, in sport club Mao period, 2008. The sample was supplemented by 25 players working in football club who agreed to participate and signing the deed of free and informed consent in accordance with resolution No. 196 \ 96. The collection instrument used was a questionnaire, characterizing the socio-demographic data and thematic issues, in the same contained spaces for record of the antropométricas measures undertaken and pressóricos values verifications and pulse frequency. For analysis statistical method was used and descriptive study results displayed in tables and graphics. The same showed a relevant index athletes with sobrepeso, with inadequate diets in respect of the consumption of fat, sodium and food also noted that the majority said make use of alcoholic beverages, noted that the biggest changes in pressóricos levels that had occurred in athletes in excess of 30 years of age. Underlining the importance of arterial pressure constant verification and changes in eating habits and lifestyle as a way of preventing the development of hypertension.

**KEY WORDS:** athletes. Risk factors. Hypertension.

#### **FACTEURS DE RISQUE POUR HYPERTENSÃO ARTÉRIELLE DANS DES ATHLÈTES DE FOOTBALL À LE HAUT ARRIÈRE-PAYS PARAIBAN**

##### **RÉSUMÉO.**

La hipertensão artérielle se constitue dans un des plus grands problèmes de santé dans la population mondiale, en étant une des principales responsables par l'augmentation de morbi-mortalidade dans l'actualité. Le nombre de hipertensos vient en augmentant graduellement, soit par les modifications dans le style de vie ou par le vieillissement populacional lui-même. Dans cette étude s'est visée l'identification des facteurs de risque pour le développement de la hipertensão artérielle dans des athlètes de football. A été utilisée la méthode exploratório, de champ avec abordage quantitativo. La population a été constituée par des athlètes du Paraíba sport Club, dans la période de Main de 2008. L'échantillon a été complété par 25 joueurs qui agissent dans le club ils dont de football ont été d'accord à participer de la recherche et ont signé le terme d'approbation ait exempté et éclairci conformément à la Résolution n° 196 \96. L'instrument de se rassemble utilisé a été un questionnaire, en caractérisant les données sócio-demográficos et des questions de la thématique, dans la même contenait des espaces pour registre des mesures antropométriques réalisées et des vérifications des valeurs pressóricos et fréquence de pouls. Pour analyse est utilisée la méthode statistique descriptive, en étant les résultats de l'étude exposés dans des tableaux et le graphique. Les mêmes ont montré un important indice d'athlètes avec poids excessif, avec des habitudes alimentaires inadéquates, dans lesquelles il se rapporte à la consommation de sodium et d'aliments gras, aussi s'est observés que à la majorité il a rapporté faire utilisation de boissons alcooliques, s'est constatés que les plus grandes variations nous niveaux pressóricos se nous sont produites athlètes qui possédaient âge supérieur aux 30 années. S'est prouvée ainsi l'importance de la vérification constante de la pression artérielle et de changements habitudes alimentaires et style de vie je mange forme d'empêcher le développement de la hipertensão artérielle.

**MOTS - CLÉ:** Athlètes. Facteurs de risque. Hipertensão.

#### **FACTORES DEL RIESGO PARA HYPERTENSÃO ARTERIAL EN EL ATLETA DEL FÚTBOL EN HINTERLAND ALTO PARAIBANO.**

##### **RESUMEN**

El hipertensão arterial consiste en uno de los problemas más grandes de la salud en la población mundial, siendo uno de la cañería las responsables para el aumento de la morbi-mortalidad en el actual tiempo. El número de hipertensos viene aumento gradual, para las modificaciones en el estilo de vida o para el envejecimiento apropiado de la población. En este estudio era identificación dirigida de los factores del riesgo para el desarrollo del hipertensão arterial en atleta del fútbol. El método del exploratório fue utilizado, de campo con subir cuantitativo. Al atleta del club del deporte de Paraíba, en el período de la mano de 2008 constituyó a la población. La muestra fue terminada por 25 jugadores que actúan en el club del fútbol de acuerdo con quien él había convenido participar de la investigación y tenía firmó el término del asentimiento libre y clarificaron el n° \96 de 196 resoluciones. El instrumento usado de la colección era un cuestionario, caracterizando los datos y las cuestiones socio-demográficos de el temático, en los mismos espacios contenidos una para el registro de las medidas de los antropométricas llevadas a través y de las verificaciones de los valores de los pressóricos y de la frecuencia del pulso. Para el análisis el método estadístico descriptivo fue utilizado, siendo los resultados del estudio exhibido en tablas y gráfico. Los mismos habían demostrado un índice excelente del atleta con exceso de peso, con hábitos alimenticios inadecuados, en lo que si se relaciona con la consumición del sodio y de los alimentos grasientos, también si observó que la mayoría se relacionó para hacer uso de la bebida alcohólica, evidenciado que las variaciones más grandes de los niveles de los pressóricos habían ocurrido en los atletas que edad superior del possuían a los 30 años. La importancia de la verificación constante de la presión arterial y de los cambios en hábitos alimenticios y del estilo de la vida fue demostrada así como forma prevenir el desarrollo del hipertensão arterial.

**PALABRAS - LLAVE:** Atleta. Factores del riesgo. Hipertensão.

#### **FATORES DE RISCO PARA HYPERTENSÃO ARTERIAL EM ATLETAS DE FUTEBOL NO ALTO SERTÃO PARAIBANO.**

##### **RESUMO**

A hipertensão arterial constitui-se em um dos maiores problemas de saúde na população mundial, sendo uma das principais responsáveis pelo aumento da morbi-mortalidade na atualidade. O número de hipertensos vem aumentando gradativamente, seja pelas modificações no estilo de vida ou pelo próprio envelhecimento populacional. Nesse estudo visou-se a identificação dos fatores de risco para o desenvolvimento da hipertensão arterial em atletas de futebol. Foi utilizado o método exploratório, de campo com abordagem quantitativa. A população foi constituída por atletas do Paraíba esporte Clube, no período de Mao de 2008. A amostra foi completada por 25 jogadores que atuam no clube de futebol que concordaram em participar da pesquisa e assinaram o termo de consentimento livre e esclarecido de acordo com a Resolução n° 196\96. O instrumento de coleta utilizado foi um questionário, caracterizando os dados sócio-demográficos e questões da temática, na mesma continha espaços para registro das medidas antropométricas realizadas e verificações dos valores pressóricos e frequência de pulso. Para análise foi utilizado o método estatístico descriptivo, sendo os resultados do estudo expostos em tabelas e gráfico. Os mesmos mostraram um relevante índice de atletas com sobrepeso, com hábitos alimentares inadeguados, no que se relaciona ao consumo de sódio e alimentos gordurosos, também se observou que a maioria referiu fazer uso de bebidas alcoólicas, constatou-se que as maiores variações nos níveis pressóricos ocorreram nos atletas que possuían idade superior aos 30 anos. Evidenciou-se assim a importância da verificação constante da pressão arterial e de mudanças em hábitos alimentares e estilo de vida como forma de prevenir o desenvolvimento da hipertensão arterial.

**PALAVRAS – CHAVE:** Atletas. Fatores de risco. Hipertensão.