

**116 - NECK CIRCUMFERENCE AND CARDIAC RISK FACTOR IN ELDERLY MEN**ELIANE CUNHA GONÇALVES<sup>1, 2</sup>;JOSÉ FERNANDES-FILHO<sup>1, 3</sup>

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**INTRODUCTION**

Anthropometric indicators are increasingly being used, seeking more directed to the likelihood of countless risk factors responses. Neck circumference is one of these measures has been used for this purpose (Pitanga, 2005; Cornier et al., 2011). The NC (neck circumference) It has been identified in the scientific literature as a simple measure, which allows the identification of overweight and obesity and to be positively correlated with changes in some metabolic syndrome factors (Ben-Noun, 2006; Onat, et al, 2009; Laakso, Matilainen, Keinanen-Klukaanniemi, 2002; Yang et al, 2010; Ascaso et al. 2001; Hatipoglu, 2010). The NC increased leads to an accumulation of fat molecules in the wall of the carotid arteries, favoring the development of CD (cardiovascular disease) (Preis et al. 2010).

Lima e Garner (2006) state that in addition to elevate blood pressure and cholesterol concentration, increased amounts NC insulin resistance hampering the uptake and utilization of glucose. The NC correlated with BMI and WC in both genders and also significantly associated with risk factors for metabolic syndrome (Stabe et al, 2013).

Ben-Noun e Laor (2006) investigated the relationship between NC and risk factors for coronary artery disease, demonstrating that men showed NC higher and higher concentration of triglycerides compared to women.

Chavaglia et al. (2010), confirming that the measured NC guard linear relationship with hypertension and low HDL levels reinforced by Ben-Noun, et al. (2001) They showed that the extent of the neck was also valid for the indirect determination of the level of body fat.

Although most studies point important association of NC with increased cardiovascular disease, new studies are needed to relate it to other anthropometric markers. This study aimed to investigate the relationship between NC and the waist risk factor for CD.

**MÉTODS**

Cross-sectional study including 85 men 60-92 years old. The survey was conducted in Vitória, after approval by the Ethics in Research Committee under number 16586913.7.0000.5060.

The patients agreed to participate and signed the consent form. Exclusion criteria were unable to be measured and weighed.

In anthropometric measurements were measured: waist circumference and neck circumference.

Waist circumference was measured by tape with 2 m long, at the thinnest part of the abdomen, naked in the measurement area and then related to stature. The waist circumference classification is given from the following values: <94 cm, 94-101,9 cm e ≥ 102 cm for men (Who,2005; Ben-Noun, Laor, 2003).

The neck circumference was measured at the base of the neck, at the time of cricothyroid cartilage (Figure 1). In men prominently, the CP was measured below the prominence (Ben-Noun, Laor, Sohar, 2001). On the classification of neck circumference, we used the values <37 cm and >37 cm for men (Ben-Noun et al. , WHO, 2000).

Statistical analysis was performed using SPSS version 20.0. All data sets were tested for normality and the data were expressed as mean and standard deviation. The statistical significance considered was 5% in all comparações. Para compare means between groups, applied the test t de Student.

**RESULTS**

The sample consisted of 85 males with 69.55 ± 5.89 years. In the Table 1 shows anthropometric characteristics of the neck circumference and waist, and we observed that both the CP as the DC there was no statistical difference (p < 0.001).

Table 1: Anthropometric data collected with the mean and standard deviation.

ANTHROPOMETRIC DATA	MEDIUM	DESVIATION STANDAR
NECK	39,55 cm**	3,6
WAIST	95,4 cm**	11,08

\*\* p<0,001

**DISCUSSION**

This study found similar to previous research and reflects that despite the reduction in mortality in Brazil, especially as CD, the levels remain high and are similar Latin americanosaos countries Eastern European countries and China (Pouliot, et al., 1994).

Men tend to have a higher proportion of visceral fat, giving them the so-called pattern of body fat distribution android (Dagenais et al., 2005) or body mace.

As for WC, the average was increased risk and there was a relationship between the very high DC and increased NC, confirming the findings of Ben-Noun e Laor (2006) e Yang et al. (2005) Thus, changes in WC reflect the male pattern of fat distribution and changes in risk factors for DV. Dagenais et al. (2005) and Yusuf et al. (2005) compared the use of the toilet with cardiovascular disease, identified it as the largest association with cardiovascular events.

Some limitations should be taken into consideration as the small number of participants, but reinforces Ben-Noun, et al., (2003), as well as determining the level of obesity of individuals, the measure neck circumference may also be related to risk factors for coronary heart disease, by evaluating the components of metabolic syndrome. A high measure of neck circumference is positively correlated with the factors of metabolic syndrome, thus increasing the chances of coronary artery disease.

(Magalhães e Barros, 2013)

### CONCLUSION

The data found demonstrate that NC, and WC can be used as anthropometric marker to estimate cardiovascular risk. The paucity of studies on the measurement of NC as CD indicator, it can be concluded that the NC is a simple measure to be carried out and can be used as a marker anthropometric able to estimate cardiovascular risk factors being practical and well directed to the same.

### Potential Conflict of Interest

No potential conflict of interest relevant.

### Funding Sources

The present study had no external funding sources.

### Study Association

This study is part of the Doctoral Thesis of the author.

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**NECK CIRCUMFERENCE AND CARDIAC RISK FACTOR IN ELDERLY MEN****ABSTRACT**

Introduction: Anthropometric indicators are increasingly being used, seeking more directed to the likelihood of countless risk factors responses. Neck circumference is one of these measures has been used for this purpose (Pitanga., 2005; Cornier et al, 2011). The NC (neck circumference) has been identified in the scientific literature as a simple measure, which allows the identification of overweight and obesity and to be positively correlated with changes in some metabolic syndrome factors. Objective: To investigate the relationship between CP and the waist risk factor for CVD. Method: A total of 85 individuals with 69.55 ± 5.89 years residents in Greater Victoria, was applied the paired Student t test. The WC classification is given from the values: <94 cm, 94 to 101.9 cm and ≥ 102 cm for men and NC used the values <37 cm and> 37 cm. Results: NC 39.55 ± 3.6cm was found and CC 95.4 ± 11,08cm pointing out that both the NC as the WC are in the heights above normal for the health parameters indicate a prevalence in risk factors CD. It encontrado p <0.0001, so there was no significant difference between the data, both of which can be used for the diagnosis of CD risk. Conclusion: The data obtained demonstrated that CP, and CC can be used as anthropometric marker to estimate cardiovascular risk.

**KEYWORDS:** Risk factors, elderly.

**TOUR DE COU ET CARDIAQUES FACTEUR DE RISQUE DANS LES HOMMES ÂGÉS****RÉSUMÉ**

Introduction: Les indicateurs anthropométriques sont de plus en plus utilisés, la recherche de plus dirigé vers la probabilité de risque d'innombrables réponses facteurs. Tour de cou est une de ces mesures a été utilisée à cette fin (Pitanga, 2005.; Cornier et al, 2011). Le TC (tour de cou) a été identifiée dans la littérature scientifique comme une mesure simple, qui permet l'identification de surpoids et d'obésité et d'être en corrélation positive avec les changements de certains facteurs du syndrome métabolique. Objectif: étudier la relation entre le TC et le facteur de risque de la taille de risque cardio-vasculaire.(RCV). Méthode: Un total de 85 personnes à 69.55 ± 5.89 ans résidants du Grand Victoria, a été appliqué le test t de Student apparié. La classification de tour de taille (TT) est donnée à partir des valeurs: <94 cm, 94 cm et à 101,9 ≥ 102 cm pour les hommes et le TC a utilisé les valeurs <37 cm et> 37 cm. Résultats: TC 39,55 ± 3,6 cm a été trouvé et TT 95,4 ± 11,08cm soulignant que tant le TC que le CC sont dans les hauteurs supérieures à la normale pour les paramètres de la santé indiquent une prévalence des facteurs de risque RCV. Il encontrado p <0,0001, donc il n'y avait pas de différence significative entre les données, qui peuvent tous deux être utilisés pour le diagnostic du risque de maladies cardiovasculaires. Conclusion: Les résultats obtenus ont démontré que TC, TT et peut être utilisé comme marqueur anthropométrique pour estimer le risque cardio-vasculaire.

**CIRCUNFERENCIA DEL CUELLO Y RIESGO CARDIACO FACTOR EN HOMBRES MAYORES****RESUMEN**

Introducción: Los indicadores antropométricos se utilizan cada vez, en busca de más dirigido a la probabilidad de un sinnúmero de factores de respuestas a los riesgos. Circunferencia del cuello es una de estas medidas se ha utilizado para este propósito (Pitanga, 2005.; Cornier et al, 2011). El CCU (circunferencia del cuello) se ha identificado en la literatura científica como una medida simple, que permite la identificación de sobrepeso y obesidad y que se correlaciona positivamente con los cambios en algunos de los factores del síndrome metabólico. Objetivo: Investigar la relación entre la CC y el factor de riesgo de la cintura de Enfermedad cardiovascular. Método: Un total de 85 individuos con 69,55 ± 5,89 años residentes en la Gran Victoria, se aplicó la prueba t de Student pareada. La clasificación de CC se da a partir de los valores: <94 cm, 94 a 101,9 cm y ≥ 102 cm para los hombres y CCU utiliza los valores <37 cm y> 37 cm. Resultados: CP 39,55 ± 3,6 cm se encontró y CC 95,4 ± 11,08cm señalando que tanto el CC como el CCU están en las alturas por encima de lo normal para los parámetros de salud indican una prevalencia de factores de riesgo ECV. Se encontrado p <0,0001, así que no había diferencia significativa entre los datos, los cuales pueden ser utilizados para el diagnóstico de riesgo de ECV. Conclusión: Los datos obtenidos demostraron que CCU y CC se puede utilizar como marcador de antropométricos para estimar el riesgo cardiovascular.

**CIRCUNFERENCIA DO PESCOÇO E FATOR DE RISCO CARDÍACO EM HOMENS IDOSOS****RESUMO**

Introdução: Indicadores antropométricos estão cada vez mais sendo utilizados, buscando respostas mais direcionadas para a probabilidade de inúmeros fatores de risco. A circunferência do pescoço é uma destas medidas que vem sendo utilizada com esse objetivo (Pitanga, 2005; Cornier et al., 2011). A CP (circunferência do pescoço) tem sido apontada na literatura científica por ser uma medida simples, que possibilita a identificação do sobrepeso e obesidade e por estar correlacionada positivamente com mudanças de alguns fatores de síndrome metabólica. Objetivo: verificar a relação entre CP e o fator de risco da cintura para DCV. Método: Foram avaliados 85 indivíduos com 69,55±5,89 anos residentes na Grande Vitória, Aplicou-se o teste t de Student pareado. A classificação da CC se deu a partir dos valores: <94 cm, 94-101,9 cm e ≥ 102 cm para homens e para CP utilizaram-se os valores <37 cm e >37 cm. Resultados: A CP 39,55±3,6cm encontrada foi de e a CC 95,4±11,08cm apontando que tanto a CP quanto a CC estão nos patamares acima do normal para os parâmetros de saúde indicando uma prevalência nos fatores de risco DCV. Foi encontrado p<0,0001, portanto não houve diferença significativa entre os dados, sendo que ambos podem ser utilizados para o diagnóstico de risco da DCV. Conclusão: Os dados encontrados demonstraram que a CP, assim como a CC pode ser utilizada como marcador antropométrico para estimar risco cardiovascular.

**PALAVRAS-CHAVE:** Fatores de risco, idosos.