



## Cardiometabolic risk in Security Forces professionals

### Risco cardiometabólico nos profissionais das Forças de Segurança

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#### ABSTRACT

Cardiometabolic risk indicates the likelihood of an individual having cardiovascular disease when they have one or more risk factors. The set of risk factors is called "Metabolic Syndrome" and one of the factors most closely related to its appearance is abdominal circumference. This is a health indicator that can cause the early onset of some cardiometabolic diseases.

**Keywords:** Cardiometabolic Risk Factors [59374], Hypertension [7152], Waist Circumference [53219].

#### RESUMO

O risco cardiometabólico indica a probabilidade de um indivíduo ter uma doença cardiovascular, quando tem um ou vários fatores de risco. Ao conjunto de fatores de risco, designa-se "Síndrome Metabólica" e um dos fatores mais relacionados com o aparecimento da mesma é o perímetro abdominal. Este é um indicador de saúde que pode causar o aparecimento precoce de algumas doenças cardiometabólicas.

**Palavras-chave:** Fatores de Risco Cardiometabólico [59374], Hipertensão [7152], Circunferência da Cintura [53219].

#### 1 INTRODUCTION

Cardiometabolic risk indicates the likelihood of an individual having cardiovascular disease when they have one or more risk factors. The set of risk factors is called "Metabolic Syndrome" and one of the factors most closely related to its appearance is abdominal circumference. This is a health indicator that can cause the early onset of some cardiometabolic diseases.



The DGS states that the ideal figure for males is less than 94 cm and that above this the risk of developing cardiovascular disease is high. When abdominal circumference is increased, it can lead to the development of other risk factors, such as hypertension, hyperglycemia, hypertriglyceridemia, hypercholesterolemia, obesity, among others.

In addition to BMI, it is important to pay attention to abdominal circumference, as a person can be normal weight or just slightly overweight and have an abdominal circumference value that indicates cardiovascular risk.

## 2 OBJECTIVE

To evaluate the relationship between abdominal circumference and other risk factors.

## 3 METHODOLOGY

Prospective, observational and quantitative study carried out on a group of individuals from a security force. Anthropometric data, blood pressure, laboratory tests and an electrocardiogram were collected from each individual. The SPSS (*Statistical Product and Service Solutions*) program was used for the statistical analysis of the study.

## 4 RESULTS

Sample consisted of 18 individuals, all male aged between 30 and 51 years, with an average of  $40.89 \pm 5.989$  years.

Risk factors were analyzed and hypercholesterolemia was found in 77.8% of the individuals, hypertriglyceridemia in 22.2% and no individual showed hyperglycemia. There was an increase in abdominal circumference in 44.4% of the subjects, and in BMI 72.2% of the subjects were overweight and 5.6% obese. With regard to blood pressure, 72.2% of the individuals had hypertension, with isolated systolic hypertension being the most prevalent (44.4%). All the individuals in this study had at least one risk factor, with 44.4% having three or more risk factors.

Of the 8 individuals with increased abdominal circumference, 7 were overweight, 1 was obese, 5 had hypertension, 2 had hypertriglyceridemia, 7 had hypercholesterolemia and 5 had three or more risk factors (62.5%).

Of the 10 individuals with normal abdominal circumference, 6 were overweight, 8 had hypertension, 2 had hypertriglyceridemia, 7 had hypercholesterolemia and 3 had three or more associated risk factors (30%).

Among the 8 individuals with three or more risk factors, 62.5% had an increased abdominal circumference and 37.5% had a normal abdominal circumference.



## **5 DISCUSSION/CONCLUSION**

The majority of individuals with increased abdominal circumference had three or more risk factors associated with them, which indicates that these individuals are more likely to have cardiovascular disease than those with a smaller set of associated risk factors (1). In fact, most of the individuals with more risk factors had an increased abdominal circumference.



## REFERENCES

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