


## The role of nurses in dealing with hypertensive patients in primary health care

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### ABSTRACT

Arterial hypertension (AH) is a multifactorial chronic pathology and, therefore, can affect individuals of different age groups and different groups in society. In Brazil, AH has been growing significantly and has become one of the protagonists in mortality rates in the country. Due to this, a question was raised to better understand what the role of nurses would be in relation to hypertensive patients in basic health, therefore the objective of this study is to describe the role of nurses in a qualified and effective way in caring for patients with arterial hypertension, with the aim of promoting comprehensive health care for these individuals, and also contributing scientifically to the journey and knowledge of professionals and future nursing professionals so that, through this, assistance to these clients occurs in a more assertive and effective way. To carry out this study we used the literature review methodology. During the research we came across a total of 40 articles on this topic, it was necessary to discard 16 because they were out of date and we used 24 to write and compose this study. We have seen that through prevention it is possible to avoid or delay the development of the pathology, and with adequate treatment the patient's life expectancy and quality of life increases considerably, improving their prognosis. We conclude that for this, the nurse has great importance in the health and disease process, paying attention to the signs and symptoms, family history, patient's lifestyle and socioeconomic condition to be able to carry out the screening, maintenance and prevention of arterial hypertension, thus avoiding, possible complications and damage to the individual's health.

**Keywords:** Arterial hypertension, Treatment, Prevention.

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## INTRODUCTION

Arterial hypertension (AH) is a multifactorial chronic cardiovascular disease, which is why it affects several groups of different age groups in Brazilian society, also portraying a large part of the global mortality rate (PACHÚ, C. O, *et al.*, 2021).

Studies by the World Health Organization (WHO) point out that by 2025 there will be an increase of around 60% in cases of hypertension, also considering that in 2021, about 600 million people had already acquired the disease. While in Brazil, research points to growth of more than 30%, which may also affect health workers. (PEREIRA, S. G, *et al.*, 2021).

According to COSTA, S. M, *et al.*, (2020), in addition to physical damage, such as stroke, kidney disorders, heart failure, among others, factors such as obesity, sedentary lifestyle, socioeconomic and psychosocial issues also interfere with the development and worsening of arterial hypertension, making it a public health problem, in which it is necessary for nurses to have extensive knowledge of this comorbidity and its risks.

Obtaining a consistent mastery over this pathology is essential, as it is necessary for the nursing team to ensure qualified and humanized care, so that, through a holistic view, it can outline strategies that seek the best treatment and prevention according to the clinical case of each patient. And this becomes essential because nurses also have the role of educator and disseminator of information (PACHÚ, C. O, *et al.*, 2021).

Despite the high level of knowledge about the pathology, it is also necessary to constantly monitor these clients, because the re-education of habits, such as dietary, physical and others, presents a certain level of difficulty, which leads many patients not to pay due attention to the prevention and treatment of arterial hypertension (COSTA, S. M, *et al.*, 2020).

## HYPERTENSION AND ITS TYPES

According to the VII Brazilian Hypertension Guideline (2016), this pathology is characterized when blood pressure (BP) values exceed and/or remain at the following levels: systolic  $\geq 140$  mmHg and/or diastolic  $\geq 90$  mmHg. And because it is a cardiovascular disease, arterial hypertension can affect the functioning of several systems, acting silently and leading to the triggering of dysfunctions in the patient (GOMES, C. F, *et al.*, 2018).

It is noteworthy that this disease is classified into three stages (Table 1), in addition to having three variations, namely: Primary Arterial Hypertension, Secondary Arterial Hypertension and Masked Hypertension.



Table 1 - Stages of Arterial Hypertension

	PAS (mmHg)	PAD (mmHg)
<b>Hipertensão estágio 1</b>	140-159	90-99
<b>Hipertensão estágio 2</b>	160-179	100-109
<b>Hipertensão estágio 3</b>	≥180	≥110

Source: 7th Brazilian Hypertension Guideline of the Brazilian Society of Cardiology, 2017.

Where primary arterial hypertension, also called essential, is developed by multiple factors, such as: lifestyle, socioeconomic situation, genetic predisposition, among others, making it difficult to identify its main cause (NOBRE, F, *et al.*, 2013; CORDEIRO, M, *et al.*, 2017).

While the secondary is characterized by having an identifiable origin, such as: renal, pulmonary, neurological, endocrine disorders, among others, and can make it reversible through treatment or reduction of these alterations (PÓVOA, R. M, 2019; COSTA, T. C, LEITÃO, D. B, 2021).

Masked arterial hypertension is directly linked to increased mortality and cardiovascular morbidity, due to its value often being within normal parameters, making an assertive diagnosis difficult and requiring the use of ABPM (Ambulatory Blood Pressure Monitoring) or HBPM (Home Blood Pressure Measurement) (LOPES, P. C, *et al.*, 2008).

It is important to note that secondary hypertension has a lower incidence in the population and, on the other hand, primary hypertension is the most common, while masked hypertension affects about 50% of patients who use some type of pharmacological treatment. However, both have similar treatments that are properly protocolized (ALESSIA, A, *et al.*, 2014).

## **HYPERTENSION TREATMENT PROTOCOL**

Arterial Hypertension is a chronic disease with no cure, which can bring numerous consequences, including the development of Diabetes Mellitus, on the other hand, it is a pathology that has treatment, and continuous monitoring is also necessary. Following the protocols stipulated by the Ministry of Health, where in these situations the most indicated is HIPERDIA (SILVA, A. C, *et al.*, 2022).

The Arterial Hypertension and Diabetes Program, also called HIPERDIA, consists of registering and monitoring patients with SAH and DM, aiming at improving the health and well-being of these patients, through the link established with the Basic Health Unit (UBS) and through its use in the Family Health Strategy (ESF). constant, individualized support is offered and humanized care according to each person's clinical condition (SOUSA, A. O, COSTA, A. V. M, 2020).



Since 2001 there was already a concern with the comprehensive health care of hypertensive patients, with the main objective of increasing their life expectancy, reducing losses and the high rate of deaths due to hypertension, and for this purpose the Plan for the Reorganization of Care for Arterial Hypertension and Diabetes Mellitus (PRAHADM) was created, which is currently the regulation of HIPERDIA (SOURCES, F. L, *et al.*, 2019).

It is necessary to follow a plan that cooperates for better treatment adherence, directly influencing the effectiveness of such regulation, identifying the root of the problem, defining objectives to treat it, outlining goals, actions and deadlines for its accomplishment, and as an example we can mention the low attendance of patients with hypertension in the UBS for treatment and medical follow-up (SOUSA, N. A, *et al.*, 2019).

Where it will be essential to understand the reason why these individuals stop attending the Basic Health Units, in order to promote the improvement of their health and quality of life through an active search and practices exercised by the multidisciplinary team, and through this it will be possible to resume or start the therapeutic process of that particular group (SOUSA, A. O, COSTA, A. V. M, 2020).

According to FONTES, F. L, *et al.*, (2019), the routine of this group corroborates the way in which the pathology in question will express itself and develop in each person, and therefore, there is not only the performance of pharmacological treatment, there is also the possibility of using another therapeutic resource, which is non-pharmacological.

## **THE IMPORTANCE OF PHYSICAL ACTIVITY AND DIET FOR SAH**

Hypertension can present non-modifiable (ethnicity, gender and age) and modifiable (diet, alcoholism and smoking) risk factors, which is where non-pharmacological treatment acts, and can have an exclusive use or be complemented with medications. This intervention is carried out by changing lifestyle habits, such as diet, physical activity, and reducing or abandoning addictions such as licit and illicit drugs (COSTA, A. J. R, *et al.*, 2021).

One of the most harmful factors for the aggravation of hypertension is a sedentary lifestyle, as physical activity plays an important role in strengthening the muscles, including the cardiovascular system. When practiced regularly, it can trigger a long-term effect, reducing blood pressure levels, because it contributes positively to hemodynamic changes and cardiac output (COSTA, N. S. C, *et al.*, 2021).

Because age contributes to the development and worsening of this multifactorial syndrome, it is important that the frequency, duration and intensity of this aerobic exercise be prescribed respecting the anatomical and physiological limitations of each of these patients, in order to avoid possible injuries and achieve its main objective, which is to keep this blood pressure as close to the



normal parameters established by the WHO. contributing to a healthier lifestyle (MACHADO, V. C, *et al.*, 2020).

Food is another important point that must be carefully observed, because it is directly related to the excessive consumption of alcohol, sodium and fat that contribute to the elevation of blood pressure, aggravating the client's clinical condition, and can also lead to the development of obesity, and therefore, the maintenance and control of eating practices, diet and BMI (Body Mass Index) are of great importance (SOUSA, M. T, *et al.*, 2021).

It is notorious that when there is an excessive increase in adipose tissue in the abdominal circumference, there is also a greater chance of the individual developing this cardiovascular disorder, based on this the guidelines of the Brazilian Society of Arterial Hypertension recommend the intake of vegetables, fruits, fibers, white meat and nuts, following the DASH diet, in which the consumption of red meat and fatty and sugar-rich foods also decreases. Since, in addition to maintaining a balanced diet and treating hypertension, it is also a way to prevent other chronic non-communicable diseases, such as diabetes mellitus (SILVA, A. H, *et al.*, 2020).

In Brazil, the morbidity and mortality rate in the population caused by arterial hypertension is 32.6% in adults, mainly affecting the elderly group. When the DASH diet is adopted, blood pressure levels and the development of the disease are reduced by 14%, this happens because of the macro and micronutrients present in the foods that are part of this nutritional therapy (RODRIGUES, B. L, *et al.*, 2020; ANJOS, K. D, *et al.*, 2021).

And although the constant performance of physical exercise is also an important factor for the reduction of premature deaths of patients with this cardiac dysfunction, according to FONTANELLA, F. O, *et al.*, (2019), many report the lack of an ideal space, financial inaccessibility, fatigue generated by the routine and long working hours, absence or lack of adequate knowledge, and even the lack of motivation and disinterest caused by emotional and psychological health.

## **NURSES' ROLES IN RELATION TO HYPERTENSIVE PATIENTS IN PRIMARY CARE**

In the last 40 years, SAH has been the protagonist of a chronic disease in Brazil and in the world, with an increase of more than 90% of cases, being named a public health problem, and therefore, it was necessary to create guidelines at the state levels, and especially at the federal levels, which guide the care and assistance to these patients. in a way that helps the nursing team to detect the presence of this cardiovascular disorder and propose an appropriate intervention according to the stage and type of arterial hypertension that each subject is presenting (MOTA, B. A, LANZA, F. M, CORTEZ, D. N, 2019).



Therefore, the nurse has a great importance in the health-disease process, both in the private network and in basic services, because according to COFEN (2009) and its resolution No. 358 of the same year, the Nursing Process needs to occur in any environment where these professionals are present, being applied ethically, and following the five stages that make up this process. Where the nurse evaluates the situation presented holistically as a strategy, helping to understand the true root of the problem, so that they can draw up a care, treatment and prevention plan for this individual.

Nursing is of great importance in the early diagnosis of chronic diseases, such as hypertension, because in addition to being a gateway to the development of other pathologies, such as chronic renal failure and stroke, it can also lead to family and socioeconomic problems and even affect the public health structure, which will have even more expenses to offer continuous treatment to low- and middle-income patients who are the most affected by this disease. And it is important to emphasize that all these consequences can also contribute to the emergence of the pathology in question (SOUZA, C. P, *et al.*, 2020).

It is essential that nursing helps other health professionals to know how to deal with hypertensive patients, having the sensitivity to understand the reason for non-adherence to the established treatment, so it is necessary that continuing education processes occur frequently in basic services, in order to train other professionals, especially in the nursing area who do not yet have so much experience and skill. In addition, through anamnesis and a survey of data and research with patients in the population, it is possible to understand their common characteristics, promoting lectures in the community with the objective of showing all the damage that the disease can cause and all the long-term advantages of an effective treatment (LIMA, A. K, *et al.*, 2021).

According to MENDES, F. A, SILVA, M. P, FERREIRA, C. R (2018), arterial hypertension, in addition to being a major cause of strokes, in 40% of cases it can also lead individuals to death from stroke. With each passing year, mainly due to lifestyle habits, the number of people developing SAH increases, and therefore, we only reinforce the great importance of the role of the nurse who is responsible for evaluating, identifying, diagnosing, caring and providing information and knowledge to the population.

## RESULTS AND DISCUSSION

The first point to be questioned in our study and research was to better understand arterial hypertension, its types, the protocols currently used, how it can be avoided or treated, and the role of nursing in public health dealing with this cardiovascular dysfunction. And for this, 8 articles were used at the beginning so that we could understand a little more about hypertension.

In general, 12 articles, 50% of which were used for this study, including NOBRE, F, *et al.* (2013) defined hypertension as: "a multifactorial clinical condition characterized by high and



sustained levels of blood pressure, it is often associated with functional and/or structural changes in the target organs (heart, brain, kidneys and blood vessels) and metabolic changes, resulting in an increased risk of fatal and non-fatal cardiovascular events"

Therefore, in the day-to-day life of public health and nursing professionals, when a patient has a blood pressure above 140x90 mmHg, it is already necessary to be in a state of alert, because according to the WHO (World Health Organization), when this pressure on the wall of the arteries rises, the heart needs to make an even greater effort than it is used to so that the blood is distributed in the same way throughout the patient's body.

In addition, this high blood pressure can trigger other disorders, such as the appearance of stroke (cerebrovascular accident), myocardial infarction, heart failure and also kidney failure, which can leave the patient with sequelae that can affect their daily routine and well-being.

According to (SILVA, A. C, *et al.*, 2022) this pathology that is being discussed has no cure, but through proper treatment it is possible to treat it without causing greater damage, and the HIPERDIA program is a great ally for this.

In theory, this program can present great results for the treatment of this non-communicable disease, the problem is that in practice it needs to go beyond estimated data and needs to be used carefully, because the growth of individuals with this disease has been growing more and more, and if we look holistically at the situation we can understand and treat the true root of the problem according to the reality of each community.

One of the ways to treat hypertension is through physical exercise and diet, which together can provide a better quality of life for these patients, but many are unable to follow this non-pharmacological treatment, especially the practice of physical activity, FONTANELLA, F. O, *et al.*, (2019) conducted a survey with some patients who reported the reasons why they do not practice and do not undergo this treatment.

Where 29.1% report the lack of an ideal space, 21.8% do not have financial resources, leading this survey 54.5% say they have excessive fatigue generated by the routine and 18.2% by the long working hours, the absence or lack of adequate knowledge was also a problem reported by 27.3% of the people. On the other hand, demotivation and disinterest caused by emotional and/or psychological health was reported by 38.2%.

Therefore, the objective of this study was not only to understand more about hypertension, but also to understand why the number of patients with this pathology has been growing over time, what has led to some of these individuals dying, and how nursing can contribute to avoid these situations.

LIMA, A. K, *et al.*, (2021), reports that nursing plays an important role in the early diagnosis of diseases, in the health-disease process, and in the continuing education of other health



professionals, providing the necessary information to contribute to and improve humanized and strategic care, so that through the nursing process it is possible to understand the true cause of the discomfort that each patient presents.

Confirming what was said by (PACHÚ, C. O, *et al.*, 2021): "Obtaining a consistent mastery over this pathology is essential, as it is necessary for the nursing team to ensure qualified and humanized care, so that through a holistic view it can outline strategies that seek the best treatment and prevention according to the clinical case of each patient. And this becomes essential because nurses also have the role of educator and disseminator of information"

The great importance of nursing for the identification, diagnosis, treatment and prevention not only of SAH, but also of many other diseases, especially in public health, is well known.

Chart 1: Articles found on the subject

Titles/Authors (Year)	Objectives	Type of study
1- Nursing care for patients with Systemic Arterial Hypertension: an integrative review/Pachú, C. O, <i>et al.</i> , (2021).	To analyze and identify the main nursing care provided to patients with SAH. In addition to looking at the number of current publications related to this subject.	Integrative review.
2- Factors associated with prehypertension and hypertension in health workers working in high-complexity services/Pereira, S. G, <i>et al.</i> , (2021).	To estimate the prevalence and factors associated with prehypertension and hypertension among health workers working in highly complex sectors for critically and chronic patients.	An epidemiological, cross-sectional, and analytical study was conducted with health workers from hemodialysis, oncology, emergency room, and neonatal intensive care services of nine hospitals in the northern macro-region of Minas Gerais, Brazil.
3- Hypertensive patients assisted in secondary care: cardiovascular risk and social determinants of health/ Costa, S. M, <i>et al.</i> , (2020).	OBJECTIVE: To investigate the relationship between social determinants of health and global cardiovascular risk in hypertensive patients assisted in secondary care services of the Unified Health System.	Analytical cross-sectional study with patients from the Hiperdia Center, in the north of Minas Gerais, Brazil.
4- Secondary Hypertension: approach in primary health care/Costa, T. C, Leitão, D. B, (2021).	Identify situations suggestive of secondary hypertension. Review the pathophysiology, clinical and/or laboratory manifestations, diagnosis and treatment of the main forms of HS.	Scientific articles were searched on online platforms of evidence-based medicine using the keywords Secondary Hypertension and Primary Health Care.
5- Secondary Arterial Hypertension/Póvoa, R. M (2019).	Deepen the knowledge of secondary hypertension and be aware of the underlying causes.	Systemic review.
6- Primary systemic arterial hypertension/Nobre, F, <i>et al.</i> , (2013).	To determine the multiple factors originating from Primary SAH, taking into account the high incidence and high morbidity and mortality rate of the given pathology.	Integrative review.
7 – Masked hypertension/ LOPES, P. C, <i>et al.</i> , (2008).	To stipulate the relationship between masked hypertension and cardiovascular alterations and to map the values that deviate from the normal and acceptable parameters established	Literature review.





8 – Effectiveness of the HIPERDIA Program in Primary Health Care: a review of the literature/Silva, A. C, <i>et al.</i> , (2022).	To describe the effectiveness of the HIPERDIA program in primary health care and to present its importance and necessity in the prevention of hypertension and DM.	Literature review.
9 - HIPERDIA: Program to improve the control of patients with Arterial Hypertension and Diabetes Mellitus of the family health strategy of "Santinho I AND II" in Barras – Piauí/Sousa, A. O, Costa, A. V. M, (2020).	Encourage the adherence of hypertensive and diabetic patients to the HIPERDIA program, as well as develop educational activities on healthy habits, such as physical activity and adequate nutrition.	Integrative review.
10 - Relevance of the conversation circle in the HIPERDIA Program: focus on healthy eating and physical activity/ Fontes, F. L, <i>et al.</i> , (2019).	To describe the concern with comprehensive health care for hypertensive patients.	Integrative review.
11 – Risk factors and complications in diabetic/hypertensive patients registered in HIPERDIA/Sousa, N. A, <i>et al.</i> , (2019).	To analyze the resulting facts, the problems and the treatment plan with greater adherence to the pathologies (SAH and DM).	This is a cross-sectional descriptive study.
12 – Non-pharmacological treatment of hypertension in primary care: An integrative review/Costa, A. J. R, <i>et al.</i> , (2021).	To evaluate the means of performing non-pharmacological treatment and its efficacy in patients with SAH in primary care.	Integrative literature review.
13 - Physical exercise in the treatment of arterial hypertension/Costa, P. N, <i>et al.</i> (2021)	To clarify the therapy of hypertension aided by physical exercise and changes in lifestyle, showing the benefits that the practice of physical exercise can bring to the health of the population.	Literature Review
14 - Prevalence of systolic arterial hypertension in elderly patients practicing physical activity/M, C. V <i>et al.</i> , (2020)	OBJECTIVE: To evaluate the prevalence of systolic arterial hypertension in elderly people who practice physical activity.	This is a qualitative-quantitative cross-sectional study.
15 - Hypertension (high blood pressure). BRAZIL, Ministry of Health.	To demonstrate the clinical picture of hypertension as a whole, to highlight the risk factors, the diagnosis, to assist in the treatment and to evidence statistics related to this pathology	Integrative review
16 - Educational actions: diet, physical activity and their possible influences on blood pressure/S, T. M, (2021).	To investigate the possible impact of health education actions, with emphasis on guidance on diet and physical activity, on blood pressure levels in patients diagnosed with SAH, treated pharmacologically	Prospective cohort of quantitative character.



17 - High-fat diet and systemic arterial hypertension (SAH): a systematic review on risk factors/S, H. A <i>et al.</i> , (2020).	To conduct a literature review on the implications of a high-fat diet on the increase in blood pressure and its main risk factors.	Systematic Review.
18 - Impact of the Health Academy Program on mortality from Systemic Arterial Hypertension in the state of Pernambuco, Brazil/R, S. B, <i>et al.</i> , (2020).	OBJECTIVE: To evaluate the impact of the Health Academy Program on mortality due to Systemic Arterial Hypertension in the state of Pernambuco, Brazil.	Impact assessment of public policies.
19 - DASH diet in the treatment of systemic arterial hypertension/A, D. K, (2021).	Discuss information and collect data on the DASH diet in the treatment of high blood pressure.	Literature review.
20 - Prevalence of barriers to the practice of leisure-time physical activity in patients with hypertension/F, O. F, (2019).	To identify the barriers and the stage of behavior change to the practice of physical activity in free time in a sample of patients with arterial hypertension.	Cross-sectional study.
21 - Effectiveness of nursing consultations in adherence to treatment of systemic arterial hypertension/Beatriz Amaral-Moreira Mota, Fernanda Moura-Lanza and Daniel Nogueira-Cortez (2019).	OBJECTIVE: To evaluate the adherence to drug and non-drug treatment of users of a primary care service diagnosed with systemic arterial hypertension before and after the implementation of the systematized nursing consultation.	Non-controlled clinical trial.
22 - Nursing diagnoses in patients with arterial hypertension in primary care/Fabrizio do Amaral Mendes <sup>1</sup> , Marluçilena Pinheiro da Silva <sup>2</sup> and Cecília Rafaela Salles Ferreira, (2018).	To identify nursing diagnoses (NDs) in patients with arterial hypertension treated at the Basic Health Unit.	This is a descriptive study with a quantitative approach.
23 - Nursing performance in the prevention of arterial hypertension; L, K. A, 2021.	To identify, in view of the performance of nursing, the challenges in the prevention of Arterial Hypertension in Primary Health Care.	This is a descriptive cross-sectional study with a qualitative approach
24 – Prevalence of chronic non-communicable diseases, eating habits and physical activity in a family health strategy in Presidente Prudente – SP/S, P. C, (2020).	To investigate the prevalence of patients with NCDs registered at a Family Health Strategy (FHS) unit in Presidente Prudente and to verify their eating habits and physical activity.	Field research in the hospital unit.

## CONCLUSION

Thus, we understand that for nursing to provide qualified care, especially for hypertensive patients, it is necessary to apply scientific knowledge and a humanized view, aiming at an improvement in quality of life and expectancy, avoiding or postponing the illness of this group.



Therefore, understanding the stages and types of hypertension is essential to identify the current situation of these individuals in order to evaluate them strategically, thus being able to implement an action plan. And this will be possible through the HIPERDIA program, since it will be applied according to the need and difficulty that each client presents. Thus monitoring the clinical picture and understanding how the pathology in question is behaving and developing, in addition to monitoring the adherence and response of the chosen therapeutic resource.

Therefore, we emphasize the great importance of constant physical activity and a balanced diet following the DASH diet, because through the change of habits it is possible to maintain a stable and acceptable pressure within the parameters established for that particular person, and according to the Brazilian Society of Arterial Hypertension, blood pressure levels and the development of hypertension will be decreased.

Therefore, nurses have an important role not only in the act of caring, diagnosing and treating, but also in providing reliable and necessary information in a way that contributes to the longevity and well-being of the individual of the entire community, thus being able to reduce the morbidity and mortality rate of this cardiovascular pathology and its possible complications and sequelae, contributing positively to the integral health of all patients affected by the respective disease. in the private network and especially in primary care.



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