

## The Effect Of Compliance On A Low Salt Diet On Blood Pressure In Hypertension Patients Treatment In Grandmed Hospital Lubuk Pakam

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### ABSTRACT

Hypertension is an increase in blood pressure beyond normal limits with a diastolic pressure of 90 mmHg or a systolic pressure of 140 mmHg. Hypertension is a disease that cannot be cured but can be controlled, one of which is with a low-salt diet. Adherence in undergoing a low-salt diet is the main key to the recovery of hypertensive patients. When hypertension is not controlled will appear complications in the organs. To prevent blood pressure, exercise regularly, maintain an ideal weight, consume healthy foods, manage stress, and get enough sleep. Check blood pressure periodically to the doctor, The purpose of this study is to analyze the effect of adherence to a low-salt diet on the blood pressure of hypertensive patients. This study used a total sampling method, namely sampling techniques where the number of samples was equal to the population, the sample in this study was 15 inpatient hypertension patients at GrandMed Lubuk Pakam Hospital. Research shows that female respondents were 7 people (46.7%) male respondents as many as 8 people (53.3%). This study can be seen that from 15 respondents, it can be seen that 11 patients who adhered to a low-salt diet adhered to (73.3%), and patients who did not comply with a low-salt diet adherence were 4 people (26.7%). This study is a Cross sectional study as many as 15 respondents were the subject of this study. The results of statistical tests showed that there was an effect of adherence to a low-salt diet on blood pressure in inpatient hypertensive patients at Grandmed Lubuk Pakam Hospital with values (p Value = 0.000). Thus it can be concluded that there is an effect of adherence to a low-salt diet on inpatients at GrandMed Lubuk Pakam hospital.

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## 1. INTRODUCTION

Hypertension is an increase in blood in the arteries where the systolic blood pressure is above 140 mmHg and the diastolic blood pressure above 90 mmHg[1]. Hypertension often does not cause signs and symptoms. Hypertension normally classified into 2, namely primary hypertension (essential or idiopathic) namely increased blood pressure for no known cause while hypertension secondary, namely increased blood pressure with a specific cause and can usually be identified[2].

Usually in people's lives they pay less attention to diet right so that in the daily menu is not fulfilled good nutritional value and balanced, and often people do not pay attention to their own health and his family. This is where various kinds of diseases arise to the community, one of which is hypertension, which is now gone know age. Hypertension can recur due to an unhealthy diet regularly such as eating foods that contain high sodium, high cholesterol, high fat and high purines that will enter the circulatory system blood and can cause plaques to form in the blood vessels and high sodium levels can thicken the blood so that blood circulation is not and will result in an increase in blood pressure. so deep giving the right diet is one of the main factors that are right for control hypertension, because hypertension is an incurable disease secured but only controllable. If people don't pay attention this will cause other complications and even lead to disease on death [3]. Prevalence of hypertension in population aged 18 years above in 2013 by 25.8% and in 2018 it increased to 34.1% [4].

Society must be given education about proper diet, so the role of the family in providing the right can be the target for sufferers hypertension to control blood pressure, consult a nutritionist in determine

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the right daily menu and periodically check blood pressure at least once a week. That way it will reduce the high complications that arise [5].

## 2. METHOD

This research is a descriptive research with analytic observational method through a cross sectional approach by means of an observation approach or data collection. The research sample is a portion of the population, namely inpatient hypertension patients at Grandmed Lubuk Pakam Hospital. The population in this study were inpatients with hypertension at Grandmed Lubuk Pakam Hospital. Sampling using total sampling, namely the population and sampling, which has met the inclusion criteria and exclusion criteria, included in the study until the required number of samples is met. The total sample used is 15 respondents. After the data is collected, the data is classified into several groups of variables in the statement then processed using a program or computer "software", with the following steps Data checking (editing), data coding (coding), data processing (processing) , Data cleaning (cleaning), Questionnaire Quality Test, Validity Test, Reliability Test, Data Analysis using Univariate Analysis and Bivariate Analysis

## 3. RESULTS AND DISCUSSION

### Overview of Respondent Characteristics

#### Characteristics of Respondents Based on Age

Characteristics of respondents based on age can be seen in the table below This is in the age category 40-55 years-56-75 years.

**Table 1. Frequency Distribution of Respondents by Age**

Age	F	%
40-55 Years	6	40,0
56-75 Years	9	60,0
<b>Total</b>	<b>15</b>	<b>100,0</b>

Based on the results of the study that of the 15 respondents who became research subjects, obtained frequency characteristics, based on age at category 40-55 years as many as 6 people (40.0%), category based on age 56-75 years as many as 9 people (60.0%).

#### Characteristics of Respondents Based on Gender

Characteristics of respondents based on gender can be seen in the table below with the male and female categories

**Table 2. Frequency Distribution of Respondents by Gender**

Gender	F	%
Man	8	53,3
Woman	7	46,7
<b>Total</b>	<b>15</b>	<b>100,0</b>

Based on the results of the study that of the 15 respondents who became the subject research, obtained frequency characteristics, based on male sex as many as 8 people (53.3%), and those who were female were 7 people (46.7%).

#### Characteristics of Respondents Based on Occupation

The characteristics of respondents based on work can be seen in the table below with the categories IRT, Employees, Traders, Pensioners, Farmers, Civil Servants, Self-employed.

**Table 3. Characteristics of Respondents by Occupation**

Work	F	%
IRT	6	40,1
Retired	2	13,3
Trader	1	6,7

Self-employed	2	13,3
Farmer	2	13,3
Employee	2	13,3
<b>Total</b>	<b>15</b>	<b>100,0</b>

Based on the 15 respondents who were the research subjects, it was found frequency distribution based on work with the IRT category of 6 people (40.1%), 2 employees (13.3%), 1 trader (6.7%), Retired 2 people (13.3%), Farmers 2 people (13.3%), Entrepreneurs as many as 2 people (13.3%).

### Univariate Analysis

This analysis was conducted to obtain an overview of the characteristics the frequency of each variable studied, by looking at the frequency characteristics can know the description of each variable in the study.

### Characteristics of Respondents Based on Blood Pressure

The characteristics of respondents based on blood pressure can be seen in the table below with hypertension category 1, hypertension 2, and hypertension 3.

**Table 4. Characteristics of Respondents Based on Blood Pressure**

Blood pressure	F	%
Hypertension 1	6	40,0
Hypertension 2	8	53,3
Hypertension 3	1	6,7
<b>Amount</b>	<b>15</b>	<b>100,0</b>

Based on the 15 respondents who were the research subjects, it was found frequency distribution based on blood pressure with hypertension category 1 as many as 6 people (40.1%), hypertension 2 as many as 8 people (53.0), hypertension 3 as many as 1 person (6.7%).

**Table 5. Characteristics of Respondents Based on Low Diet Compliance Salt**

Dietary Compliance	F	%
obey	11	73,3
Not obey	4	26,7
<b>Total</b>	<b>15</b>	<b>100,0</b>

Based on the 15 respondents who became the research obtained frequency distribution based on adherence to low salt diet by category 11 people (73.3%) obeyed and 4 people did not comply (26.7%).

### Bivariate Analysis

Bivariate analysis was carried out to determine the effect of the independent variables to the dependent variable using the Chi-Square test ( $X^2$ ). As for The analysis can be seen from the table as follows:

### Effect of Low Salt Diet Compliance Against Pressure Respondent's Blood

**Table 6 Effect of Low Salt Diet Compliance Against Pressure Blood in Hypertension Respondents at Grandmed Lubuk Pakam Hospital.**

Blood pressure	Effects of Dietary Compliance		Total		p value
	Obedient	Obedient Not	f	%	
Hypertension 1	0	3	3	20,1	0,000
Hypertension 2	0	1	1	6,6	
Normal	11	0	11	73,3	
<b>Total</b>	<b>11</b>	<b>4</b>	<b>15</b>	<b>100,0</b>	

Based on the table above it can be seen that of the 15 respondents, the influence Low salt diet adherence to blood pressure is known as hypertension 1 there were no adherents while 3 people (20.1%) did not comply, Hypertension 2 of them did not obey, while 1 person (6.6%) did not comply, and 11 people (73.3%) adhered to normal blood pressure.

The statistical test results with Chi-Square obtained a value of  $p = 0.000$  ( $p < 0.05$ ) This means that there is an influence between adherence to a low-salt diet and adherence to a low-salt diet in hypertensive patients hospitalized at Grandmed Hospital Lubuk Pakam.

## Discussion

### Characteristics of Respondents

Based on the results of the study that there were 15 respondents who were the subject the research obtained the number based on age in the 40-55 year category as many as 6 people (40.0%), categories based on age 56-75 years as many as 9 people (60.0%).

Based on the results of the study that there were 15 respondents who were the subject research obtained the number based on sex with frequency based on male sex as many as 8 people (53.3%), and the type female genitalia as many as 7 people (46.7%).

Based on the results of the study that there were 15 respondents who were the subject research obtained frequency distribution based on the category of work 6 IRT people (40.1%), 2 employees (13.3%), 2 traders 1 person (6.7%), 2 retirees (13.3%), 2 farmers (13.3%), Entrepreneurs as many as 2 people (13.3%).

### Characteristics of Influence of Compliance

Compliance comes from the basic word obedient which means obedient, likes to obey orders, obedience is the patient's positive behavior in achieving therapeutic goals [6].

### Characteristics of Hypertension

Hypertension is a condition when the blood pressure in the blood vessels chronic increase. This can happen because the heart works more pumping blood hard to meet the body's need for oxygen and nutrients. If Left unchecked, this disease can interfere with the function of other organs, especially vital organs such as the heart and kidneys. Women will experienceThe increased risk of high blood pressure (hypertension) after menopause is age over 45 years. Women who have not menopause are protected by hormones Estrogen plays a role in increasing levels of High Density Lipoprotein (HDL). Low HDL cholesterol levels and high LDL cholesterol (Low Density Lipoprotein) affect the occurrence of atherosclerosis and result in high blood pressure [7].

### The Effect of Adherence to a Low Salt Diet Against Pressure

Blood in Inpatient Hypertension Patients at Grandmed Hospital Lubuk Pakam. Based on table 9 it can be seen that of the 15 respondents, after being seen from the results of adherence to a low-salt diet, it is known that respondents are obedient as many as 11 people (73.3%), respondents who did not comply were 4 people (26.7%). Thus it can be concluded that there is an effect of dietary adherence low salt on blood pressure in hypertensive patients hospitalized at home Grandmed Lubuk Pakam Hospital.

The goal of a low salt diet is to help eliminate salt retention or water in body tissues and lowers blood pressure in hypertensive patients. The results after the treatment showed an increase in compliance respondents marked by a decrease in the number of respondents marked by a decrease in the number of respondents who did not comply, as well as an increase in respondents who did obey.

According to researchers, giving a low-salt diet is related to the formation process enzyme hormone. In the process of occurrence of hypertension involved many roles 39 hormones and enzymes and, as is known, the formation of hormones and nutrients enzymes one of which is an amino acid which is the simplest form of proteins. The function of sodium in the body is to maintain fluid balance and acid-base body, but if excessive sodium intake can cause Imbalance of body fluids causing fluid accumulation(oedema). A low salt diet aims to help lower pressure blood pressure and maintain normal blood pressure. In addition, it aims to eliminate salt retention in the body. Base A low-salt diet that

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needs attention is to limit the use of sodium sodium and fatty foods. In addition to a low-salt diet supporting factors Another thing to note is the consumption of blood pressure-lowering drugs.

Results In this study, respondents who adhered to a low-salt diet showed significant difference in blood pressure with the result value  $p = 0.000$ . Study This proves that a low salt diet can lower blood pressure respondents with hypertension, but also cannot be separated from the influence of consumption of medication while the respondent is in the hospital. Drugs will affect tremendous effect if given in the right amount and accompanied with food at the right time.

This is in line with the results of researcher Risma Hayati et al (2013), stated that there is a significant difference in the effect of adherence to a low salt diet on blood pressure in hypertensive patients with a value of  $p = <0.05$ . Influence Diet adherence is a decrease in systolic blood pressure with diastolic depending on the age of each. A low salt diet may contribute to maintain blood pressure levels in hypertensive patients.

#### 4. CONCLUSION

Based on the results of the research and discussion that has been described, the conclusion of the study is that of the 15 respondents who were the research subjects, the frequency distribution was obtained based on blood pressure with hypertension category 1 as many as 6 people (40.1%), hypertension 2 as many as 8 people (53.0), hypertension 3 as many as 1 person (6.7%). Distribution frequency based on adherence to a low-salt diet with adherent categories of 11 people (73.3%) and non-adherent categories of 4 people (26.7%). the effect of adherence to a low-salt diet on blood pressure was found to be hypertension 1. There were no adherents, while 3 people (20.1%) did not comply, hypertension 2. 11 people (73.3%) adhered to normal blood pressure.

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