


Relationship Between Lifestyle And Hypertension Incidence

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Article Info	ABSTRACT
Keywords: Hypertension, lifestyle	Hypertension is an increase in systolic blood pressure of more than equal to 140 mmHg and diastolic blood pressure of more than equal to 90 mmHg. Hypertension causes the deaths of around 8 million people every year. In Indonesia, Basic Health Research (Riskesdas) in 2018 showed an increase in the prevalence of hypertension of around 260 million, namely 34.1% compared to 25.8% in the 2013 Riskesdas. Lifestyle is an important factor that is closely related to the incidence of hypertension, especially in productive age. Unhealthy lifestyles such as diet (salt consumption), lack of physical activity, and smoking can cause hypertension. The aim of this research is to determine the relationship between lifestyle and the incidence of hypertension. This research uses the Literature Review method with a Narrative Review design. Results: This literature review states that there is an influence of lifestyle on the incidence of hypertension. Conclusion: This literature review states that Unhealthy lifestyles such as diet (salt consumption), alcohol, lack of physical activity, and smoking increase the incidence of hypertension..
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INTRODUCTION

Hypertension is improvement pressure blood systolic more from The same with 140 mmHg and diastolic more from The same with 90 mmHg. ¹ Hypertension is reason main disease cardiovascular and death early throughout the world, data from WHO (World Health Organization) in 2013, there were 9.4 million per 1 billion world population dies consequence disturbance cardiovascular disease. ^{2,3} Hypertension result in death around 8 million people every year year, of which 1.5 million death occurred in Southeast Asia. ⁴ In Indonesia, the 2018 Basic Health Research (Riskesdas) showed improvement prevalence hypertension in Indonesia with amount resident around 260 million is 34.1% compared to 25.8% in Riskesdas 2013. ⁵

Hypertension is problem major global health issues, and changes style life has recommended as treatment line First For hypertension in many guidelines. ⁶ Causative factor the occurrence hypertension at age productive because of style less life healthy. ⁷ Risk factors the occurrence hypertension shared become factor risks that can occur modified and not can modified. ⁸ risk factors that can modified among other patterns eating, activity physical,

consumption alcohol and smoking, as well as obesity or excess weight.⁹ On the other hand, the factor risk that is not can modified covering history hypertension in family, age >65 years, and the presence of disease accompanying others, including diabetes and other diseases chronic kidney disease.^{10, 11}

Smoking, drinking alcohol, excess weight, and eating too a lot of salt is factor risk main hypertension.⁴ Things show that For life more happy and healthy, important For increase understanding and attitude public to prevention and control of hypertension.¹² Based on description above, then writer interested For stage study more deep about connection between style life and events hypertension.

METHOD

Study This meration research that was carried out with studi literature or Literaturere view use metode narrative review. Study This done tinjauan secara narative to literature Which relate with connection style life with incident hypertension. Literatur Which used in study This berjumlah 15 Jurnal Which in accordance with criteri nk you For dingentke in results and discussion. Criteria inclusion in research This namely journal international and journals national that carries out study about connection style life with incident hypertension. Jurnal Which used that is year 201 6- 2024.

RESULTS AND DISCUSSION

In a study conducted by Xiaoli et al., in 2017, they discussed about *The Risk Factors of High Blood Pressure among Young Adults in the Tujia-Nationality Settlement of China*. Study the using two methods namely questionnaire demographics and evaluation fitness physique in a way comprehensive. From research This obtained Prevalence hypertension among resident young Tujia more tall during 2011-2014. Risk factors main the occurrence improvement pressure blood chronic found in the type gender (as male), worker collar blue (workers who do work rude in non- office environment like location construction or track production) in the area rural, excess overweight / obesity, individual over 40 years of age, and those with low CRF. Obesity associated with improvement activation system nerve sympathy and improvement release of renin. In the study This found people who experienced obesity and overweight weight has risk hypertension 6.265 times and 2.325 times compared to people with normal weight. Because obesity is factor risk main the occurrence hypertension, maintain standard body weight is the most effective way For prevent hypertension in adults young people in the area.¹³

In addition, research by Ogake et al in 2019. The purpose of his research that is For know factor risk hypertension in adults young people aged 18-35 years who were treated at the Tenwek Mission Hospital, District Bomet, Kenya in 2018. In the study This to use method studies case control involving 80 cases and 80 controls. From the study This obtained Patients who have a BMI ≥ 25 have 3.05 times more likely big For suffer hypertension (OR: 3.05, 95% CI 1.26, 7.40; $p=0.014$). Having suffering relatives hypertension increase possibility caught hypertension almost threefold (OR: 2.78, 95 % CI 1.20, 6.46; $p=0.018$). Not

drinking alcohol reduce possibility suffer hypertension by 70%, (OR=0.30, 95% CI 0.11, 0.81; p=0.017). From the research This can concluded that Prevalence hypertension in adults young No as low as generally thought. Precautions must formulated such that appearance For overcome various factor risk primary in young adults. ⁹

Another study conducted by Chowdhury et al in 2016 regarding *Hypertension among adults in Bangladesh*. In a study this, obtained results individuals who have level education more high (AOR: 1.63, 95% CI: 1.25–2.14) and wealth status more high (AOR = 1.91, 95% CI: 1.54–2.38) had opportunity more tall caught hypertension compared to individuals who do not own education and higher social status. low. High wealth status cause they own style life luxurious and consuming more Lots food calories tall. As a result, a person 's weight increased and activity his physical decreased, so that increase possibility caught hypertension. Research this also found that hypertension more high among Respondent urban areas. The main reason Because height junk food consumption and lack of activity physical among Respondent urban. In addition, the community rural more tend do activity House ladder daily life and activities congested work others that can make they still active in a way physical, burning more Lots calories, and lower BMI. ¹⁴

Apart from that, Meher et al in 2023 will also hold study with title *Risk Factors Associated With Hypertension in Young Adults*. The method in the narrative review study took 10 journals from 2017-2021. From the research show that young people are suffering hypertension own level use smoking, obesity, dyslipidemia, and excessive salt consumption tall compared to public general. Besides drinking medicine, overcome variables This important For prevent and manage hypertension in a way effective. Smoking, drinking alcohol, excess weight, and eating too a lot of salt is factor risk main hypertension. This is show that For life more happy and healthy, important For increase understanding and attitude public to prevention and control hypertension. Implementation full National Program for Prevention and Control of Cancer, Diabetes, Diseases Cardiovascular, and Stroke (NPCDCS) and the level program national or other worlds required For overcome all aspect hypertension and its problems, with emphasis on generation young. ¹²

Research conducted by Princewel in 2019 proves this to be true cross-sectional method of month March until September 2016. In the study This obtained results analysis multivariate, factor risk independent For hypertension in our research is : lack of activity physical (Adj. OR 2.6, 95%CI: 1.3-4.4, p = 0.021), consumption alcohol in a way regular during more than 10 years (Adj. OR 2.9, 95 %CI: 1.6-5.1, p = 0.014) and aged more from 40 years : Adj. OR 2.5, 95%CI: 1.02-4.1, p = 0.002 in the category age 41-60 years and risk related age This even more high in older people more from 60 years p = 0.002. Research This show that ; prevalence hypertension in adults is 19.75% in rural areas Cameroon. Some factor associated risks with development hypertension in adults are : age, consumption alcohol in a way regular, level activity physical, obesity, stress and concentration glucose blood fasting. ¹⁵

In addition, research conducted by Mahdalena et al. in 2023 with objective For know The Influence of Urban Lifestyle To Incident Hypertension. Research This to use literature review method. From the research This obtained There is influence style life public urban that

is stress and activity physique to incident hypertension. Stress that attacks people in the city big Because face burden and demands Work while in the city small Because problem economy like poverty or the difficulty look for work. If stress in progress in a way prolonged will cause problem health is one of them that is hypertension. Relationship between stress and primary hypertension are suspected by activity nerve sympathetic through (catecholamines, cortisol, vasopressin, endorphins and aldosterone) which can increase pressure intermittent blood.¹⁶

In research conducted by Mahantesh et al in 2021 with title *Prevalence of hypertension and its associated risk factors in Dharwad population*. Research methods This is cross-sectional. In this study This prevalence hypertension A little more high in population male. Prevalence hypertension based on age show that prevalence hypertension highest found in the group age between 41 and 60 years and the prevalence the smallest found in the group age ≤ 20 years. The study also revealed that prevalence hypertension high in the group participants who consume alcohol. Prevalence high hypertension was also observed in the group smoker / chewer tobacco. It is also known that prevalence hypertension more high on participants with style sedentary life.¹⁷

In research conducted by Pilakkadavath et al in 2016 with title *Modifiable risk factors of hypertension: A hospital-based case-control study from Kerala, India*. Research objectives This For estimate and compare distribution factor risks that can occur modified between patient hypertension (cases) and nonhypertension (controls) and for estimate connection influence factor risk. In research This A total of 296 subjects involved in study this. The average age of the sample study is 50.13 years. All factor risks that can occur modified researched related with obesity, lack of activity physical, intake fruits and vegetables that are not adequate, diabetes, smoking, and use alcohol own difference significant proportion between cases and controls. Obesity, lack of activity physical, smoking, and diabetes were found become factor risk significant the occurrence hypertension after customized with factor risk others. Changes style life is runway in determine How epidemic hypertension will to be continued moment this. Therefore that, the state must quick start implementing core strategies in framework national For control hypertension. This is need adequate facilities For diagnose and treat hypertension as early as possible. Primordial prevention must be aiming For change style live in a group young. Generation young must taught about importance disease style life since school days That itself. The state must push formation club health at the level school, college high and panchayat. There must be adequate facilities in all cities and regions settlements where people can strolling or exercise.¹⁸

Besides that research conducted by Theodara et al in 2023 regarding *Comprehensive effects of lifestyle reform, adherence, and related factors on hypertension control*. Got it results that modification style life and obstacles in control pressure blood described. A method effective For reduce pressure blood (BP) and prevent incident cardiovascular with drug antihypertensive has described. Maintain factor style life healthy (index) mass body, pattern eating, smoking, consuming alcohol, sodium excretion, and sedentary behavior) can lower pressure blood systolic by 3.5 mm Hg and reduces risk disease cardiovascular disease (CVD) is around 30%, regardless of type his illness. vulnerability genetics to hypertension. Do

intervention style life through education health can repair factor style alive, like reduce intake of salt, sodium, and fat, changing habit Eat with more Lots consume fruits and vegetables, no smoking, reduce consumption alcohol, exercise in a way regular, maintain healthy weight, and minimize condition stress. Every behavior can influence pressure blood with modulate visceral fat accumulation, insulin resistance, renin-angiotensin- aldosterone system, function endothelium vascular, stress oxidative, inflammatory, and functional autonomous. Evidence of the existence of effect combination from treatment antihypertensive and changes style life show existence method For reduce hypertension. ¹⁹

This is also in line with research conducted by James et al in 2021 entitled *Effects of Lifestyle Modification on Patients With Resistant Hypertension*. Research methods This namely 140 patients with hypertension resistant (mean age, 63 years ; 48% female ; 59% fair-skinned black ; 31% had diabetes; 21% with disease kidney chronic) in random entered to in the modification program style life for 4 months C-Life (*Center-Based Lifestyle Intervention*) including diet counseling, management weight based on behavior, and exercise, SEPA (*Standardized Education and Physician Advice*). Research results This to climb that decline pressure blood more large in the C-life group. So that study This conclude that Diet and exercise can lower pressure blood in patients with hypertension resistant. Structured program in the form of diet and exercise for 4 months as therapy additional given in series rehabilitation heart produce decline pressure blood clinic and care significant road as well as improvements in disease biomarkers certain cardiovascular. ²⁰

Research conducted by Myung et al in 2017 regarding *The effect of lifestyle changes on blood pressure control among hypertensive patients*. Study This conducted in 5 practices family based on House sick in Korea from July 2008 to June 2010. We recruited in a way prospective and assess in a way retrospective 1,453 patients given candesartan prescription. Evaluation beginning style life patient done with use individual questions. Questionnaire act carry on given at 4, 8, and 12 weeks. The results of study This obtained inactivity physical (OR, 1.195; 95% CI, 1.175 to 3.387; P=0.011), and increased salt intake (OR, 1.461; 95% CI, 1.029 to 2.075; P=0.034) was associated with control pressure blood that is not adequate. Salt intake also shows significant relationship. Research This show that For reach level control pressure more blood okay, doctor must recommend modification style life like activity adequate physical fitness and low salt intake, besides to prescribe medication and monitoring patient For hypertension control. ²¹

Another study conducted by Salvador et al in 2019 with title *The effect of lifestyle changes on blood pressure control among hypertensive patients*. The main purpose from study This is For analyze connection between style life and stress blood in patients undergoing treatment antihypertensive. In the study This obtained that consumption alcohol (beta=6.31, p=0.007) and smoking (beta=4.72, p=0.018) were associated positive with pressure blood systolic in men. ²²

This is also in line with research conducted by Elgendy et al in 2022 with title *Lifestyle Modification and Its Effect on the Control of Hypertension*. Average total score overall style life fantastic before treatment in groups Study is 29.56±3.89, while post treatment is 35.39±3.92, with improvement significant overall total score style life fantastic on the group Study post treatment compared to with before treatment (P <0.001). Conclusion of the study

This namely with follow style life healthy, like active more from four day a week, decrease weight, pattern eat rich in fruits and vegetables, pattern Eat low sodium (BMI is predictor significant), avoid cigarettes, have proven as effective therapy For prevent and control hypertension stage 1. ²³

Another study conducted by Tozivepi et al in 2021 regarding *The nexus between adherence to recommended lifestyle behaviors and blood pressure control in hypertensive patients at Mutare provincial hospital, Zimbabwe*. On Analysis bivariate show that participants who comply treatment antihypertensive and recommendations alcohol own opportunity more small For suffer hypertension that is not controlled, while consume fried food fatty ≥ 3 times a week associated with possibility more tall experience pressure blood that is not controlled ($p < 0.1$). Analysis regression logistics disclose that participants who ate “ sadza ” or wheat porridge intact more Possible For control pressure blood [adjusted odds ratio (AOR): 1.6; 95% confidence interval (CI): 1.0–2.5] whereas those who don't add salt when Eat own decline possibility experience pressure blood that is not controlled by 40% (AOR: 0.6; 95% CI: 0.4–0.9). ²⁴

Study The latest was done by Alkalah in 2024 with objective evaluate the impact of the personalized and modified DASH (*Dietary Approaches to Stop Hypertension*) diet style live at the level pressure blood in diagnosed individuals hypertension stage I. DASH is guidelines For manage pressure blood and increase health in a way overall with emphasize consumption fruits, vegetables, grains whole, low- fat proteins and low- fat dairy products, while limit intake of saturated fat, added sugar, and sodium. In the study This use Urpositive sampling is done go out in term time One years, especially from April 2022 to March 2023. Research results disclose decline significant in blood systolic ($P < 0.001$) and diastolic ($P < 0.001$) levels pressure between participants who underwent a customized DASH diet and included change style life to in routine daily them. In addition, the significant thing difference observed in changes systolic (P value – 0.001) and diastolic pressure blood (P value – 0.001) between two groups : group I, which received an adapted DASH diet only, and group II, which received adapted DASH pattern eating and changing style life. In individuals with stage-1 hypertension, implementation of a personalized DASH diet and modification style life play a role important as a treatment strategy effective start, complete use treatment. Research This proven beneficial for individuals who have own high threshold pressure blood, which causes decline factor cardiovascular risk. ²⁵

Of the 15 journals that have been investigated obtained that Lifestyle is factor important which greatly influences life society and are closely related with incident hypertension especially at the age productive. Less productive lifestyle Healthy like pattern eating (salt consumption), lack of activity physical, and smoking which increases incident disease hypertension.

CONCLUSION

In research this, we found that There is various type factors that are significant related with hypertension among adults. Research This show that Poor lifestyle Healthy like pattern eating (salt consumption), lack of activity physical, drinking alcohol and smoking known as factor

risk significant hypertension. Associated factors with hypertension This can modified and prevented, early diagnosis, behavior prevention, and taking policy can reduce possibility caught disease hypertension. Among intervention style life, adjustment pattern food containing sodium and alcohol restrictions low is the most effective in lower pressure blood. Therefore it is a comprehensive and integrated intervention program must implemented For increase awareness so that service maintenance Primary health care is directed at primary prevention. Interventions This can covers change style life and habits eat at level public For reduce incident hypertension in the future.

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