

**PERBEDAAN EFEKTIVITAS PEMBERIAN JUS WORTEL DAN JUS  
TOMAT TERHADAP PENURUNAN TEKANAN DARAH PADA LANSIA  
DI PUSKESMAS BALOI PERMAI**

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**ABSTRAK**

Hipertensi merupakan salah satu masalah kesehatan yang banyak dialami oleh lansia dan berkontribusi terhadap morbiditas serta mortalitas akibat penyakit kardiovaskular. Di Indonesia, tingginya prevalensi hipertensi pada kelompok usia lanjut menunjukkan perlunya intervensi nonfarmakologis yang aman, mudah diakses, dan mudah diterapkan. Jus wortel dan jus tomat mengandung kalium serta senyawa antioksidan seperti  $\beta$ -karoten dan likopen yang berpotensi membantu menurunkan tekanan darah melalui mekanisme vasodilatasi dan perlindungan endotel. Penelitian ini ditunjukkan guna menganalisis perbedaan efektivitas pemberian jus wortel dan jus tomat terhadap penurunan tekanan darah pada lansia penderita hipertensi. Penelitian ini menerapkan desain quasi-eksperimen dengan pendekatan *pretest-posttest* pada dua kelompok. Penelitian dilaksanakan di Puskesmas Baloi Permai, Batam. Penelitian ini melibatkan 12 sampel lansia hipertensi yang dipilih menjadi dua kelompok dengan menggunakan teknik purposive sampling yaitu kelompok jus wortel dan kelompok jus tomat. Intervensi yang diberikan yaitu 200 ml jus wortel atau jus tomat selama tiga hari berturut-turut. Pengukuran tekanan darah sistolik dan diastolik dilakukan sebelum dan setelah intervensi. Analisis data menerapkan uji *paired sample t-test* dan *independent sample t-test*. Perolehan penelitian menampilkan bahwasanya pemberian jus wortel dan jus tomat secara signifikan dapat membantu dalam menurunkan tekanan darah sistolik dan diastolik. Namun, tidak terdapat perbedaan yang signifikan antara kedua kelompok dalam penurunan tekanan darah sistolik. Dan, terdapat perbedaan yang signifikan pada penurunan tekanan darah diastolik. Selisih penurunan tekanan darah diastolik pada kelompok jus tomat lebih besar dibandingkan pada kelompok jus wortel. Jus tomat dapat direkomendasikan sebagai strategi non-farmakologis pendamping dalam pengelolaan hipertensi pada lansia.

**THE DIFFERENCE IN EFFECTIVENESS BETWEEN CARROT JUICE AND TOMATO  
JUICE IN REDUCING BLOOD PRESSURE AMONG ELDERLY PATIENTS AT BALOI  
PERMAI PUBLIC HEALTH CENTER**

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**Keywords :** Hypertension, Carrot juice, Tomato juice, Elderly, Blood pressure

**ABSTRACT**

Hypertension was one of the health problems commonly experienced by the elderly and contributed to morbidity and mortality due to cardiovascular diseases. In Indonesia, the high prevalence of hypertension among the elderly indicated the need for non-pharmacological interventions that were safe, accessible, and easy to implement. Carrot juice and tomato juice contained potassium and antioxidant compounds such as  $\beta$ -carotene and lycopene that had the potential to help lower blood pressure through vasodilation mechanisms and endothelial protection. This study aimed to analyze the difference in the effectiveness of carrot juice and tomato juice consumption in reducing blood pressure among elderly patients with hypertension. This study used a quasi-experimental design with a pretest–posttest approach in two groups. The research was conducted at Baloi Permai Public Health Center, Batam. The study involved 12 elderly hypertensive participants who were divided into two groups using purposive sampling, namely the carrot juice group and the tomato juice group. The intervention given was 200 ml of carrot juice or tomato juice for three consecutive days. Systolic and diastolic blood pressure measurements were taken before and after the intervention. Data analysis was performed using the paired sample t-test and independent sample t-test. The results showed that the administration of carrot juice and tomato juice significantly helped reduce systolic and diastolic blood pressure. However, there was no significant difference between the two groups in reducing systolic blood pressure. Meanwhile, there was a significant difference in the reduction of diastolic blood pressure. The decrease in diastolic blood pressure in the tomato juice group was greater than in the carrot juice group. Therefore, tomato juice can be recommended as a complementary non-pharmacological strategy in the management of hypertension among the elderly.