

EFEK YOGHURT UMBI BIT (*Beta vulgaris L.*) DAN KAYU MANIS (*Cinnamomum burmanii*) TERHADAP TEKANAN DARAH DAN KADAR GLUKOSA DARAH PADA TIKUS *SPRAGUE DAWLEY* YANG DIBERI DIET TINGGI LEMAK

Naima Sabita Conbul¹, Fatma Zuhrotun Nisa¹, Rio Jati Kusuma¹

INTISARI

Latar Belakang: peningkatan prevalensi penyakit tidak menular seperti diabetes dan hipertensi disebabkan pola makan yang tidak baik sehingga perlu upaya pencegahan. Yoghurt, umbi bit, dan kayu manis merupakan makanan fungsional yang kaya akan senyawa bioaktif untuk menurunkan tekanan darah dan kadar glukosa darah

Tujuan: mengetahui efek pemberian yoghurt umbi bit dan kayu manis terhadap tekanan darah dan kadar glukosa darah tikus *Sprague Dawley* yang diberi diet tinggi lemak

Metode: penelitian ini menggunakan rancangan *pretest-posttest control group design*. 28 tikus dibagi ke dalam 4 kelompok, yaitu kelompok yang diberi pakan standar, pakan tinggi lemak, pakan tinggi lemak + yoghurt umbi bit kayu manis dosis 1,8 mL/200 g BB, dan pakan tinggi lemak + yoghurt umbi bit kayu manis dosis 3,6 mL/200 g BB. Setelah 28 hari, tekanan darah dan kadar glukosa darah sampel akan diukur

Hasil: yoghurt umbi bit dan kayu manis dosis 1,8 mL/200 g BB dan 3,6 mL/200 g BB dapat menurunkan tekanan darah sebanyak 35,2% dan 42,3%. Sementara itu, kadar glukosa darah menurun sebanyak 21,6% dan 37,4%.

Kesimpulan: yoghurt umbi bit dan kayu manis efektif untuk menurunkan tekanan darah dan kadar glukosa darah dalam 4 minggu.

Kata kunci: Yoghurt, Umbi bit, Kayu manis, Tekanan darah, Kadar glukosa darah

¹Departemen Gizi Kesehatan; Fakultas Kedokteran, Kesehatan Masyarakat, dan Keperawatan; Universitas Gadjah Mada

**THE EFFECT OF BEETROOT (*Beta vulgaris L.*) AND CINNAMON
(*Cinnamomum burmanii*) YOGHURT ON BLOOD PRESSURE AND BLOOD
GLUCOSE LEVEL IN HIGH FAT DIET-INDUCED *SPRAGUE DAWLEY* RATS**

Naima Sabita Conbul¹, Fatma Zuhrotun Nisa¹, Rio Jati Kusuma¹

ABSTRACT

Background: an increase in prevalence of non-communicable diseases such as diabetes and hypertension has been associated with poor eating habits. Thus, preventive action is required. Yoghurt, beetroot, and cinnamon are kinds of functional foods which contain high bioactive compounds to lower blood pressure and blood glucose level in order to prevent non-communicable diseases

Objectives: determine the effect of beetroot and cinnamon yoghurt on blood pressure and blood glucose level in high fat diet-induced *Sprague Dawley* rats.

Methods: This research is a pretest-posttest control group design. 28 rats were divided into 4 groups: standard diet, high-fat diet, high-fat diet + 1,8 mL/200 g BW beetroot and cinnamon yoghurt, and high-fat diet + 3,6 mL/200 g BW beetroot and cinnamon yoghurt. After 28 days, the blood pressure and blood glucose level was measured

Results: both consumption of 1,8 mL/200 g BW or 3,6 mL/200 g BW dose of beetroot and cinnamon yoghurt beetroot and cinnamon yoghurt resulted in significant decrease of blood pressure (35,2% and 42,3%) and blood glucose level (21,6% and 37,4%).

Conclusion: beetroot and cinnamon yoghurt has potential to lower blood pressure and blood glucose level in 4 weeks.

Keywords: Yoghurt, Beetroot, Cinnamon, Blood pressure, Blood glucose level

¹Department of Health and Nutrition; Faculty of Medicine, Public Health, and Nursing; Gadjah Mada University