

## **Pengaruh Pemberian Formula Enteral Berbasis Tepung Sorgum dan Tepung Kedelai terhadap Trigliserida pada Tikus Wistar dengan Hiperglikemia**

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### **ABSTRAK**

**Latar Belakang :** Resistensi insulin pada penderita DM dapat memengaruhi metabolisme lipid yang ditunjukkan dengan peningkatan kadar trigliserida (TG). Formula enteral berbasis tepung sorgum dan tepung kedelai yang memiliki kandungan serat pangan berpotensi menurunkan kadar trigliserida.

**Tujuan :** Mengetahui pengaruh pemberian formula enteral berbasis tepung sorgum dan tepung kedelai terhadap trigliserida pada tikus wistar dengan hiperglikemia.

**Metode :** Penelitian ini merupakan penelitian eksperimental yang memakai tikus wistar dalam 4 kelompok, meliputi K-, K+, P1, dan P2. Kelompok K+, P1, serta P2 dikondisikan DM dengan menginjeksi STZ-NA. Kelompok K- dan K+ hanya diberikan pakan standar. Kelompok P1 dan P2 diberikan pakan standar dan formula enteral berbasis tepung sorgum dan tepung kedelai dengan dosis 4,41 g/hari dan 5,51 g/hari selama 28 hari. Kadar TG ditentukan menggunakan metode GPO-PAP. *Paired t-test* digunakan untuk analisis perbedaan kadar TG sebelum dan setelah intervensi. Uji *One Way Anova* dengan uji lanjutan digunakan untuk mengetahui perbedaan kadar antar kelompok.

**Hasil :** Ada perbedaan kadar TG sebelum dan sesudah intervensi pada kelompok K+, P1, dan P2. Kadar trigliserida pada kelompok K+ meningkat sebesar 11,37%. Kadar trigliserida pada kelompok P1 serta P2 menurun, masing – masing sebanyak 29,2% serta 31,85%.

**Simpulan :** Pemberian formula enteral berbasis tepung sorgum dan tepung kedelai dengan dosis 4,41 g/hari dan 5,51 g/hari selama 28 hari dapat menurunkan kadar trigliserida, masing – masing 29,22% dan 31,85%.

**Kata Kunci :** formula enteral, tepung sorgum, tepung kedelai, kadar trigliserida, hiperglikemia

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## ***Effect of Administration of Enteral Formula Based on Sorghum Flour and Soybean Flour on Triglycerides in Wistar Rats with Hyperglycemia***

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### **ABSTRACT**

**Background :** *Insulin resistance in diabetes patients can affect lipid metabolism as indicated by increased triglyceride levels. Enteral formulas based on sorghum flour and soy flour which contain dietary fiber have the potential to reduce triglyceride levels.*

**Purpose :** *To determine the effect of administering enteral formulas based on sorghum flour and soy flour on triglyceride levels in Wistar rats with hyperglycemia.*

**Method :** *This research was an experimental study using adult Wistar rats in 4 groups, including K-, K+, P1, and P2. Groups K+, P1, and P2 were conditioned with DM by injecting STZ and NA. The K- and K+ groups were only given standard feed. Groups P1 and P2 were given standard feed and enteral formula based on sorghum flour and soybean flour at a dose of 4.41 g/day and 5.51 g/day for 28 days. Triglyceride levels were checked using the GPO-PAP method. Paired t-test was used to analyze differences in TG levels before and after intervention. One Way Anova test with follow-up tests was used to determine differences in levels between groups.*

**Result :** *There were differences in triglyceride levels before and after intervention in groups K+, P1, and P2. Triglyceride levels in the K+ group increased by 11.37%. Triglyceride levels in groups P1 and P2 decreased by 29.2% and 31.85%, respectively.*

**Conclusion :** *Administration of enteral formulas made from sorghum flour and soybeans flour at doses of 4.41 g/day and 5.51 g/day for 28 days can reduce triglyceride levels by 29.22% and 31.85%, respectively.*

**Keywords :** *enteral formula, sorghum flour, soybean flour, triglyceride levels, hyperglycemia*

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