

COMPARISON OF EFFICACIES BETWEEN LIVE AND KILLED PROBIOTICS IN CHILDREN WITH LACTOSE MALABSORPTION

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Abstract. The objective of this study was to determine the efficacy of live and killed probiotics to decrease the presence of hydrogen using the breath hydrogen test (BHT). This pretest-posttest control group design single blinded randomized study was performed in 5 government elementary schools in Tumiting subdistrict, Manado, Indonesia from March to May 2008. The study for inclusion as subjects consisted of healthy 10-12 year old children with heights and weights within normal limits using the Centers for Disease Control (CDC) criteria whose BHT was ≥ 20 parts per million (ppm), indicating lactose malabsorption. One hundred thirty children were screened, 86 met criteria, 43 children were randomized into two groups. Thirty-nine children who were given live probiotic and 40 children who were given killed probiotic completed the study. There was a significant difference when comparing the BHT results before and 120 minutes after giving probiotic for the children taking both the live and the killed probiotic ($p < 0.001$). When the children taking the live and killed probiotics were compared, there was no difference in the BHT at 120 minutes of probiotic ($p = 0.453$) by *t*-test. The administration of live or killed probiotic for 2 weeks can decrease the results of a BHT in children with lactose malabsorption. No adverse reactions attributable to treatment were noted.

Key words: live probiotic, killed probiotic, lactose malabsorption

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