

EFFECT OF ROASTED PLANTAIN FLOWER ON BLOOD LIPIDS, PROTEINS AND IRON

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Plantain flower is used by the population of Sri Lanka in their normal diet. Hence the effect of Plantain flower on the metabolism of lipids, proteins and iron was studied in a group of healthy individuals at the ages of 20-25 years. Roasted Plantain flower "varai" (60 g wet weight) was administered with their normal mid-day meal for six consecutive days and various parameters were measured on 0 and 7th day of administration of the food. Cholesterol, triacylglycerol, free fatty acids and iron were measured on a group of 40 healthy subjects, while the protein and bilirubin trials were made on different groups of 20 people. Fasting blood samples were taken for all analysis. Mean blood glucose levels before and after the administration of Plantain flower were 79.7 mg dl^{-1} ($+/- 13.18$) and 72.4 mg dl^{-1} ($+/- 12.37$) respectively. The difference was statistically significant. Mean serum triacylglycerol levels before and after the administration of the food were $0.99 \text{ m mole l}^{-1}$ ($+/- 0.44$) and $0.68 \text{ m mole l}^{-1}$ ($+/- 0.36$) respectively. The decrease in serum triacylglycerol level was also statistically significant. Mean serum total protein level before and after the administration of Plantain flower was 6.38 g dl^{-1} ($+/- 0.83$) and 6.21 g dl^{-1} ($+/- 0.79$) respectively. Difference in serum protein after the administration of the diet was not significant. Mean serum iron before and after the administration of Plantain flower was $166.4 \mu\text{g dl}^{-1}$ ($+/- 45.6$) and $124.5 \mu\text{g dl}^{-1}$ ($+/- 38.1$) respectively. The results show that the decrease in serum iron level is significant. Mean serum cholesterol level before and after the administration of the food was 196.4 mg dl^{-1} ($+/- 48.9$) and 171.8 mg dl^{-1} ($+/- 18.3$) respectively. Thus the food has not significantly reduced the serum cholesterol level. Mean serum bilirubin level before and after the administration of Plantain flower curry was 0.8 mg dl^{-1} ($+/- 0.1$) and 0.33 mg dl^{-1} ($+/- 0.8$) respectively. Thus serum bilirubin was not significantly altered by the intake of Plantain flower. Mean serum free fatty acid levels before and after the administration of plantain flower were 751.6 ($+/- 117.5$) and 654.3 ($+/- 97.4$) respectively and no significant reduction was observed. These results indicate that blood glucose, serum triacylglycerol and iron are significantly reduced while the cholesterol, free fatty acid and bilirubin changes are insignificant.