

## **Effects of Bee Bread Supplementation on Total Antioxidant Status and F<sub>2</sub>-Isoprostane Among Athletes**

### **ABSTRACT**

Antioxidant is a substance that helps to reduce the severity of oxidative stress. Many chronic diseases have been reported related the increasing of free radical and oxidative stress in the human. There is still scanty information on antioxidant property of bee bread at pre and post exercise after short term supplementation. This present study investigated effects of eight weeks supplementation of bee bread on antioxidant status at pre and post exercise among athletes. Twelve male athletes were recruited in this randomised crossover study. For the exercise trial test, subjects were required to run at 60% of their respective  $VO_{2max}$  on a motorised treadmill for 90 minutes and immediately followed by a time trial performance. Blood samples were collected at pre and post exercise to determine total antioxidant status (TAS) and F<sub>2</sub>-Isoprostane. Statistical analyses were performed using descriptive statistic and ANOVA with repeated measures. TAS was significantly higher, whereas F<sub>2</sub>-Isoprostane was significantly lower in the bee bread trial in comparison with placebo trial after eight weeks of supplementation. This present study found that bee bread supplementation showed positives impact on antioxidant status among athletes.