# Effect of purple sweet potato leaf consumption on the modulation on the antioxidative status in basketball players during training

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## Abstract

The aim of this study was to evaluate the effect of purple sweet potato leaves (PSPLs) consumption on antioxidative status and its modulation of that status in basketball players during training period. Fifteen elite basketball players were enrolled in this study. The seven-week study consisted of a run-in (week 1), PSPLs diet (daily consumption of 200 g PSPLs) (weeks 2, 3), washout (weeks 4, 5), and control diet (low polyphenol, with the amount of carotenoids adjusted to the same level as that of PSPLs) (weeks 6, 7). Blood and urine samples were taken for biochemical analysis. Compared with the control group, the results showed that PSPLs consumption led to a significant increase of plasma polyphenol concentration and vitamin E and C levels. Low density lipoprotein (LDL) lag time was significantly longer in the PSPLs group. A significant decrease of urinary 8-hydroxy-2-deoxyguanosine (8-OHdG) was noted; however, there was no significant change in plasma glutathione (GSH), total antioxidant status (TAS) and malondialdehyde + 4-hydroxy-2(E)-nonenal level after consuming the PSPLs diet. In conclusion, consumption of PSPLs diet for 2 weeks may reduce lipid and DNA oxidation that can modulate the antioxidative status of basketball players during training period.