The effect of Ciwujia (Radix Acanthopanacis Senticosus) preparation on stamina was investigated in 16 male adult volunteers. The results showed that anaerobic threshold of power load at 4 mmol/L blood lactic acid (LA) level was 808±189 kg. m/min (134±23.9 W) before taking Ciwujia preparation, while it was 904±80kg. m/min (150.6±19.9 W) after taking Ciwujia preparation. The respiratory quotient (RQ) decreased from 0.99 pre-ciwujia to 0.86 post-ciwujia, which indicate that Ciwujia preparation increased the level of fat metabolism by 43% during exercise. Since energy for high intensity exercise largely depends on glycogen stored in the body, results obtained with Ciwujia preparation have positive implications for the athlete. By inducing a glycogen sparing effect, Ciwujia preparation delays the occurrence of fatigue and increases the anaerobic threshold. The RQ, LA, heart rate and anaerobic performance data are consistent with a glycogen sparing effect of Ciwujia preparation.