9.0 Future Research

Following almost two-decades of chromium supplementation studies on body composition and physical performance a large range of studies have investigated the effect of a variety of dosages and duration of chromium supplementation, particularly in the form chromium picolinate. A wide range of subjects have been used, from active males and females to sedentary, young and old (18-77 years) lean and obese (BMI 22-42 kg/m^2). Grant et al. (1997) and Crawford et al. (1999) were the only studies to find significant effects of chromium nicotinate and niacin-bound chromium, respectively. A recommendation of future research would be to review the potential of chromium nicotinate and niacin-bound chromium in a similar comprehensive manner to that which chromium picolinate has been studied. Studies utilising exercise training predominantly focus on resistance training and when aerobic training is used, this is often low-intensity fat burning exercise performed by overweight or obese subjects. As chromium loss is suggested to increase with exercise, a novel study would be to investigate the serum chromium content (as a measure of chromium status) and potential benefit of chromium supplementation in elite endurance athletes, such as cyclists, rowers or long-distance runners where exercise training is frequent (~7 $d \cdot wk^{-1}$) and of high-intensity.