8.0 Conclusion

Chromium supplementation is consistently associated with a significant increase of serum chromium concentration and urinary chromium excretion when analysed, which is a useful indicator of chromium status within individual subjects. Chromium picolinate supplementation in a range of dosages (182 – 1000 µg · d\(^{-1}\)) is unable to influence strength, power or aerobic capacity above the effects of training alone in male and female subjects. Some studies have demonstrated significant effects of chromium supplementation on body composition. A select few demonstrate a slight, non-significant positive trend on parameters of body composition with chromium supplementation. The most consistent finding however, is that chromium supplementation is unable to influence body composition, in terms of body mass, lean body mass and fat mass, in the majority of well-designed, bias-controlled studies compared to placebo receiving subjects, under supervised exercise training or as “free-living” subjects. Metabolically, these findings suggest that availability of serum chromium (as Chromodulin) through natural dietary intake is not the limiting factor to insulin potentiation, as chromium supplementation (200-1000 µg · d\(^{-1}\)) in greater than recommended daily intake (25-35 µg · d\(^{-1}\)) is ineffective at significantly altering body composition, in the majority of well-designed and bias-controlled studies.