



INTERVAL VS. CONTINUOUS WALKING TRAINING FOR TREATING TYPE 2 DIABETES MELLITUS

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Abstract

Regular physical activity is recommended for subjects with type 2 diabetes mellitus, and the positive effect of physical activity on risk factors for cardiovascular disease is well-documented. The exercise pattern has in the recent years been recognized as a major determinant for the metabolic benefits seen, and an increasing amount of studies have reported great effects of interval training programs in the treatment of type 2 diabetes mellitus. Yet, few studies have compared these interval training programs to matched continuous training programs. As such, the effect of interval training per se is largely unknown.

In a number of studies, we have compared aerobic interval-walking training with time-duration and mean intensity-matched continuous walking training in subjects with type 2 diabetes mellitus. We have found that interval-walking training results in superior improvements in body composition, physical fitness and glycemic control compared to continuous walking training after a free-living 4 month intervention and that interval-walking remains superior compared to continuous walking for improving glycemic control after shorter, strictly controlled and supervised interventions. We have furthermore explored the mechanisms underlying this superiority of interval-walking training on glycemic control and have found that increases in peripheral glucose disposal during hyperglycemia are greater after interval- compared to continuous walking training.

In conclusion, interval-walking training is a feasible and effective training modality for subjects with type 2 diabetes mellitus, something which may have implications for the way future training programs are structured and recommended for subjects with type 2 diabetes mellitus.

Keywords: Type 2 diabetes mellitus; exercise; Interval training; glycemic control; glucose disposal

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