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## The Effects of Exercise during Haemodialysis

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Patients with chronic kidney disease are an inactive population. There has been a recent growth in research into exercise and activity levels in patients who require haemodialysis treatment to live. Regular exercise is purported to have numerous benefits to these individuals, these include improved exercise capacity, muscle function and strength, quality of life and various other health benefits. Exercise 'rehabilitation' in this population is challenging due to low physical capacity and function and numerous complications associated with the disease and treatment and due to low compliance to outpatient clinics. Cycling exercise while the patient is dialysing offers an alternative option.

The haemodialysis procedure is extremely invasive and consequently has various metabolic, hormonal, inflammatory and haemodynamic implications.

Haemodialysis is reported to have pro-inflammatory and anorexigenic effects, cause immune dysfunction, increase the risk of infection and frequently causes a transient fall in blood pressure. Exercise itself has been shown to alter concentrations of circulating inflammatory factors, suppress appetite hormones, influence immune function, and has profound effects on blood pressure both during the activity and after the activity is completed. However, the effect exercise has when performed during haemodialysis is unclear.

This presentation will highlight findings from recent research comparing 15 haemodialysis patients who completed a treatment with and without an exercise session. Changes in blood pressure, circulating inflammatory factors, immune function and appetite will be reported.