

2020 Research Awards

Project Title:

Clinical study to evaluate the impact of intensive physical training and structured exercise programs on cardiovascular health and penile erection in men with prostate cancer

Lead Investigator:

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Project Summary:

Men with prostate cancer commonly experience significant psycho-sexual issues such as erectile dysfunction, especially following surgery and radiation therapy. In addition, many men have poor cardiovascular health especially in the setting of hormone (androgen) deprivation therapy for prostate cancer. While the impact of pelvic floor exercise on early recovery of urinary continence in men following prostate cancer treatment is well known, the clinical effects of physical exercise on male sexual function and cardiovascular health are poorly understood and remain largely unknown.

Recent literature supports the role of high intensity interval exercise training to boost cardio-respiratory health with smaller time investment compared to continuous form of exercise, and an improved VO₂ max, a measure of endurance that calculates the maximum volume of oxygen the body can use. By increasing the cardio-metabolism and athletic capacity, this could translate to endothelial remodeling and improve overall vascular health and blood flow.

This study explores the feasibility and efficacy of structured high intensity interval exercise training on male sexual function (measured by erectile function score) and cardiovascular health markers including cardiorespiratory fitness (VO₂ peak), exercise capacity (peak power output), coronary markers and vascular function (pulse wave velocity) in men with erectile dysfunction following prostate cancer treatments.

Research Benefits:

This prospective clinical study will demonstrate that intensive physical training and structured exercise programs can have a positive impact on cardiovascular health remodeling and penile erection in men who are diagnosed and received treatment for prostate cancer. These research outcomes could translate to optimisation of cardio-metabolic health, disease prevention and overall better healthcare delivery in prostate cancer survivorship.

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