The Prostate Cancer Active Lifestyle Study (PALS): a randomized controlled trial of diet and exercise in overweight and obese men on active surveillance.

RUTH ETZIONI, JOHN L GORE, DANIEL W LIN, ET AL.
JOURNAL: CANCER 2024;130(12):2108-2119

Reviewed by OUR EXPERTS

With Expert Review from Kirsty Baxter

Men with low-risk prostate cancer are commonly managed through active surveillance, helping to avoid unnecessary treatment, delay treatment-related side effects, and preserve quality of life. Obesity may influence disease progression, with men with obesity undergoing active surveillance having a 1.5-fold greater risk of prostate cancer progression than men of normal weight. One potential link is altered glucose and insulin regulation, as both glucose availability and insulin signalling can support pathways involved in cancer cell growth.

This randomised controlled trial investigated whether achieving 7% body weight loss through dietary changes and increased physical activity could improve markers of glucose regulation, inflammation and obesity implicated in prostate cancer progression.

Weight loss was significantly greater in the intervention group than in controls and was accompanied by significant improvements in glucose regulation. However, these metabolic improvements did not translate into significant differences in prostate cancer pathology between the groups.

The authors concluded that men with overweight or obesity undergoing active surveillance for prostate cancer can successfully achieve weight loss through dietary and physical activity changes, with accompanying improvements in glucose regulation relevant to pathways implicated in prostate cancer development. ■

Impact of Weight Management on Obesity-Driven Biomarkers of Prostate Cancer Progression

WILLIAM P PARKER, MISTY D BECHTEL, PRABHAKAR CHALISE, ET AL.
JOURNAL: THE JOURNAL OF UROLOGY 2024;211(4):552-562

Reviewed by OUR EXPERTS

With Expert Review from Kirsty Baxter

Men with obesity, particularly those with excess visceral adipose tissue have an increased risk of prostate cancer mortality, suggesting that both obesity and prostate cancer may share underlying biological mechanisms. Visceral adipose tissue, is associated with reduced insulin sensitivity and increased circulating, which may promote prostate cancer growth. Although lifestyle interventions can improve obesity and support weight loss, it remains unclear whether improvements in diet quality, physical activity, and weight management can influence prostate cancer related biomarkers. This 16 week RCT included 40 men with obesity and prostate cancer who were scheduled for prostatectomy, investigated whether achieving >5% weight reduction through calorie restriction and exercise could counteract obesity-driven prostate cancer biomarkers. Compared with controls, participants undergoing weight management showed improvements in glycaemic measures and blood lipids, alongside reductions in visceral tissue amount. However, no significant differences were observed in prostate tissue markers. The authors concluded that calorie restriction and exercise reduced adiposity and produced favourable changes in circulating biomarkers associated with prostate cancer, although these changes were not reflected within prostate tissue. ■

Reviewed by OUR EXPERTS

The effect of flavonoid and subclasses supplementation on prostate specific antigen, hormonal parameters and prostate cancer risk:

SYAKIB BAKRI, AGUSSALIM BUKHARI, HAERANI RASYID, ET AL.
JOURNAL: ARCHIVIO ITALIANO DI UROLOGIA, ANDROLOGIA : ORGANO UFFICIALE [DI] SOCIETA ITALIANA DI ECOGRAFIA UROLOGICA E NEFROLOGICA 2025;97(2):13645

With Expert Review from Ana-Paula Agrela

This systematic review and meta-analysis of nine randomised control trials with 420 men investigated the effects of flavonoid supplementation in men diagnosed with prostate cancer. Flavonoid supplementation was associated with a significant reduction in total prostate specific antigen (PSA), with interventions longer that 12 weeks producing greater reductions in PSA than shorter interventions. Supplementation was also associated with a significantly reduced risk of prostate cancer. The authors concluded that flavonoids may have a role in reducing prostate cancer risk and influencing PSA levels, although further research is needed. ■

High-dose vitamin D to attenuate bone loss in patients with prostate cancer on androgen deprivation therapy: a phase 2 RCT

CHARLES KAMEN, MICHELLE JANELSINS, CHARLES E HECKLER,
JOURNAL: CANCER 2024;130(14):2538-2551

With Expert Review from Chloe Steele

Prostate cancer is frequently accompanied by bone loss, increasing the risk of osteopenia and osteoporosis. This risk can be further exacerbated by androgen deprivation therapy (ADT), which can accelerate reductions in bone mineral density (BMD). This 24-week randomised controlled trial involving 52 men aged over 60 years with prostate cancer undergoing ADT investigated the efficacy, safety and feasibility of high-dose vitamin D for preventing bone loss. Compared with standard-dose supplementation, high-dose vitamin D was associated with significantly reduced BMD loss at the total hip and femoral neck, with the greatest benefits observed in men with lower baseline serum 25(OH)D concentrations. However, high-dose vitamin D did not improve all markers of bone formation and was associated with increased markers of bone resorption. The authors concluded that high-dose vitamin D was safe and effective in mitigating BMD loss in older men receiving ADT, particularly those with lower vitamin D status at baseline. ■