

diabetes mellitus).

Discussion: Being female and alcohol consumption appeared to be key predictors of having a chronic condition in MA, and MA had a lower prevalence of most chronic conditions compared to the general population. This study highlights key factors influencing the health of MA as well as the potential health benefits of regular exercise and participation in sport for older adults.

Conflict of interest statement: My co-authors and I acknowledge we have no conflict of interest to the submission of this abstract.

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S58

Pelvic floor symptoms are an overlooked barrier to exercise participation: a survey of 4556 symptomatic women

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Introduction: Physical inactivity is the second highest contributor to chronic disease and injury in Australian women. Pelvic floor (PF) disorders are highly prevalent; 25% of women in the general population report symptoms. This study aimed to (i) investigate barriers to exercise in women with PF symptoms (urinary incontinence [UI], anal incontinence [AI] and pelvic organ prolapse [POP]) (ii) determine factors associated with reporting PF symptoms as a substantial exercise barrier and (iii) investigate the association between reporting PF symptoms as an exercise barrier and physical inactivity.

Methods: Australian women, 18-65 years with PF symptoms (n=4556), completed a survey containing validated PF and physical activity questionnaires. Participants reported exercise barriers and the degree they limited participation. Binary logistic regression was used to identify variables associated with (a) identifying PF symptoms as a substantial exercise barrier (stops exercise participation often/all of the time) and (b) physical inactivity.

Results: In this cohort, 31% (n=1429) reported PF symptoms as a substantial exercise barrier, UI was the most frequently reported barrier. Two-thirds of participants who identified POP and UI as exercise barriers, had stopped exercising. The odds of reporting PF symptoms as a substantial exercise barrier were significantly higher for women with severe UI (odd ratio (OR):4.77 CI:3.60, 6.34), high symptom bother (UI OR:10.19, CI:7.24, 14.37; POP OR:22.38, CI:13.04, 36.60; AI OR:29.66, CI:7.21,122.07), those who experienced vaginal birth (one birth OR:2.04, CI:1.63, 2.56) or a 3rd/4th degree obstetric tear (OR:1.47, CI:1.24, 1.76). The odds of being physically inactive were greater in women who identified PF symptoms as an exercise barrier than those who did not (OR:1.33, CI:1.1, 1.59).

Discussion: A high prevalence of PF symptoms in women has been previously established. This study demonstrated that PF symptoms are a substantial barrier to exercise participation, causing one in three symptomatic women to stop participation in exercise often/all the time. Physical inactivity is a major cause of mortality and morbidity in Australian women. Pelvic floor symptoms stop women of all ages from participating in exercise, including younger nulliparous women. Those who identify their PF symptoms as a substantial barrier to exercise have higher odds of being physically inactive. Pelvic floor muscle training has level 1A evidence as an effective, low-risk form of conservative management for UI symptoms in the general population. Identification and management of PF symptoms could allow women to remain physically active across their lifespan.

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S62

A comparison of acceleration and maximum speed sprint training on eccentric hamstring strength and hamstring muscle architecture

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Background: Hamstring strain injuries (HSI) are prevalent in field sports with a high-speed running component. It is widely believed that sprint training can have a HSI preventative effect due to the relatively high muscle activation. However, it is not known whether acceleration or maximum speed training is more effective for influencing HSI risk indicators such as eccentric strength or fascicle length. Therefore, the purpose was to investigate the differences between acceleration and maximum speed sprint training on eccentric hamstring strength and BFLH architecture.

Methods: Community footballers (age = 23.1 ± 3.8, n = 12) were recruited for six-weeks of acceleration or maximum speed sprint training. Athletes completed pre- and post-testing consisting of a 40-m sprint test with 0-10-m and 30-40-m splits, an eccentric hamstring assessment on the NordBord, and an ultrasound assessment of the BFLH. Athletes were ranked on eccentric hamstring strength then separated into three groups: acceleration (n = 4), maximum speed (n = 4) and control (n = 4). Sample size was limited due to COVID-19 restrictions. Acceleration and maximum speed training was completed twice weekly. Ultrasound assessment was performed 24-hours post-session 2, 4, 6, 8, 10 and, 12. Athletes were asked to rate their soreness on a Likert scale 24-hours post-session.

Results: Mean eccentric hamstring strength improved in the acceleration (5.3%, d = 0.27) and maximum speed (3.5%, d = 0.31) groups, however, not in the control (0.9%, d = 0.09) group. Acceleration (+23%, d = 1.59) and maximum speed (+20%, d = 1.81) athletes increased BFLH fascicle length compared to control athletes (-6%, d = -0.31). Acceleration improved by 2% and 3% for the acceleration and maximum speed athletes respectively. Likewise, maximum speed improved by 11% and 8% for the acceleration and maximum speed athletes. Control athletes performed 2% worse in acceleration and 1.5% better in maximum speed. Neither intervention reported excessive soreness post-sessions.

Discussion: These findings indicate that sprint training for the mitigation of HSI risk factors is a promising training intervention. Specifically, the large increase in BFLH fascicle length suggests that the inclusion of regular sprint training should contribute to a well-rounded strength and conditioning program. There appear to be no substantial differences between the two training interventions, however, both interventions outperformed control subjects who completed their normal training schedule during this period. Minimal hamstring muscle soreness, coupled with clear improvements in speed qualities suggest that sprint training acts as a performance enhancement and injury prevention method.

Conflict of Interest Statement: Dr David Opar is listed as a coinventor on a patent filed for a field test of eccentric knee flexor strength (PCT/AU2012/001041.2012), known commercially as the NordBord. Dr Opar is also a minority shareholder in a company (Vald Performance) that commercializes the device. David Opar is the Chair of