

significantly better VISA-G (baseline  $p=0.04$ , MD=-11.2, 95%CI=-21.70:-0.70, 12 weeks  $p<0.00$ , MD=-20.72, 95%CI=-31.22:-10.22, 52 weeks  $p<0.00$ , MD=-16.71, 95%CI=-27.21:-6.22) and secondary measure scores compared to placebo at all timepoints when BMI<25.

**Discussion:** MHT or placebo combined with tendon-specific or sham exercise plus education reduced pain and increased function for this population. Women with BMI<25 who were allocated MHT with any exercise plus education were better than placebo cream. MHT may be an effective intervention for post-menopausal women with GTPS when BMI <25 and when prescribed in conjunction with any exercise plus education. Any exercise strategy is effective when prescribed with education about avoiding gluteal tendon compression and load management.

**Conflict of interest:** None declared.

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## S43

### Joint Associations of Physical Activity and Insomnia Symptoms with Incident Mood Disorder in a population-based cohort study

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**Background:** When examined as separate risk factors, low physical inactivity and insomnia symptoms are both associated with increased risk of mood disorders including depression, however few studies examine these risk factors jointly. The aim of this study was to examine the joint association of physical activity and insomnia symptoms with the incidence of mood disorder in Australian adults.

**Methods:** Data were drawn from the 2013-2018 waves of the annual Household Income and Labour Dynamics in Australia panel study. In 2013, participants completed a survey assessing mood and anxiety disorder, physical activity, insomnia symptoms, lifestyle behaviours (i.e., diet, sleep duration, smoking, alcohol), reported diagnosis of depression/anxiety, and sociodemographic characteristics. Incident mood disorder was assessed using the MHI-5 and defined as mood disorder (MHI-5 score <54) in 2013 and no mood disorder (MHI-5 score >54) in 2014-2018. Physical activity was assessed using the IPAQ-SF and classified as low, moderate, and high using standard scoring protocols. Insomnia symptoms were assessed using three items assessing poor sleep quality and difficulty initiating and/or maintaining sleep and dichotomised as Insomnia symptoms/ No Insomnia. Participants were then classified into one of six groups representing distinct combinations of physical activity and insomnia symptoms. Only participants with complete data on covariates and exposure variables and who were free of mood disorder in 2013, and who had at least one follow-up survey during 2014-2018 were included in the analysis. A discrete-time proportional-hazards model was estimated using a logit-hazard (i.e., logistic) regression model to examine the association between joint categories of physical activity and insomnia symptoms and incident mood disorder between 2014-2018 adjusted for sociodemographics, lifestyle behaviours and prior/current diagnosis of depression/anxiety.

**Results:** There were 11,023 participants with complete data and no mood disorder in 2013. The incidence of mood disorder in 2014-2018 was 21.1%. Relative to participants classified as High PA/No insomnia symptoms, reporting either High PA/Insomnia (OR = 1.87, 95% CI 1.57,

2.23), Moderate PA/Insomnia (OR = 1.94, 95% CI 1.62, 2.32), or Low PA/Insomnia (OR = 2.33, 95% CI 1.96, 2.77) was significantly associated with increased likelihood of incident mood disorder.

**Discussion:** The combination of any level of physical activity and insomnia symptoms was associated with an increased likelihood of reporting mood disorder during the following five years, and this increased as physical activity decreased. These observations highlight the potential benefit of interventions targeting physical activity and insomnia symptoms to promote good mental health.

**Conflict of Interest Statement:** My co-authors and I acknowledge that we have no conflict of interest of relevance to the submission of this abstract

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## S55

### Prevalence of chronic conditions in masters games athletes

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**Introduction:** Masters athletes (MA) are typically individuals 35 years of age or older who engage in sporting competitions or systematic training. They are widely reported to be healthier and to exhibit a lower risk of chronic conditions than age-matched peers. Few studies have examined the prevalence of chronic conditions in MA. The study aimed to identify the prevalence of chronic conditions and their possible predictors in MA, and their prevalence compared to the general population.

**Methods:** Masters athletes competing at the 2017 Australian Masters Games (n= 4,848) and 2018 Pan Pacific Masters Games (n=14,455) were invited to complete an online survey collecting data on demographics and health, including presence of chronic conditions. A logistic regression model was built to investigate the association between demographic and lifestyle factors and the prevalence of having at least one chronic condition in MA. The 2017-18 Australian National Health Survey (AHS) provided data on the general Australian adult population. Age- and sex-adjusted prevalence of selected chronic conditions was compared with AHS data using a weighted t-test, and p values were adjusted for multiple comparisons. Statistical analyses were conducted using R version 3.6.3 and level of significance  $\alpha=0.05$ .

**Results:** A total of 814 MA (53.7±10.6 years, 60.7% female) completed the targeted survey questions. Overall, 53.1% of MA had at least one chronic condition, with the most prevalent being food allergies and intolerances (14.9%), osteoarthritis (13.3%), heart conditions (11.2%), asthma (10.3%), anxiety (8.9%), depression (6.9%), and hypertension (4.5%). Being female and drinking more than two standard drinks per day had a higher OR for having at least one chronic condition (OR, 1.6; 95%CI, 1.2-2.2 and OR, 2.3; 95%CI, 1.1-5.0 respectively). The prevalence of osteoarthritis was similar in MA compared to the general population (11.3%; 95%CI 9.1-13.6; 13.5% respectively,  $p=0.45$ ). The prevalence of all other chronic conditions was lower in MA compared to the general population (anxiety, asthma, cancers, depression, hyperlipidaemia, hypertension, osteoporosis, type 2