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**THE RELATIONSHIP BETWEEN THE SIGNIFICANT KNEE AND HIP PAIN AND USE OF NON-STEROID MEDICATION IN THE MIDDLE-AGED AND ELDERLY UK RUNNING POPULATION: LARGE COHORT STUDY**S. Kluzek<sup>1</sup>, G. Bullock<sup>2</sup>, T. Bestwick-Stevenson<sup>1</sup>, J. Stocks<sup>1</sup><sup>1</sup>Nottingham University, Nottingham, United Kingdom, <sup>2</sup>Wake University, Winston-Salem, United Kingdom

**Objectives:** Oral anti-inflammatory non-steroidal drugs (NSAID) are used commonly in the general population. Association between knee osteoarthritis (OA) and early cardiovascular mortality is often linked with decreased physical activity. Both running and jogging markedly reduce cardiovascular risk. Although regular exercise is a core treatment of lower-limb osteoarthritic pain, strategic activity pacing to improve compliance and decrease pain is recommended. It is unclear whether runners with significant and frequent knee and hip pain are more likely to use oral NSAIDs or pace their running activities.

**Material and Methods:** Baseline data from 'Running Through' (runningthrough.org), a prospective cohort study of community runners, joggers and Nordic walkers, were collected via electronic survey between February 2021 till February 2022. The National Health and Nutrition Examination Survey (NHANES) questions regarding significant knee and hip pain in the past months have been collected at baseline. Those questions have been previously associated with osteoarthritic pain. Baseline characteristics were compared between those reporting OA knee and/or hip pain and those without significant pain. Logistic regression models were performed calculating an odd ratio between those affected by lower limb OA pain and not, corrected for baseline demographics, comorbidities and other medication use.

**Results:** The study population included 2010 subjects over the age of 44, with 440 (22%) participants who reported significant frequent knee or hip pain (NHANES pain). There were no differences in age (median 56, IQR: 50,64); sex (54% female) or BMI (27.7), or history of diabetes/cardiac problems between the group with and without OA pain. Those affected by lower limb OA pain were more likely to have hypertension (12.7 vs 9.3%,  $p=0.036$ ). Furthermore, there was no difference in running frequency, with >80% of responders running 2-3 or 4-6 times a week, or favourite distance run (74% between 5 and 10 km). 15.2% of participants with significant knee and hip pain reported regular use of NSAIDs vs only 5% of those without the OA pain. The logistic regression model showed a significant increase in NSAIDs use after correcting for baseline characteristics, comorbidities and other medication use with OR of 3.05 and 95% conf. Interval 2.16-4.3.

**Conclusions:** Over 20% of middle-aged and elderly runners report significant and frequent knee and hip pain. Apart from the higher rates of hypertension, they report three times higher use of NSAID drugs; running distance and frequency was not different between those groups.