registered in the Danish Hip or the Danish Knee Arthroplasty Registers (DHA/DKA) with a diagnosis of primary OA were sent a detailed questionnaire regarding previous occupation, related exposures and complementary environmental factors. The analyses included cumulated exposures, McNemar’s X² tests, and conditional logistic regression including gene-exposure-interaction variables. 

**Results** 1181 twins responded (rate 58.9%). Responder analyses did not display any significant difference among non-responders with respect to diagnosis, zygosity and sex. We found a gene-exposure effect modification in hip OA-lifting and lifting-walking with OR’s 17.7 (1.1–280.2) and 10.4 (1.00–107.1), respectively, and a clear dose-response relationship between hip OA and prolonged standing-walking. Significant occupational risk factor in knee OA was kneeing, but no gene-kneeling interaction was detectable.

**Conclusion** Gene-exposure effect modification may be important in the development of hip OA in particular exposures to lifting and lifting-walking, but not in knee OA.

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**A COMPARATIVE STUDY OF MUSCULOSKELETAL SYMPTOMS AND WORK-RELATED IMPACT FOR PROFESSIONAL AND PRE-PROFESSIONAL MUSICIANS**

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**Introduction** Musculoskeletal symptoms are common in musicians, but little is known of the work- or study-related impacts, nor how they compare with other groups. The aim of this study was to compare professional musicians and pre-professional musicians (university music students), with a reference group, regarding the prevalence of musculoskeletal symptoms and their impact.

**Methods** A questionnaire survey was distributed to university music students and professional musicians, as well as non-music university staff and students (the reference group). Ache, pain and discomfort in the previous 12 months were determined using a modified Nordic Musculoskeletal Questionnaire, as well as the work- and study-related impact of these symptoms. Descriptive statistics were reported, and comparisons were made adjusting for age and gender. A 5% level of significance was used.

**Result** Symptom prevalence was high in both groups (86% for musicians and 91% for the reference group), principally in the neck, shoulder and lower back regions. After adjusting for age and gender, symptoms in the wrist/hand region were more common for musicians (OR 1.55, 95% CI: 1.12 to 2.15), and ankle/foot (OR 0.40, 95% CI: 0.31 to 0.66), hip/thigh (OR 0.45, 95% CI: 0.31 to 0.68), and knee (OR 0.45, 95% CI: 0.27 to 0.58) when compared with the reference group.

Musicians were more likely to make changes to their work or study (OR 2.08, 95% CI: 1.27 to 3.39), or leave from work or study (OR 1.71, 95% CI: 1.12 to 2.60) because of their musculoskeletal symptoms, when compared with the reference group.

**Discussion** Musculoskeletal symptoms were common in both groups, with musicians more likely to experience wrist/hand symptoms. Musicians’ were more likely to experience an impact from musculoskeletal symptoms on their work or study. Implications will be discussed.