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## P44. Injury risks for fitness instructors: a review of key factors

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### INTRODUCTION

The labour risks control is an occupational health concern. Fitness participants have been increasing in the last years (Lindwall, 2004). Clients' demand and the increase in classes number take the fitness instructors (FI) to a higher injuries exposure due to high workload. It is possible to observe several variations in aerobic dance, cycling, pilates, strength training, flexibility and balance. The main differences are in the cardiovascular intensities and the low to high impact dance (Van Mechelen, Hlobil & Kemper, 1992). The FI are exposed to high volumes of classes and injuries risks due to the high number of students and classes (Couto et al., 2016). As far as our understanding goes, FI are 50% more prone to injuries incidence in comparison to students. Thus, the aim of this study was to assess by a bibliographic research the health and injuries risk in FI.

### METHODS

This is a bibliographic review made in PUBMED, Google Scholar, SCIELO and Web of Science. The used keywords were "fitness instructors injuries", "fitness professor's injuries", and "fitness instructor's risks". From an analysis of 23 papers, ten were chosen considering title and abstract. After a full integral analysis, only five papers were selected for revision. The others did not aimed to analyse the injuries and the health risks for FI. The selected papers approached the injuries and health risk factors for FI.

### RESULTS

There is a positive and significant correlation between the formation levels and injuries incidence prevention in FI and students (Malek, Nalbone, Berger & Coburn, 2002). FI with higher classification prevent higher frequency of injuries events. The injuries prevalence was superior in FI than in students (72.4 – 75.9% and 22.8 – 43.3% respectively) (Mutoh, Sawai, Takanashi & Skurko, 1998; Francis, Francis & Welshons-Smith, 1985). The injuries were general inflammations, muscle strains or sprains and stress fractures by overuse (Rothenberger, Chang & Cable, 1988). The FI are more exposed to injuries than students are (0.17 injuries/100h vs 0.15/100h of practice, respectively) and about 77% of the injuries were in the lower limbs (Garrick, Gillien & Whiteside, 1986).

### CONCLUSIONS

There is a lack of research in FI injuries risk of factors. However, FI seem to have a higher exposure to injuries in comparison to students. The high workload seem to be determinant to the incidence of overuse injuries.

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