

Risk factors for the development of neck disorders: a systematic review

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Introduction and objective Though many epidemiologic studies have analyzed the relationship between risk factors and neck disorders, no clear picture exists of the strength of the evidence of the major determinants. This is mainly due to the often poor quality of the conducted studies and the lack of a review that sufficiently summarizes the available evidence and weighs validity and precision of the available studies. The purpose of this review was to identify the main risk factors for the development of neck disorders and to assess the strength of evidence of these risk factors.

Material and method To identify as many relevant studies as possible, online searches of Medline, Embase, Psychlit, Sportdiscus, NIOSHTIC, HSELINE, and CISDOC were carried out. Titles and abstracts were screened for relevance to potential risk factors for neck disorders; reference lists were screened for additional relevant studies. The in- and exclusion criteria in this review were: 1) Included were studies conducted in a working population or a community-based population; excluded were studies in patient populations. 2) The design of the study was case-control, cross-sectional, prospective cohort, or retrospective cohort with registered data. 3) The outcome can include one or more syndromes, signs or symptoms of the neck. The outcome variable must be reported separately for the neck and can be a self-reported variable as well as a clinical diagnosis.

The methodological quality of the selected studies was assessed using a quality assessment tool (based on existing quality assessment tools used in systematic reviews of RCT's on the effectiveness of treatment, but adapted to assess the quality of observational studies) consisting of different items on validity, precision and information in four categories: study population, exposure measurements, outcome measurements, and analysis and data presentation. On every item a study was rated respectively 'positive', 'negative', or 'don't know' if a study did meet, did not meet, or no clear information was stated on this item. All studies were independently evaluated by two different observers. For every study, all scores were added to come to a final quality score, and a conclusion was drawn on the strength of evidence of different risk factors for the development of neck disorders.

Results Reading the abstracts 149 articles were selected on base of the in- and exclusion criteria. Due to lack of information in some abstracts some studies were excluded after reading the entire article. Results of the methodological quality assessment and conclusions on different risk factors for neck disorders will be presented at the conference.