

Can psychosocial stress at work put at risk of developing rheumatoid arthritis?

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A Swedish study published in one of the latest issue of *Psychotherapy and Psychosomatics* discloses new relationships between stress at work and development of rheumatoid arthritis.

Psychosocial work stress, in terms of high psychological demands, low decision latitude or the combination of these stressors (job strain), is associated with an increased risk of several diseases (e.g. cardiovascular disease), but it has not been studied in relation to rheumatoid arthritis (RA). However, research on the relationship between psychosocial work stress and immunological parameters also suggests a possible association with inflammatory conditions, including RA. In order to investigate whether high psychological job demands, low decision latitude and job strain are associated with the risk of developing RA, a group of Swedish investigators used data from EIRA, a large population-based case-control study with incident cases of RA. The study base comprised the population, aged 18-65 years, in middle and southern parts of Sweden during 1996-2003. In total, 1,221 cases and 1,454 controls participated.

Psychological job demands and job decision latitude were measured according to questions developed by Karasek and Theorell. Questions were posed about participants' present work situations; both demands and decision latitude were categorized using the quartiles among the controls (each gender separately) as cut-off points. High psychological job demands, as well as high decision latitude, were defined as a score above the upper quartile. Low psychological job demands, as well as low decision latitude, were defined as a score below the lower quartile. Job

strain was defined as the combination of high demands and low decision latitude.

The investigators also performed a classification of psychological job demands and decision latitude based on a job exposure matrix (JEM), in order to avoid potential bias due to differential recall between cases and controls. Among the controls, mean scores of demands and decision latitude were calculated for each latest reported occupation (each gender separately) where the number of controls was at least 3. Both cases and controls were then given the mean scores according to their latest reported occupation. Cut-off points of psychological job demands and decision latitude were calculated in the same way as described above. The odds ratios (OR) of developing RA with 95% confidence intervals (CI) were calculated for high compared with low psychological job demands and low compared with high decision latitude. Job strain was compared with relaxed working conditions (low psychological job demands and high decision latitude) and with conditions without job strain. OR were interpreted as relative risks, as the study was population-based, and were adjusted for age, sex, residential area, smoking and social class.

High psychological job demands tended to be associated with a decreased risk of RA, especially in the JEM-derived data (OR = 0.8, 95% CI = 0.6-1.0). Low decision latitude was associated with an increased risk of RA (self-reported data: OR = 1.6, 95% CI = 1.2-2.2, JEM-derived data: OR = 1.3, 95% CI = 1.0-1.7). Self-reported job strain was associated with a 30% higher risk of RA, compared with relaxed working conditions, but the CI was wide and the result was not confirmed by JEM-derived data.

To summarize few methodological considerations, the investigators conclude that the observed association between low decision latitude and risk of developing RA is most likely real, and that the influence of

various biases is of limited magnitude. The main new finding of this study was that low decision latitude was associated with an increased risk of developing RA, according to both self-reported and JEM-derived information. Low decision latitude is also the component in the demand-control model that has most consistently been related to risk of [cardiovascular disease](#). Furthermore, some evidence that those with high psychological job demands had a decreased risk of RA was found.

More information: Bengtsson, C.; Theorell, T.; Klareskog, L.; Alfredsson, L. Psychosocial Stress at Work and the Risk of Developing [Rheumatoid Arthritis](#): Results from the Swedish EIRA Study. *Psychother Psychosom* 2009;78:193-194.

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