Occupational and environmental exposures, the association with chronic sinusitis	
Authors	Feras M. Alkholaiwi, Rahaf R. Almutairi, Danah M. Alrajhi, Basma A. Alturki, Atheer G. Almutairi and Faris H. Binyousef
Publication Year	2022
Grant Number	
DOI link	10.15537/smj.2022.43.2.20210849

Abstract: **Objectives:** To find the association between environmental and occupational exposures and chronic rhinosinusitis (CRS) development.

Methods: The Preferred Reporting Items Of Systematic Reviews Guidelines were used when a systematic literature review was conducted to find all published cases of CRS by searching PubMed database and Google Scholar. Published articles between 1989 and 2021 that reported chronic and occupational rhinosinusitis were included. However, articles that reported allergic rhinitis or upper airway diseases and non-English articles were excluded from this study.

Results: A total of 97 articles were extracted initially, and 15 articles were reviewed after excluding 82 articles that did not match our inclusion criteria. Most studies linked CRS development to smoke exposure (n=9734), followed by living in rural areas as farms (n=5504). Exposure to pesticides (n=4248) contributed to a higher prevalence of CRS. Blue-collar occupations, such as fire fighters, farmers, and fishermen were significantly related to CRS development in a total of 5260 patients. Chronic rhinosinusitis mainly affected more men (n=8912) than women (n=8076).

Conclusion: We found that smoking was the most aggravating environmental factor. Chronic rhinosinusitis symptoms' severity increased with direct contact with allergens. Thus, the greatest proportion of patients with CRS was those with blue-collar occupations, such as firefighters, farmers, and fishermen.