QUESTIONNAIRES FOR PEOPLE EXPOSED TO CHEMICAL AGENTS (QEAQS) AN INNOVATIVE TOOL FOR ASSESSING MINERS EXPOSED TO CRYSTALLINE SILICA.

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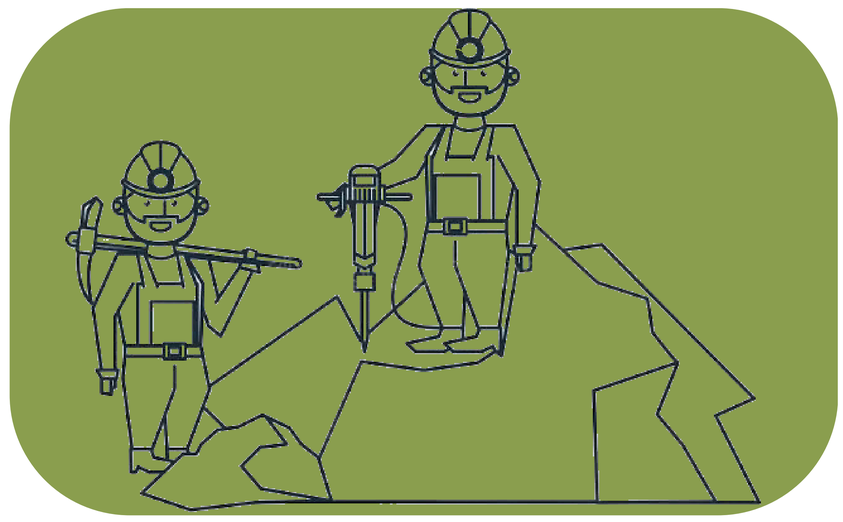
INTRODUCTION

- Mining is a high-risk activity for workers.
- Chronic exposure to crystalline silica and dust can harm health.
- Common related diseases: silicosis and pulmonary fibrosis.

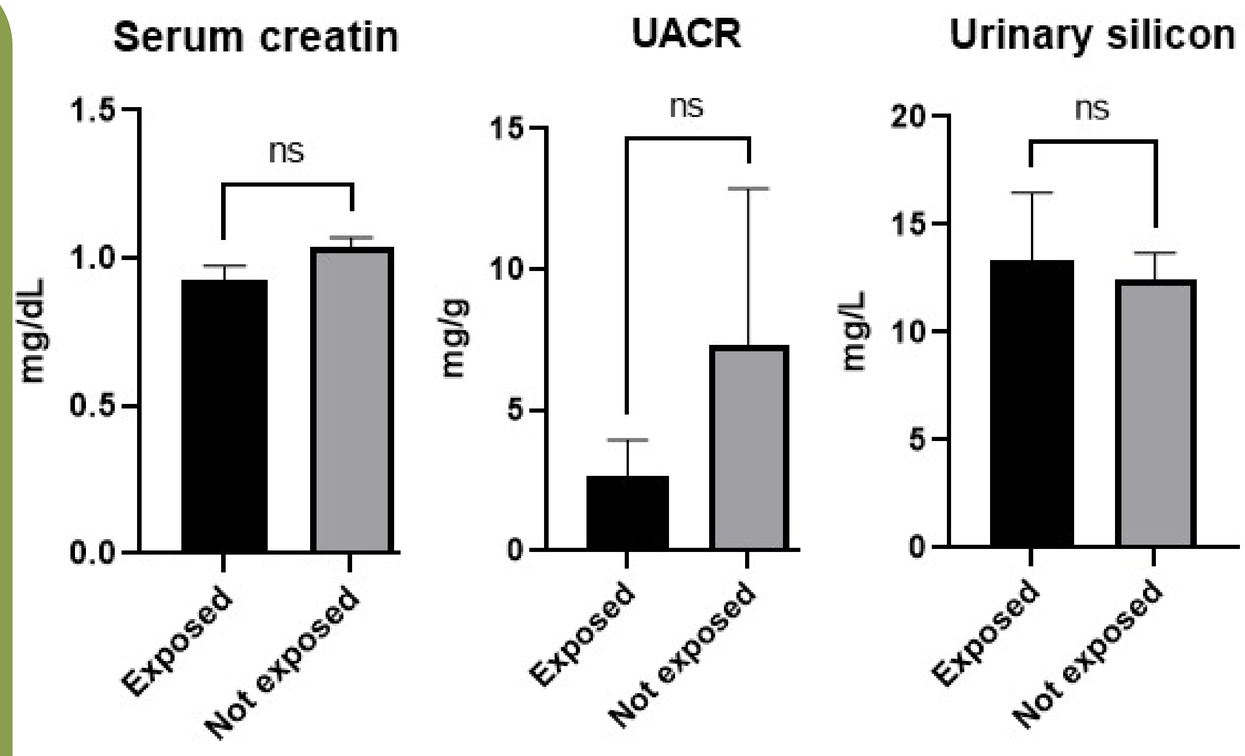


OBJECTIVE

- To assess the use of Personal Protective Equipment (PPE) among miners exposed to crystalline silica.

METHODOLOGY

- Study approved by UFRGS ethics committee (CAAE nº 53706121.6.1001.5347).
- Sample: 30 miners occupationally exposed to crystalline silica.
- Questionnaires on lifestyle habits were applied.
- Blood and urine samples collected for microalbuminuria, creatinine, and urinary silica analysis.
- Lab tests done using commercial kits and BS120 semi-automated analyzer.
- Urinary silica measured via ICP/MS.



There were no significant differences in serum creatinine levels, urinary albumin/creatinine ratio, or urinary silicon excretion between exposed and non-exposed groups, according to student t-test and chi-square test.

RESULTUS AND CONCLUSIONS

- No significant changes in urinary albumin/creatinine ratio or urinary silica levels.
- No link found between silica exposure and kidney function changes.
- Only 4 miners used full PPE correctly and worked in ventilated environments.
- 26 miners did not use PPE and worked in poorly ventilated areas.
- The digital questionnaire tool was effective and fast.
- Most miners neglect PPE use, despite high health risks.
- Urinary silica measurement was not a reliable indicator of exposure; further research is needed.