

SUMMARY

Effects of exposure to lead in the air on the levels of lead, Hemoglobin, serum Cystatin C and health complaints in car painting workers at Surabaya

High exposure to inorganic lead compounds can damage the kidneys, such as damage to the renal proximal tubule, being further influence on the high level of exposure and a long time is the occurrence of interstitial fibrosis, sclerosis of vessels and glomerular atrophy. target of lead poisoning is the circulatory system, nervous system, urinary system, reproductive system, endocrine system, and the heart. Based on the results, levels of Pb in an administration is 0.000522 mg / Nm³, whereas the levels of Pb in the car painting of 0.065372 mg / Nm³

This study aim to analyze the effect of air lead to blood lead and blood lead effect on hemoglobin, serum cystatin C and health complaints on workers painting workshop in Surabaya. Benefits from this research can provide information about the level of lead in the air, blood lead levels, blood hemoglobin levels and serum cystatin C and health complaints in Surabaya painting workshop workers. And can also provide information as input for management workshop painting in order to monitor the health of workers

The methode of this study is a quantitative research, the research subjects painting car repair shop worker using laboratory tests and questionnaires with the observational design using cross-sectional and sampling using simple random sampling. As for how the analysis of data using multiple linear regression and logistic regression using a data processing program. The variable to be measured is conditioned Pb levels by using Gas Chromatography flame AAS method (NIOSH method 7082-2003), blood lead measured using AAS method, blood hemoglobin was measured using Cyamethemoglobin and Cystatin C in serum using ELISA method.

The research results showed that lead levels in the air part of the painting have higher levels of 0.000522 ppm, while the levels of Pb in the car painting of 0.065372 ppm, and blood lead levels higher exposed group with a mean 11.20 ppm in comparison the unexposed group is 8.25 ppm as well as hemoglobin levels in the exposed group is lower with the average in the exposed group is 12.97 g/dL compared to the group not exposed to 14.77 g/dL and serum levels of Cystatin C in the exposed group larger with a mean of 1.08 and 0.84 unexposed group

The conclusion of this study is lead in the air affects blood lead, hemoglobin levels and serum cystatin C is influenced by blood Lead levels and health problems is influenced by blood Lead levels are haematological disorders and kidney disorders in workers in the painting workshop.

For suggestions To minimize the health problems caused by exposure to lead in the air to workers monitor workers' health should be done once every 6 months, should be provided PPE standardized SNI such as gas masks, special work clothes, gloves and safety shoes, should be done lead monitoring the air in

the garage and car painting workshop worker health monitoring, After finishing work, the need to immediately shower with soap.

