

## SUMMARY

This work aims to study the health hazards among car maintenance workers and to study the environmental factors that predispose to these hazards. It was done in East and Middle Delta Bus Co. in Benha and El-Bagour Bus Maintenance Stations in Qalubia and Menofia Governorates.

The study included 2 groups. The first one was the exposed 150 workers, randomly selected from departments of body repair, engine maintenance and painting. The second group includes 50 workers who were randomly selected from administrative department as a control group.

The two groups were exposed to the following :

- |                             |                               |
|-----------------------------|-------------------------------|
| - Questionnaire             | - Full clinical examination.  |
| - Urine and stool analysis. | - Full blood picture.         |
| - Blood lead concentration  | - Pulmonary function testing. |
| - Audiometer.               | - ECG.                        |

Also, environmental measurements was done including dust,  $Pb_2O$  concentration, CO,  $SO_2$  and noise levels.

The results revealed the following :

The skin and eye disorders were significantly higher in exposed than in the controls, while the painter and engine maintenance had insignificantly higher skin disorders than the body repair, the last had insignificantly higher eye disorders than other two exposed groups.

The exposed had insignificantly higher respiratory symptoms, pulmonary function impairment, and insignificantly lower pulmonary function parameter than the controls.

Also, painters had insignificantly higher respiratory symptoms, pulmonary function impairment, insignificantly lower pulmonary function parameter than other two exposed groups.

The cardiovascular manifestations and ECG abnormalities were insignificantly higher in controls than the exposed.

There was statistically insignificant difference between exposed and controls regarding abdominal manifestation.

The locomotor disorders were insignificantly higher in exposed than the controls, also body repair had insignificantly higher locomotor disorders than other two exposed groups.

The exposed group had insignificantly higher blood lead, insignificantly lower Hb concentration, RBCs count, than the controls.

The exposed also had insignificantly higher parasitic infestation than the controls.

The painters had insignificantly higher blood lead, insignificantly lower Hb concentration, RBCs count than other two exposed groups. While engine maintenance had insignificantly higher parasitic infestation especially bilharziasis than other two exposed groups.

The exposed had insignificantly higher hearing thresholds, more hearing loss, more conductive and mixed deafness than the controls.

Also, the body repair workers had insignificant higher hearing thresholds, more hearing loss, more conductive and mixed deafness than other two exposed groups.

By environmental measurement there were higher dust (above TLV) and lead level, higher CO, SO<sub>2</sub> level and higher noise level than the general environment, this explains the causes of the health hazards among the exposed workers.