

In this study valid pulmonary function tests exist for 163 nonsmokers in other than the non-mechanic garage group. The previous discussion has indicated their pulmonary function parameters (FVC, FEV_1 and MMF) compare favorably with the group studied by Morris, Koski and Johnson. It is instructive to utilize the regression equations from the above studies of normal populations to obtain other comparative data. The various regression equations utilized are shown in Table 39 and the percent ratios of observed to predicted spirometry parameters are listed in Table 43. As can be seen, the values obtained for $FVC/PFVC$ and $FEV_1/PFEV_1$ are in excess of 1.00 for all regression equations. This is the result of the inclusion of smokers among comparative groups, the use of averages of several efforts, or the underprediction resulting from the broad age distributions utilized for the regression equations. High values of $FEV_1/PFEV_1$ result, in part, from an extrapolated origin of expiration (c.f. Table 39). The values for $MMF/PMMF$, $FEF_{50}/PFEF_{50}$, and $FEF_{75}/PFEF_{75}$ are less than 1.00 for the prediction equations of Cherniak and Knudson. This is the result of their use of the maximum flow value obtained in any effort rather than the flow in the effort with maximum FVC. It is generally found that lower flow rates are obtained during the achievement of a maximal FVC. The Morris, Koski and Johnson equations would appear to give the best comparison for FVC_1 and MMF because a large proportion of their population was above age 30, only nonsmokers were studied, and the best effort was utilized. The very complicated equation of Schoenberg, which was developed to properly take account of age, is limited by the relatively few individuals over age 30 and the use of averages of efforts.

Regression equations for the various spirometric parameters obtained from data on the 163 white, nonsmokers tested in this survey are listed in Table 41. Because only three individuals were under age 30, only the linear dependence on age could be established.

PHYSICAL EXAMINATION RESULTS

Table 42 lists the number and percentage of abnormalities found on physical examination according to job category and organ system. The only