a possible household contact, a variety of epidemiologic tracing techniques is utilized to locate the individual and ascertain his/her current status. Living individuals are invited to participate in periodic medical clinics.

Control Population

For comparison purposes in the chest x-ray interpretation, a control population was felt to be appropriate. Urban New Jersey residents currently living in the same community as the study population were identified from the general medical clinic at the facility used to examine the workers and household members. Consecutive eligible individuals who appeared for routine chest x-rays between January 1, 1975 and December 31, 1976 were selected until age and sex classes similar to the first 326 examined household contacts were filled; thus, the age and sex distribution of the study group and controls were similar. Clinical records of all controls were reviewed and only those with no recorded personal occupational contact with asbestos were included. Only PA films were available for review. No new clinical examinations or spirometry were performed on controls.

Methods

The clinical examination includes comprehensive lifetime occupational and residential histories, past and current medical history, history of current symptoms, smoking and respiratory questionnaires, physical examination, 14″ X 17″ posteroanterior, right and left oblique chest x-rays, and spirometry.

After each clinic, the chest x-rays of household contacts, factory workers and previously identified controls were interspersed and read without knowledge of exposure category. The ILO U/C Pneumoconioses Classification of 1971 was utilized by a panel of five experienced readers.[5] A consensus interpretation was arrived at and it is this reading that was utilized for statistical analyses. A film was classified as abnormal if one or more of the following were recorded: small opacities (combined rounded and irregular) 1/0 or more; any lateral wall pleural thickening; any pleural calcification; pleural plaques on the diaphragm. Although recorded, blunting of the costophrenic angles was not included in this analysis. Only abnormalities visible on the PA film were utilized. The added utility of the oblique films will be discussed in a later report.

The actual extent and intensity of each household resident's asbestos exposure is unavailable. To help approximate a relative exposure dose index for each household contact, the employment history of the factory worker in whose household he/she resided was utilized. The resident *worker* for each household is referred to as the "index worker." Thus, each household contact was assigned a "duration of exposure" which was equivalent to the length of time lived in the household while a worker was actively employed. Similarly, each contact was assigned a year of "onset of exposure" equivalent to the year in which he/she first resided with an actively employed worker.

Statistical Analyses

Prevalence data were compared by the χ^2 test. Differences between means were compared using Student's t-test. P values at less than .05 were considered significant. Statistical analyses were performed with the cooperation of the City University of New York Computer Center, using the Statistical Package for the Social Sciences.[6]