ible alternative models might reduce or increase this range by a factor of perhaps 2 (2½–5% or 10–20%), but the data on which to base such refinements will not be available in the foreseeable future.

3. To accept that linear dose-response models are appropriate, at least for cancer, but to defer a decision until our estimates are more precise and analogous studies have been conducted in other environments. It may not always be possible to assign meaningful individual exposures, but average exposures of the sort shown in fig. 4 could be estimated in many factories. The incidence of bronchial carcinoma and mesothelioma must be studied in environments with different fibre sizes before such predictions can be generalised. It should be emphasised that such studies will not afford much information on the effect of very low doses. Their only value is to give independent estimates of the slope of the dose-response curve in other industrial settings.

The epidemiological evidence that pleural mesothelioma can be caused by chrysotile alone is supported by the observation that chrysotile is quickly eliminated from the lung parenchyma but remains in the pleura, while amphiboles are present in very much lower concentrations in the pleura than in the lung.[18] This may be because amphiboles are more penetrant and less liable to dissolution, and having left the lung are more widely distributed elsewhere but less likely to remain in the pleura. The reported excesses of peritoneal mesothelioma and other non-respiratory cancers in crocidolite workers,[14] neither of which occurred in our cohort,[10] appear to support this interpretation. The persistence of some chrysotile in the pleura but very much less in the lung perhaps reflects differential dissolution in these sites. Electron-microscopé studies of the peritoneum and other organs are urgently required to confirm or refute these speculations. Total fibre counts of both air and post-mortem tissue samples, in conjunction with mortality data, would greatly increase the value of comparative studies of other working environments.

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Questionable Routines

CRITICAL EVALUATION OF ADENOIDECTOMY

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Summary In two matched groups of thirty-two children, one which had tonsillectomy alone and the other which had tonsillectomy plus adenoidectomy, the symptoms generally attributed to adenoidal hypertrophy were equally common in both groups before operation and improved with equal frequency after operation whether or not the adenoids were removed.

INTRODUCTION

TEMPORARY improvement in symptoms after adenotonsillectomy may be due to *an* operation rather than *the* operation;[1] the effects of adenotonsillectomy should thus be compared with those of another operation, to exclude the placebo effect. We have compared the improvement in the symptoms of adenoidal hypertrophy in two groups of patients, only one of which had an adenoidectomy.

PATIENTS AND METHODS

Thirty-two children listed for adenoidectomy and tonsillectomy on the waiting-list of the Liverpool Ear, Nose, and Throat Hospital were matched for age and sex with thirty-two children listed for tonsillectomy alone (table I).

The parents were interviewed and asked about the symptoms attributed to adenoidal disease (nasal obstruction, snoring, rhinorrhœa, speech problems, cough, and headache) and the children were examined for corresponding signs—mouth breathing and abnormalities on anterior rhinoscopy.[2] At the time of examination the examiner did not know what operation the children were to have.

The children were then operated on and reassessed six weeks later, again without the examiner knowing what operation they had had.

The number of positive scores for each symptom and sign in each group was analysed by a χ^2 test, with a 2×8 contingency table. The proportion of children who improved in each group (x) was calculated and a modified arc sin transformation done on the proportion ($y=\arcsin (x/n+1)^{\frac{1}{2}}+\arcsin (x+1/(n+1))^{\frac{1}{2}}$). The transformed proportions were then compared by a *t* test for paired data.

RESULTS

In the two groups, there was no significant difference in the number of children who showed signs and symptoms of adenoidal hypertrophy before operation

TABLE I—PATIENTS

	Tonsillectomy		Tonsillectomy and adenoidectomy	
Sex	No.	Age range	No.	Age range
M	16	5 yr 5 mo. to 9 yr 6 mo.	16	5 yr 6 mo. to 9 yr 6 mo.
F	16	3 yr 6 mo. to 10 yr 8 mo.	16	3 yr 9 mo. to 10 yr 5 mo.