Two other tests are used. In one, variations in the arterial concentration of oxygen after the exercise test are measured; in the other a pneumotachograph is used to indicate bronchial spasm.

The author refers to some requirements of physiological tests. First, the test must be precise enough to give reproducible results on the same subject, and it must be sensitive enough to reveal the differences one wishes to measure. Thus, the change of maximum respiratory capacity shown by a man with serious silicosis compared with a normal man may be two or three times as great as the change in vital capacity. Second, one must be sure of what one is measuring. The dyspnea test which has been described does not tell the observer the cause. It is not a specific test, and its results need interpretation. Third, one must bear in mind the question how far the test depends on cooperation of patient and doctor. From this point of view it is hoped that the new tests described are good, for the patient does not know when the measurements begin or when they end. Finally, it is important that the test should be simple and easy to apply.

FROM BULLETIN OF HYGIENE.

SILICOSIS IN THE METALLURGICAL INDUSTRY IN FRANCE. TARA, GAULTIER, and CAVINEAUX, Arch. d. mal. profess. **10**:464 (May) 1949.

Although French Ministry of Labour statistics show that in recent years there has been an increase of silicosis among miners, the number of cases in the metallurgical industry has remained low. Yet, in two years, the authors have seen a hundred cases in the Paris and Lyons areas. The silicosis risks in the various branches of the metallurgical industry are discussed, and the numbers of cases found in these branches are tabulated. Sandblasting and foundry work produce the largest numbers of cases, but since the numbers exposed to risk are not stated the relative risk to the individual worker cannot be estimated from the statistics provided.

THOMAS BEDFORD [BULL. HYG.].

SILICOSIS IN SAND BLASTERS. TARA, M. GAULTIER, L. ROCHE and F. TOLBOT, Arch. mal. profess. **10**:476 (May) 1949.

The authors discuss the silicosis hazard of sandblasting. It is difficult to ascertain the frequency of the disease with accuracy. Various other observers have mentioned incidences of from 8.4 to 29 per cent. The present authors found 8 out of 32 sandblasters to be silicotic, and of the 24 healthy subjects 15 had worked on sandblasting for less than 3 years. Sandblasters often do not show signs of silicosis until they have been exposed to risk for a considerable time. In Paris, 29 sandblasters in whom silicosis was detected had had an average exposure of 8 years, and for 9 cases found in Lyons the mean exposure was 12 years. Yet of these 38 men, 26 had worked at this occupation for less than 10 years.

Prevention is assured by the use of a protective hood; but it is better to use steel shot instead of sand.

THOMAS BEDFORD [BULL. HYG.].

DETERMINATION OF GRAIN SIZE OF SILICOGENOUS DUST. L. GESSNER, J. R. RÜTTNER and H. Bühler, Schweiz. med. Wchnschr. **79**:1241 and 1258 (Dec. 24 and 31) 1949.

Gessner and his associates had at their disposal lungs from patients who during life had had silicosis. The dust contained in these lungs was subjected to analysis by elutriation to establish the grain size. Silicon dioxide has been defined as the causal factor of silicosis, but the authors found other silicates, also, in silicotic lesions; they never found such silicates in the absence of silicon dioxide, however, and thus they believe that the presence of other silicates is the natural result of the fact that the workers who contract silicosis usually work in atmospheres containing various silicates in addition to silicon dioxide. It has still not been decided whether certain silicates can independently produce lesions resembling silicosis or whether they change the silicotic lesion by either reducing or exacerbating it.

Asbestosis, which is characterized by diffuse pulmonary fibrosis, has been ascribed by some investigators to the silicic acid that is liberated from the asbestos, whereas others ascribe the damaging effect to the mechanical action of the asbestos needles. Sericite and mica also have received attention, the more so since sericite has been found in the lungs of some coal miners.