

When used according to established rules there is little risk in tuberculin, and the main object by the clinical method is to produce as strong an immunity to tuberculin as possible, without bringing about any general fever reactions, violent local reactions or disturbing the general health.

The dosage at the outset of treatment should be extremely small and to put off reactions as long as possible. If a marked reaction occurs at the onset it is very difficult to habituate the patient to increase in the dosage. It has been amply demonstrated that tuberculin hypersusceptibility may be produced on cases in which the diagnostic test has been made with tuberculin, and it may be exceedingly difficult to produce tolerance when the treatment is begun. To commence with doses of 1-10000 milligram of filtrate B. F. or Koch's B. E. in afebrile cases, or 1-1000 mg. old tuberculin should be given.

Denys makes use of eight solutions in giving B. F. No. 1 contains 1-10000 mg. to each c.c. No. 2 contains 1-1000 mg. to each c.c. No. 3, 1-100. No. 4, 1-10, and so on running up to No. 8, which is pure filtrate. The increase in using these solutions is always by 1 decigram each solution. As 10 decigrams, or 1 c.c. of each solution is reached, the real solution which is ten times stronger, and in which 1 decigram represents the same dose as 1 c.c. of the preceding solution, is taken up and the increase is again by 0.1 of the new solution until 1 c.c. is given. Thus, for ten doses the increase is by 1-10000 mg., then by 1-1000 mg., etc. Reactions are most apt to occur at the second or third injection of the new solution, as the increase is ten times larger when a new solution is used.

The intervals between the injections are three or four days, and longer with the larger doses. If no intolerance is manifested it should continue for six months, but when reactions appear it may take a year to reach full doses.

The symptoms of intolerance may be divided into three groups, those of a general febrile reaction, those indicating a local reaction both at the site of disease and of injection, and those pointing to general constitutional disturbance, as malaise, headache, sleeplessness, pains, anæmia, nausea and loss of weight and strength. Any of these groups of symptoms indicate intolerance, and are to be considered before giving another dose and in regulating its strength. The febrile reaction may be short or prolonged, the former resembling the tuberculin reaction, and the latter lasting at a very moderate grade for a week or less.

Local reaction at the seat of disease is a valuable guide to dosage. Increased cough and expectoration, pleuritic pains, aggravation of the