

more of the natural antidote. The injection contains no poison and can do no harm.

The injection is given into the soft tissue of the arm. The pin prick is scarcely felt. Occasionally there is a slight swelling at the site of the injection afterwards, but the vast majority of children feel no after-effects at all.

The injection is usually given in two instalments—the second about four weeks after the first. Doctors recommend that after being immunised in infancy—preferably at or about the first birthday—the child should receive a single re-invigorating dose on reaching school age. The aim of this re-invigorating dose is to keep immunity at a high level all through school life.

### B.C.G.

#### DEPUTATION TO THE MINISTRY OF HEALTH.

We have been asked by the Tuberculosis Association to publish the following report of a deputation received by Sir Wilson Jameson, K.C.B., M.A., M.D., F.R.C.P., D.P.H., Chief Medical Officer to the Ministry of Health.

The Deputation was received on July 17, 1946, by Sir Wilson Jameson. In addition to the latter, the following were present: Mr. J. E. H. Roberts, Professor W. Tytler, Dr. Andrew Morland and Dr. J. V. Hurford (deputation); Drs. Norman Smith and James Maxwell (Ministry of Health); Mr. Inch (Dept. of Health for Scotland); Dr. Norman England (observer J.T.C.); Mrs. Overend (N.A.P.T.); Dr. V. S. Springett (Prophit Trust) and Dr. Ustvedt.

Mr. Roberts, mentioning the Memorandum which had already been presented, gave a summary of the situation with regard to B.C.G. and Professor Tytler spoke of the preparation and technique of using the vaccine, mentioning the recent work of the Russians on its freezing—which enabled it to be kept for a considerable time and for each batch to be tested before issue.

In reply to questions, Mr. Ustvedt described the use of B.C.G. in Norway. It was regarded as so valuable that a tuberculin-negative nurse who had not been offered vaccination and who later developed tuberculosis might well have a claim for damages.

Much discussion centred round the question as to whether trials should be made as a controlled experiment or whether B.C.G. should be offered to negative students and nurses in all hospitals. The deputation pressed for the latter, though Mr. Roberts suggested that both courses were possible—in different areas.

The vaccination of school leavers and children in tuberculous households was discussed but the feeling was that trials should first be made on nurses and students.

Professor Tytler mentioned that though it had made certain suggestions, the deputation wished the Ministry to consider for itself how best B.C.G. could be produced and controlled.

It was stressed that later use of a vole bacillus vaccine was not ruled out by inaugurating trials with B.C.G.

Sir Wilson Jameson's attitude to the matter appeared to be very favourable and he promised to take steps to carry it further. He agreed to the issue to the Medical Press of the following:—

Sir Wilson Jameson received the B.C.G. deputation with sympathy and expressed himself as willing to take steps to see if a suitable vaccine can be made available. As regards the use to which it should be put and the class of persons to be vaccinated, it would be necessary to appoint an expert committee to take charge of these details.

## RADIO-ACTIVE URANIUM ISOTOPES OPEN UP UNEXPLORED PROCESSES OF LIFE.

We have pleasure in publishing this most interesting article distributed from the office of the Surgeon-General in Washington, D.C. :—

An "X-ray" of the dynamic processes of living now is available to medical research.

Possibility of obtaining for the first time relatively large amounts of radio-active isotopes through the uranium piles of the Manhattan District brings basic biological investigation to a new frontier, according to a statement by Major-General Norman T. Kirk, Surgeon-General of the Army, whose office will co-operate in the distribution of the materials to Army Hospitals.

The Surgeon-General said requests for these materials should come from accredited research groups or educational institutions and should be directed to Isotopes Branch, Research Division, Manhattan District, P.O. Box "E," Oak Ridge, Tennessee.

Isotopes as tools of medicine have been compared to the microscope and the X-ray, General Kirk pointed out. But these were useful largely for study of the organs of life, whereas the isotopes open up the largely unexplored field of the processes of life. It is in this respect, rather than as actual remedies for anything, that the substances are of pre-eminent importance to-day.

Some of these radio-active isotopes may find a place as specific "medicine," medical officers point out. The most notable example to date is radio-active phosphorus, known chemically as P32. Phosphorus is an important constituent of both bones and blood. It is carried in the blood stream through the entire body. When the radio-active isotope is administered the blood stream is subjected to a radium-like bombardment. Consequently, when the isotope was produced first in the cyclotron about seven years ago there were high hopes that it might mark a long advance towards the conquest of leukemia—a cancer-like condition of the blood in which there is an enormous increase in white cells, which, however, do not have the ability of ordinary cells of this sort to combat infection. Despite various complications and disappointments, use of P32 now is generally accepted as the treatment of choice for certain forms of leukemia. It brings about long remissions of the disease. It cannot be considered a "cure" for any leukemic condition in the present stage of the therapy, but it is admittedly a long step in advance in the treatment of one of the most difficult maladies known to medical science.

The element iodine tends to concentrate in the thyroid gland. Since radio-active iodine behaves exactly the same as ordinary iodine in the body, it was logical that it should be tried in malignant growths of the thyroid. Results to date have been somewhat puzzling and inconclusive. The same is true of other radio-active isotopes which have been tested for specific therapy.

But this whole field of medicine still is almost unexplored, and physicians naturally are proceeding with great caution until they know more about specific effects and possible complications. Even if all prospects for the therapeutic use of isotopes fail to materialise, General Kirk stressed, the importance of a relatively abundant supply of these materials remains pre-eminent.

Any element—96 now are known—is a combination of infinitesimally minute elementary particles. Those are protons, each carrying one charge of positive electricity; electrons, each carrying one charge of negative electricity; and neutrons, which are not electrically charged.

"Medical scientists," said General Kirk, "would like to know more about how calcium and phosphorus are used

[previous page](#)

[next page](#)