

INVESTIGATIONS AND MEASURES IN THE FIELD OF PREVENTIVE DENTISTRY *)

(Synopsis)

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Never in the history of dentistry has the interest for dental research been so great as it is today.

The profession no longer stands alone behind the claim for research on dental caries and periodontal disease in order to build a basis for effective measures in the field of preventive dentistry. The governments too in various countries are beginning to realize this necessity for the obvious reason that the diseases in question are rising to the level of recognized social problems as the modern public health service is being extended to a degree never known before. The economical involvements attached to an effective treatment plan have forced the authorities to consider earnestly prevention as the only means of gaining their end: a healthy oral condition of the people. And this is where the dental profession takes the lead.

The conditions in Norway before and after 1950, when the Norwegian Institute of Dental Research was established, presumably illustrate these assertions. The paper, therefore, contains a description of the poor circumstances under which dental research was previously working. Further how the Public Health Service, the Dental School and the Dental Association together utilized the situation, when the Government decided that the profit from the football pool should be granted to scientific research in all fields where the State could not afford to give support. The result of this co-operation was the establishment of a dental research Institute.

A short description of the Institute then follows, its equipment, its staff and its administration, which is completely separate from that of the Dental School. The importance of this point is emphasized.

Some aspects of the Institute's approach to the research problems are outlined. Even if all kinds of dental research are granted possibilities at the Institute, its main tasks are supposed to lie within *caries and periodontitis*. In the realization that the *pathogenesis* of these diseases will have to be clarified before real prevention can be discussed, the investigations are concentrated in this field. A new method for experimental investigation *in vivo* is described. This makes possible the deposition of various agents on a tooth surface in the mouth with exclusion of contamination from saliva.

Experiments with lactate *buffers* and pure cultures of different bacteria

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seem to indicate that some of the assertions based on laboratory studies will have to be revised.

As a conclusion a programme for the future is outlined: in all countries at least one centre should be established without delay with the main purpose of first of all establishing the pathogenesis of dental caries. It is necessary that such studies are carried out in all countries as the disease certainly is influenced by race, heredity and environment. An institute is the only means by which the scattered research can be coordinated and concentrated and where investigators can be educated. The necessary investment is infinitesimal in comparison with the expenditures in connection with the treatment plan which is now considered in various countries.

The research institutes should work independently, but in close contact with the dental schools. A mingling of research and educational problems would tend to disturb the quiet atmosphere which is a matter of necessity for scientific research in general.

In view of the complexity of the problems involved and the importance of the time factor an idea is advanced the realization of which, it is believed, will concentrate and speed the research and which has possibilities for bringing the solution of the caries problem nearer than it seems today. The creation of an „International Foundation for Coordination of Dental Research” is proposed. This should constitute a centre under The World Health Organization, situated in Genève. It should have no research laboratories, but a small efficient staff capable of rendering an active librarian service. The Foundation should have a board appointed among recognized scientists throughout the world, and this board should have sessions. The members of the board should concentrate on dental caries and their first act should be within a time limit to evaluate all the scientific evidence concerning this disease and decide definitely on which facts further research can be based and in which directions it should proceed. An international research programme could in this way be formed and the task of the Foundation should be to coordinate the research following this programme.