

TULANE UNIVERSITY
School of Medicine
New Orleans 12, Louisiana

Department of Medicine
1430 Tulane Avenue

March 15, 1962

CIRCULAR NO. 9

Dear Doctor :

This circular letter No. 9 is intended for the information and benefit of dentists to whom I have been supplying "Right Kind" toothbrushes and dental floss to enable them to apply our method of personal oral hygiene in their practice. I hope everyone reads it thoroughly, carefully and understandingly.

My purpose here is to briefly state, or restate, important, pertinent information which every dentist should know, who is interested in teaching and promoting this method to his patients. The highest degree of oral cleanliness and dental health cannot be maintained without it. With it anyone can retain all the sound teeth he now has through long life. With the services, supervision and guidance of a competent and conscientious dentist he can also keep functional, throughout long life, most of his teeth which have already sustained more or less damage, if he follows this method, but not without it. Under these circumstances every dentist who sincerely wishes to help his patients to maintain dental health and prevent further disease or further advancement of existing disease must be prepared and willing to advise and teach, as part of his professional services, this the only method of personal oral hygiene now known or likely ever to be known. What is this method, how was it developed and what is the basis for it?

Following my retirement as dean and professor of experimental medicine at Tulane Medical School I took up intensive study and research on the cause and prevention of the two principal diseases from which teeth are lost. I had the benefit of information, technics and methods acquired during many years of teaching and research, much of it concerned with microorganisms and microscopic pathological processes.

From my previous research experience I knew in advance that accurate information as to the microscopic etiological and pathological conditions in these two diseases would have to be secured largely through microscopic study of extracted tooth specimens. Employing appropriate methods and techniques and studying large numbers of such specimens, I got accurate information as to the microscopic etiological and pathological conditions at the locations at which the lesions of each of these diseases originate and advance, and especially the composition of the etiological foreign material on the tooth at these locations. These vulnerable locations are, for caries, the pit and fissure depressions on the occlusal surfaces of the molars and bicuspids and the proximal surfaces about contact areas between teeth; for periodontoclasia, the surfaces of the teeth at the entrance to the gingival crevices and within the crevices all the way to their very bottom.

Early in my research work I had the good fortune to discover (and have published) a very important demonstrable line on such specimens, which had not been recognized previously. This line enables one to know the exact location, on the particular specimen, of the outer border of the receding epithelial attachment and the very bottom of the crevice (periodontal pocket) when the tooth was in the mouth. Having the advantage of this useful landmark and by delicate technical methods, including much use of the dissecting

microscope, it was easy to pick, for further high power microscopic studies, small particles of material at any location of interest. Thus it was possible to learn, with great accuracy, the exact microscopic composition of the foreign material on the surface of the tooth which causes the irritation and inflammation of the soft gingival tissue resting against it, and without which there is no such irritation and disease.

Large numbers and a great variety of microorganisms-bacteria and protozoa-are found in the contents of the periodontal pocket. But most of these are secondary invaders, their presence being made possible by the irritation and inflammation caused by a pad or film (plaque) attached to the surface of the tooth at the entrance to, and within, the gingival crevice. This pad or film is composed of countless millions of filamentous type microorganisms each with one end attached to the surface of the tooth and the other extending outward toward the surface of the pad.

Usually more or less calculus is deposited at certain locations on the surface of the tooth. Calculus consists of calcified bacterial material, the calcium and other salts being derived from the outflowing inflammatory exudate. Lumps and scales of calculus on the surface of the tooth within the crevice, against which the inflamed crevicular gum tissue must rest, further promote the inflammation and suppuration. Removal of this material is a necessary part of prevention and control of further advancement of the lesions of this disease which every dentulous person has in some stage. A heavy responsibility rests upon the dentist to do this well and to advise the necessary personal hygiene to prevent future deposition of this very harmful material. Calculus is not deposited again at locations that are effectively cleaned daily by the patient. Hence the absolute necessity for the right method of personal oral hygiene.

By similar microscopic laboratory procedures I secured accurate information as to the composition and characteristics of the plaque material at the locations - occlusal depressions and around contact areas - where enamel caries lesions originate and without which no caries occurs. The bulk and deeper part of it is composed of long filamentous type microorganisms each with one attached to the surface of the tooth. When this material is cleaned off from the tooth it soon grows back but not in harmful quantities, if it is removed again every day.

Knowing and understanding these etiological conditions anyone could know in advance that to prevent both caries and periodontoclasia it would be necessary for the individual to clean his teeth effectively, at the vulnerable locations, at least once every day. While removal of remnants of food material from about the teeth is desirable and helpful, the important thing is to remove or cut off the filamentous type microorganisms that grow and accumulate at the particular locations. The stumps and stems remaining tend to grow and accumulate again but proper daily cleaning keeps this below harmful amounts. Remember that the harmful effects result from maximum continuous, undisturbed accumulation and retention of this material at these locations.

Next I carried out extensive investigation and experimentation to ascertain the most appropriate specifications for the necessary toothbrush and dental floss to do the job and the most effective method of using them for this purpose. All the information has been published. The required method is entirely different from, and in some vital particulars quite the opposite of, methods generally advocated and followed. It is effective; no other could be. It is not just another method of brushing the teeth or another toothbrush and

dental floss to try. It is an effective method of personal oral hygiene which must be learned and faithfully followed by every dentulous person to maintain the highest degree of oral cleanliness and dental health.

The important locations to be cleaned should be indicated and each individual should be shown, in his own mouth, how to clean the teeth at these locations. The brush is applied firmly to the occlusal surfaces of the grinders, with short, back and forth motion, so as to dig out, with the ends of the bristles, bacterial and any other material retained in the occlusal depressions.

To clean the teeth with the brush at the entrance to the gingival crevices, and within the crevices, the bristles must be applied firmly, at an angle of about 45 degrees to the long way of the teeth, directly into the crevices and the sulci between the teeth. This is exactly the opposite of the wrong way to brush the teeth generally advocated and promoted heretofore, Short back and forth strokes, with the bristles properly directed, dislodge soft material from the surfaces of the teeth within the crevices as far as they can go. All the buccal, labial and lingual crevices in each quadrant must be cleaned this way. By proper manipulation, with the mouth wide open, the bristles of the toe or tip of the brush should be applied into the crevice behind the last tooth in each quadrant. The bristles of the heel of the brush should be applied into the lingual sulci and crevices of both the upper and lower front teeth. It can all be done adequately in less than one minute. It is a mistake to advise and urge patients to brush their teeth for several minutes. The important thing is to brush them right, not for some particular (unreasonable and unnecessary) length of time.

The necessary use of dental floss can be done adequately, in two or three minutes by anyone who knows how to do it. Simply passing our "Right Kind" dental floss between contacting teeth and back out cleans sufficiently the proximal surfaces about the contact areas where, otherwise, early caries lesions (chalky enamel) originate within a year or two after eruption in a very high percentage of all teeth. These areas cannot be cleaned with the toothbrush. Hence the absolute necessity for the use of dental floss to prevent caries and to slow down existing lesions at these locations.

The surfaces of the teeth within the gingival crevices between the teeth can be cleaned with the brush only to the extent the bristles can be applied. Areas not reached by the bristles, especially along the middle and all the way to the bottom of the crevice (periodontal pocket) can be cleaned adequately only by the right application of the right kind of dental floss.

Every patient must be shown, in his own mouth, to carry the floss firmly to the very bottom of the crevice and holding it firmly against the tooth bring it outwards so as to wipe or cut off the microscopic material on the tooth within the crevice. This is essential for control and prevention of inflammation and suppuration of the soft tissues and the resulting alveolar bone resorption. The patient does not know or realize the presence of his gingival crevices, the inflammation and suppuration there and the irritating foreign material on the surface of the tooth within the crevice, until it is shown to him. The best instrument I have seen for this purpose is the "Bass 55" explorer (made by Suter). Most patients are surprised and impressed to see the amount of this material (bacterial and pus) that can be removed from the tooth within the crevice. He should be impressed with the one idea that

the tooth must be cleaned within the gingival crevice, from the very bottom outwards, with the dental floss. When properly explained it can be understood and carried out by any intelligent person.

It is a good routine to brush first, then clean with dental floss, then vigorously rinse the mouth with water to remove material that had been dislodged but not brought out with the string. Some like to quickly "give a lick and a promise" again with the brush.

If properly done all food and most of the bacterial material have been removed. There is no food to decompose during the night and much less growth of bacteria takes place. The mouth is about as clean the next morning as when he retired. It is a cleanly personal habit to brush the teeth and vigorously rinse the mouth soon after rising in the morning. But to maintain oral cleanliness and dental health it is absolutely necessary to thoroughly clean the teeth before retiring at night.

The exact method above is necessary and is entirely effective. Additions or deviations from it tend to detract from the successful application of what is necessary. Any dentist who thinks the teeth can be cleaned by brushing only should try this: within an hour or two after a regular meal brush the teeth well and then clean them with dental floss. Visible particles of food material will be brought out with the floss. In addition considerable amounts of bacterial (plaque) material may be seen. There is much more not seen by the unaided eye. Remember this material is the cause of the diseases and minimizing of it, at certain locations, is the purpose of cleaning the teeth.

Every dentist should faithfully follow this method himself. Those who do not are not likely to be able to successfully teach and promote it to their patients. Those who think of it as just another brush and floss to try, and see how they are liked, have missed the point of the necessity for the right method of application.

After more than fifty years of clinical trials and observations dentists still have the greatest confusion and lack of definite information as to the cause and prevention of caries and periodontoclasia. On the other hand only a few years of appropriate microscopic laboratory research has led to accurate information relative to the microscopic etiological and pathological conditions at the locations where the lesions of these diseases originate and advance. Without this information any procedure for prevention is simply guess work. With it a method of personal oral hygiene has been designed whereby practically complete prevention and control of these diseases is possible. Correct information about dental health must come to the public through the dental profession. Our method of personal oral hygiene is not taught in the dental schools. To the best of my knowledge dentists still go through college and graduate without knowing, of their own knowledge, and understanding the microscopic etiological conditions in the two principal diseases of the teeth, or what is necessary to prevent them.

I have tried to help by making the necessary "Right Kind" toothbrush and dental floss available (at cost) to dentists who know the method for which they are required and who are able to teach it to their patients. Others do not need them. Two brushes and one floss, which cost the dentist less than fifty cents, will last, in reasonable use, more than six months. This cost is negligible considering the fact that the benefit from the dentists

professional service is more than doubled thereby. It is the responsibility of informed practicing dentists to bring this method of effectively cleaning the teeth and its benefits to their patients.

I have been able to get the necessary toothbrushes and dental floss made and have supplied them at cost to dentists who have been instructed relative to the method and wish to make it available to their patients. Everything I have put into it is more than compensated for many times over by the knowledge that as a result, many dentists have been enabled to render far more effective dental health service to their patients, to the great benefit of literally thousands of people.

Yours sincerely,


C. C. Bass, M. D.