

**A
SALUTE**

to the

U.S. AIR FORCE
D E N T A L S E R V I C E

from

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SALUTES



the

U.S.
AIR FORCE
D E N T A L S E R V I C E

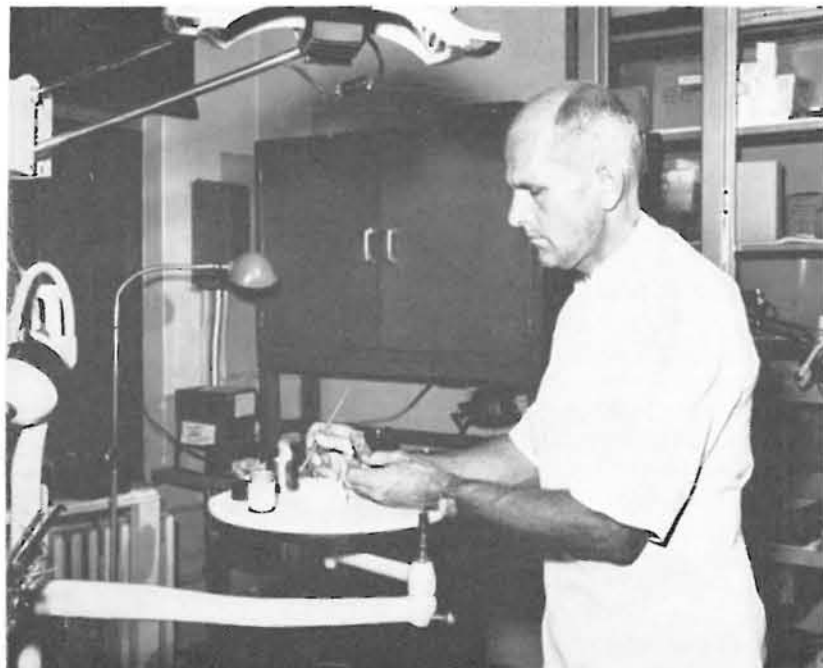


Kasper

Another USAF Achievement

Text and photo by Authenticated News

As a pilot grows older, his teeth may decay just like other people's. When they do, he goes to the dentist and gets himself fitted with some artificial dentures. Then an unexpected problem arises. New dentures frequently cause difficulties in speech. The wearer finds himself whistling or lisping when he



Col. Allen at his research.

tries to pronounce an "s" against his unfamiliar palate; he finds himself talking as if his mouth were full of pebbles. In the case of a pilot, a radioman, and other Air Force personnel whose performance depends on clear communication, a speech impediment can be extremely dangerous. The effects of new dentures usually wear off in a few weeks or months. However, an aircrewman who is scheduled for a mission can hardly wait until he gets used to his dentures. Lt. Col. Leslie R. Allen, head of the USAF School of Aviation Medicine, Randolph Field,

Texas, at the Department of Clinical Dentistry, has worked out a procedure to forestall this dilemma. His first step was to build a number of artificial palates for people whose speech was unimpaired. By dusting these with powder and noting where the tongue brushed them clean while certain letters were pronounced, he was able to find a visual pattern for each of the consonants used in normal discourse. (Vowels are not noticeably affected by the shape of the palate.) Then he proceeded to make dentures for patients with missing teeth. After dusting these with powder, he compares the consonantal patterns with those of his model palates. From this comparison he can tell where the plate needs to be built up in order to restore—or even improve—the patient's enunciation. Some letters are harder to distinguish than others. For these he uses a sonograph, which projects the sounds of the voice on a screen resembling a radarscope. By this technique Colonel Allen makes it possible for a pilot to go aloft the day he gets his new dentures and still make an intelligible noise on the radio.

VALENTINE TO A DEBTOR

I've a tendency romantic—
I send roses when there's snow—
I would swim the wide Atlantic
For a lovely lass I know—

I view children with affection—
I will send them valentines
And I haven't one objection
to showing how my heart inclines.

Dear old ladies always win me—
(You may call me "ladies" man!) —
There's no spite or rancor in me—
I do favors when I can.

Friends, too—wonderfully beguiling!
Friends—but still there ought to be
—Don't you think—besides our smiling,
Further reciprocity?

If you like I'll set *Amount Due*
In a heart that's silken fine—
I'll assert with doves I count you
True Blue, Loveable, or Mine!

I'll exceed the pledges spoken!
Loudly I will sing your fame—
If you'll send me back one token:
CHECK MADE OUT—SIGNED WITH YOUR NAME!

Helen Harrington

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EDITOR, Joseph Strack

CONTRIBUTING EDITORS
Arthur H. Levine, D.D.S.
Joseph Murray, D.D.S.

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A MAGAZINE FOR DENTISTS, DENTAL ASSISTANTS, AND DENTAL HYGIENISTS

An answer to the
child-patient "problem":



The Children's Hour

by M. A. Patrick

A CHILD PATIENT: "There's always a lot of kids in Doctor Able's office. We have fun. I like him."

A YOUNG MOTHER: "If my son 'goes into an act' I know other parents in the waiting room face the same problem and I'm not embarrassed."

AN ADULT PATIENT: "Even with numerous children in this section, Dr. Elba's office is still 'for adults-only' when appointments for older patients are arranged."

Exclusive periods for today's young patients help
guarantee a full appointment schedule tomorrow

Doctor, if you're dead set against the idea of an occasional Sunday appointment, then this is not for you.

But if you recognize the difficulty in accepting young parents as patients while resisting the treatment of their children of pre-school age, then you will be interested in the approach three suburban dentists have applied to this problem.

Two of these men, Doctors Able and Elba (as they will be identified here) practice in adjoining suburban communities just outside an eastern city. Doctor Able, in an attempt to keep the small fry and adult patients separated, introduced a "Children's Hour"

several years ago, and early in 1955 Doctor Elba set aside special hours for the treatment of children between three and seven years of age. Because of the financial advantages and the good-will earned, each man now agrees his decision has been a wise one.

Doctor Able's office is in a development of medium-priced homes being purchased by young couples whose average age is around thirty. Most of them have at least one child, while in many homes there are two, three or more youngsters.

The convenient location of Doctor Able's office first attracted young mothers as patients and they were followed by husbands who took advantage of the dentist's Friday evening and Saturday office hours. The inevitable then happened when these parents brought up the subject of treating their children. Doctor Able agreed.

Sunday-Morning Hours

Conditions existing in a dental office when a reluctant child is in the chair and an adult who has the next appointment need no elaboration here. To the physical exertion experienced by the dentist there is the embarrassment stimulated by his fear that the grown-up may react unfavorably if the situation becomes a little less than quiet. These were possibilities Doctor Able wished to prevent when he set aside the hours from ten to noon each Tuesday morning for young patients only. He announced the "Children's Hour" verbally while in conversation with patients and also posted a notice in his waiting room. Later he found it desirable to introduce Sunday morning hours so that male parents could be present to keep in line those youngsters who defy maternal direction but look upon their fathers as "the law."

"Special-Type" Patients

Doctor Elba follows a similar plan except that his children-only period is from ten-thirty to eleven-thirty Thursday morning. When questioned about his results he said: "If I were required to isolate one outstanding benefit it would be the lessening of tension during the treatment of the pre-school children. I am mentally conditioned for the unexpected dur-

ing these periods." He also indicated that parents appreciate his recognition of children as special-type patients and not simply as "young adults."

Parent-Education, Child-Training

The uniqueness of the programs set up by these dentists may in time tend to reverse the indifference of many parents to the need of their children for regular dental care. It has been estimated by Doctor J. M. Wisan, chief of the Dental Health Section of the Philadelphia Department of Health, that only 2 percent of the children in the two-to-five group visit a dental office, health clinic, or other dental facilities for treatment. This neglect by parents to initiate early dental treatment and follow through until oral health practices are firmly established, accounts for the lack of attention these children give dental needs when they become adults.

It has been the experience of Doctors Able and Elba that their "Children's Hour" programs have resulted in considerable neighborhood comment which has prompted many parents to bring in youngsters who might not have come if special provision had not been made for their care. This is in line with the belief of Doctor George W. Treuscher, dean of the Northwestern University School of Dentistry, who has said that children must be trained to accept dental treatment. "Too many dentists," he explained, "expect too much from the child. Instead, we should take time to be as kind to him as possible."

In appraising the special consideration he gives young patients, Doctor Able admitted that income during his "Children's Hour" does not equal the same time given to adults. "But," he added, "in treating a child I lay the groundwork for a grown-up patient later. In fact, in some instances I have made first-time appointments for parents only after I became acquainted with them through treating their children." The dentist is particularly pleased with developments of this sort because "I was a bit fearful at first that the special emphasis I gave children might indicate to some grown-ups that I was interested only in the treatment of their pre-school youngsters."

A third dentist, Doctor Alfred Barnett, says: "It has been my experience that nothing is more disturbing to adult patients sitting in the waiting room than a reluctant child audibly resisting treatment in the chair." This conviction, plus several other related factors, has prompted Doctor Barnett, whose city and suburban practices in southeastern Pennsylvania reach back nearly a quarter century, to set aside special hours exclusively for young folks.

"In order that children just starting school may be included in these special periods, I see children in my city office on Saturday morning, and at my suburban home-office youngsters are given dental care

Role of Esthetics

Mastication, phonetics, and esthetics are the basic functions which a denture must perform if it is successfully to replace lost dentition and supporting tissues. Since every characterization technique is aimed at enhancing one or more of these functions, it is necessary for the dentist carefully to evaluate the relative importance of each function so that he may best select the characterization techniques for the individual case.

There is no doubt that ultimate patient satisfaction in the wearing of dentures is dependent to a large extent upon the ability of the patient to masticate and manipulate food. Likewise, normal diction must eventually be developed if the prosthesis is to be satisfactory.

The role of esthetics, however, is less clearly defined. Before considering some of the techniques by which a denture may be made more esthetic, it would be well to define the meaning of the concept and to determine its relationship with the other functions of the denture.

What is meant by an esthetic denture? Obviously, the true test of such a denture is its natural appearance in the mouth, rather than how attractive it looks when examined in the hand. Not only must the denture itself appear natural, but it must also restore natural facial contours and expressions.

There are two schools of thought regarding the role of esthetics in denture construction. One group maintains that the goal or aim in denture construction should be the exact duplication or imitation of nature. The other school, representing the majority, feels that the imitation of nature is desirable only insofar as it is consistent with the mechanical principles governing stability, masticatory efficiency, and patient comfort.

An ardent proponent of the first view is Doctor Earl Pound,¹ who contends that the esthetic possibilities of a denture case are frequently neglected in favor of mechanical factors, and a concern for the patient's natural appearance should occupy a more important position in our thinking, teaching, and research. Because of the profession's preoccupation with mechanical techniques in replacing teeth and

¹ Pound, Earl, "Lost—Fine Arts in the Fallacy of the Ridges," *J. Pros. Den.*, 4:6 (Jan.) 1954.

MOLAR OR INCISOR?

No matter what you call a tooth;
A grinder or a cutter,
The dentist knows it is in truth
His daily bread and butter.

Nancy Talbert

other lost structures, it is difficult to develop natural appearing dentures or denture patients.

As an example, Doctor Pound questions the accepted technique of positioning the artificial teeth on the crest of the ridge to secure favorable leverage and stability. He feels that such positioning is unnatural, resulting in poor esthetics; and that facial deformities are accentuated, phonetic problems provoked, and that food manipulation and deglutition are limited due to restriction of the tongue. Fine arts in denture construction are lost in what he terms the "fallacy of the ridges."

The other view is expressed by Doctor Felix A. French,² who does not believe that esthetics are more important than the other two functions of dentures. It is not the proper application of art to dental problems, and, quoting Doctor Norman W. Kingsley (Dean, New York College of Dentistry, 1866-68) he makes a definite distinction between the "mechanic arts" and the "fine arts":

"All that contributed to the physical comfort and utilitarian progress of mankind we class as mechanic art: all that ministers to the esthetic sense, furnishing food for the imagination, belongs to the fine arts."

To be satisfactory, a denture must not only have good appearance, but must also be comfortable in the mouth, provide as efficient mastication as possible, and permit normal speech. The concept of "mechanic arts" as applied to denture prosthesis embodies these various factors, rather than emphasizing only the esthetic quality.

Yet, the dentist in his efforts to provide the patient with a comfortable, efficient chewing apparatus, should never minimize or underestimate the value of good appearance. The patient, who must constantly wear the denture, will be acutely conscious of any factor, however minor, that would indicate artificiality.

The various techniques of denture characterization to be described in succeeding chapters are practical ones that will find ready application in most cases. The dentist should utilize them wherever possible, for they will invariably give the patient a replacement that is more highly regarded and, in some cases, better tolerated.

² French, F. A., "The Problem of Building Satisfactory Dentures," *J. Pros. Den.*, 4:769 (Nov.) 1954.

ASK ANY DENTIST

Use your tooth brush, up and down,
Dentists tell you—not across;
But, how to gargle silently—
Leaves 'em at a loss.

Ethel Willis Hewitt

*D'S

A tooth, perhaps, can never be
A thing of beauty like a tree;
But it must be our fixed endeavor
To see it is a joy forever.

* (D.D.S., D.H., etc.)

Frank M. Arouet

Denture Characterization

by Cyril B. Kanterman, D.D.S.

(The first of three installments)

In the early days of prosthetic dentistry, the primary concern of the dentist and the patient was the construction of dentures that could be retained in the mouth and that would function with a reasonable degree of success. Unfortunately, these early dentures—if they could be called such—were for the most part dismal failures by present-day standards. George Washington, who could well afford the best, had to be content with crude, unwieldy appliances that afforded him little effective mastication.

With better understanding of the biological and mechanical principles of the dental apparatus, high standards of partial and full denture construction have evolved. The retention and stability of the denture are no longer major problems, and the dentist who adheres to accepted techniques in denture construction can usually predict success in the normal case. Even those formerly hopeless cases which presented anatomic abnormalities can now frequently be corrected by surgery, so that dentures may be worn with success. As a result, more attention is focused on the problem of esthetics in denture construction, and a primary consideration today is to make the prosthetic appliance as natural appearing as possible.

The average prosthetic patient expects his denture to be an esthetic improvement over his natural dentition, especially if there had been a defect in the latter. Not a few patients, however, in an effort to eliminate any suggestion of artificiality, will insist that their dentures exactly duplicate, or at least closely approximate, the appearance of their own teeth even to the extent of reproducing obvious defects, blemishes, and irregularities. It is also desirable to reproduce in the denture as many normal anatomic features as possible. For these reasons, the dentist should familiarize himself with the techniques and rationale of denture characterization.

Denture characterization may be defined as the procedure of personalizing a denture by the reproduction of defects, irregularities, artifacts, and normal anatomic features of the patient's teeth and supporting tissues. Defects and irregularities may be those of color, shape, spacing, and alignment of the teeth. Artifacts include fillings and crowns which

are sometimes placed on denture teeth. Anatomic features which may be simulated in the denture are rugae, labio-buccal tissue contours, and the appearance of blood vessels in the gingival tissues.

It is a mistake to regard denture characterization as a specialized service to be used only in selected cases. While some of the techniques to be described are ones not ordinarily prescribed for every case, others are routine, or at least should be so. Nevertheless, there are definite indications and contraindications for characterization which the dentist would do well to consider.

Indications and Contraindications

There are four primary indications for denture characterization:

1. In the construction of partial dentures, it is frequently desirable to characterize the artificial teeth so that they will harmonize with the adjacent natural ones, particularly in the anterior.
2. Characterization is indicated for full dentures in those where it would be of psychological benefit to the patient. Not a few individuals postpone the removal of diseased teeth because of the fear that the artificial replacement will be detected by friends and associates. This is particularly true of young people who face premature loss of teeth. By providing such patients with dentures that closely approximate every detail of the natural dentition, the dentist will help eliminate the fear and embarrassment associated with the wearing of dentures.
3. Aside from the consideration of esthetics, certain forms of denture characterization aid in phonetics, as well as in food manipulation, mastication, and deglutition. Such characterizations are indicated for every case.
4. Finally, characterization is indicated when the patient specifically requests it and there is nothing in the case to contraindicate it.

The following are contraindications for denture characterization:

1. Defects and irregularities which are esthetically displeasing should never be reproduced in the denture. Wide diastemas and full coverage gold crowns on anterior teeth are examples of unesthetic features which are best eliminated.
2. Where there is an irregularity in the arrangement and spacing of the teeth that, if reproduced, would decrease the masticatory efficiency of the denture or produce phonetic problems, such irregularity should not be duplicated.
3. Characterization is contraindicated for patients who do not desire nor appreciate it.



on Sunday morning," he explained. Because the junior patients are seen only by appointment, the dentist is in a position to schedule his chair-time so as to have a patient-less Sunday whenever he wishes one.

Doctor Barnett has found that in a number of instances the youngsters who come to him during the special weekend hours are inclined to be a bit more calm. This he attributes in part to the planned informality of the visits: "When parents question me about conditioning a child for dental treatment, I suggest that the child be told that an appointment has been made, but not to keep reminding him of the arrangements or how he must act or to overdress him 'to see the doctor.' By purposely playing down the dental treatment, there is less possibility of keying up the youngster unnecessarily. Children naturally are fearful of that with which they are unfamiliar."

Because all the youngsters who come to his office are accompanied by parents, Doctor Barnett has ample opportunity to judge whether the father or the mother is better fitted to stand by the chair. "It depends on which parent the child recognizes as 'the law' in his life," he comments. "However, if I were forced to name one or the other, I believe it would be the father, because fathers are inclined to temper their sympathy with reason and thus avoid giving the child an excuse for resisting treatment."

As most dentists will understand, Doctor Barnett agrees that there was an element of selfishness in his decision to establish hours for children only. "I feel that I am in a better position to give these children

more of the benefits of my professional experience when I condense within several hours each week the tension that is to be expected when treating youngsters." He adds: "The freedom from this same tension during other office hours permits me to better serve adult patients." While explaining the benefits of separating patients because of the age factor, Doctor Barnett pointed out a secondary advantage: "By appealing to the pride all parents have in their children, the 'tot time' plan helps maintain the good-will of the fathers and the mothers while holding them or winning them as regular patients." Doctor Barnett's young daughter, if called upon to do so, would gladly climb into his dental chair to demonstrate that it is fun. In fact, for some time she has insisted that her father extract some of her front teeth or add "braces" so that she will look like the other girls who come to his office. So far, her father, although grateful for her confidence, has resisted these requests.

Dentists who recognize possibilities in these plans in their own practices should not let the idea of spending an hour or two Sunday morning in their offices dampen their enthusiasm. Actually, after a "Children's Hour" has been in force for some time, it will be found possible to group youngsters' appointments for perhaps only one or two Sundays a month and thus leave the others free. This is particularly easy when it is made known that all off-hour appointments are required well in advance and parents are acquainted with the fact that this time is not part of the dentist's regular work week.

In establishing a children-only plan, some practitioners may feel that attention must be given to providing play things and some form of child care in the office. Doctor Elba at first considered having his wife act as "baby-sitter" but this proved unnecessary because each child is accompanied by a parent. He did purchase a collection of toys but later found that this need was satisfied by several sets of nesting plastic boxes, a few colorfully illustrated books printed on cloth instead of paper, and an eighteen-inch ball that is sufficiently soft to prevent damage if tossed by young hands. "The inexpensive rag dolls I first offered young girls proved to be a mistake," he explained. "They became loving mothers too quickly. It may be easy to take candy from a baby, but just try to get back a doll after a youngster has put it in her arms!"

The variables in a "Children's Hour" include the length of time to be given over exclusively to the treatment of youngsters, the day or days for the special period, the fee schedule, and other, less important, factors. But there is nothing variable in the resulting benefits. They are almost certain to be good. And best of all, there is little or no cost in inaugurating such a progressive program.

Madonna and Child

by Austin F. Roberts, D.D.S.

Rodney Shafter was more pale than usual when they arrived at the dentist's fifteen minutes late. His mother was invariably tardy with all appointments but her apologies were always so profuse and her explanations so charmingly confused, that most people forgave her. They simply learned to make time allowances.

Rodney was a spindly little chap of seven with large solemn eyes and two big white central incisors that looked like a pair of blank dominoes. He did not in the least resemble his mother. Mrs. Shafter was extremely vivacious—the sort of woman whose women friends said of her, "She has chic." Their husbands agreed that she was cute and secretly wondered if she meant anything by the gay yet confidential manner which seemed to lead them on but which never actually got them anywhere.

Mrs. Shafter said, "I'm TERRIBLY sorry, Doctor Cook, that we just couldn't make it right on the dot; but several things delayed us and at the last minute Rodney had forgotten to brush his TEETH!"

Doctor Cook tried to murmur that it was quite all right but Mrs. Shafter continued in her debonair voice, accenting certain words as if her auditor were deaf, "Of COURSE I couldn't bring him to you like THAT, especially when you had been so nice as to take him at ALL after I explained over the phone about his upsets; three other dentists have simply REFUSED to work on his teeth again after what happened in their offices but Rodney can't help it, doctor, it simply makes him SICK, and still I can't blame the other dentists either, but Mrs. Wilson said you had especial aptitude with children and I hoped that . . ."

Doctor Cook managed to interrupt. "We had better see what Rodney needs to have done. Just leave him with me and we'll get along all right. Perhaps you have some shopping to do?"

Mrs. Shafter was surprised, but decided she DID want to look at a dress.

Doctor Cook extended a hand to the boy and said, "Come along, old man, some pigeons are building a nest outside our window and you can watch them."

Rodney wasn't taken in by this business of pigeons because he knew what was going to happen. But Doctor Cook's hand felt warm and friendly and Rodney liked him. So he climbed into the dental chair and opened his mouth.

Doctor Cook spoke confidentially to his nurse. "I

think Rodney is going to be the best patient we've had today; I wonder if he'd like to see my trick pocket knife?"

"I'm sure he would," said the nurse. "All the boys I know are interested in pocket knives and I'll bet Rodney never saw one like yours."

So Doctor Cook took a knife out of his pocket that held a lot of shiny blades all folded up in a red handle. He laid it in the palm of his hand and covered it with his other hand. When he uncovered it, the color of the handle had changed to bright green.

Rodney was so interested he forgot to close his mouth. His big solemn eyes became still larger when Doctor Cook, after making a few magic passes, changed the color back to red again.

"Look!" exclaimed the nurse. "Here comes one of the pigeons now, with more material for their nest."

Sure enough, a silvery-gray bird landed on a cornice under the eaves of the building and strutted up and down with a twig in its bill.

Rodney watched the pigeon while Doctor Cook scrubbed his hands. Then Doctor Cook came over and looked at his teeth with a mouthmirror and said, "Hmmm."

Doctor Cook had put something on his hands that smelled nice. He reached up, unhooked his drill, and showed it to Rodney. He said, "This is a tame buzzer; it only tickles just a little."

Another pigeon alighted near the first. Rodney watched the two birds very hard as the tame buzzer started buzzing.

After what seemed like a very long time indeed, Doctor Cook said, "That last one was a whopper. You've been an exceptionally good soldier. We won't do any more today."

Rodney took a last look at the pigeons, and the nurse told him he could go into the reception room and wait for his mother, because Doctor Cook had another patient.

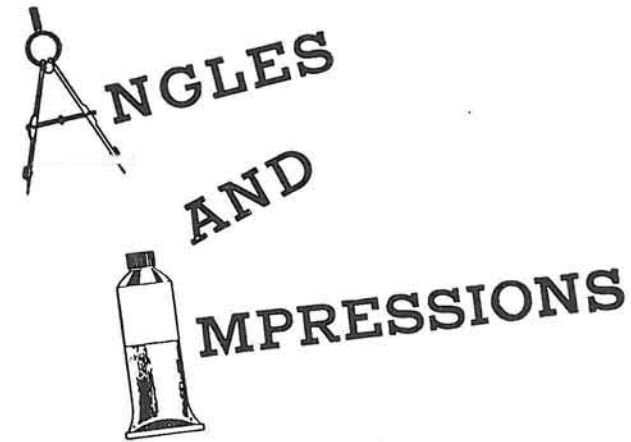
Mrs. Shafter was quite late in getting back. When she hurried in breathlessly, Doctor Cook came out of the operating room and told her what a brave boy Rodney had been and that he had had three new fillings.

Mrs. Shafter was astounded. "THREE cavities! Oh, GOOD HEAVENS!" She stared at her son. "POOR DEAR RODNEY—did it hurt TERRIBLY?"

Rodney looked piteously at his mother. Her eyes were wide. "It must have been—simply AWFUL! It must have made you—SICK!"

An expression of horror came into Rodney's face.

Mrs. Shafter wailed, "Oh, DOCTOR, I told you it always made him ill—Doctor, he's going to be—he IS sick—My POOR DARLING BOY—and this lovely rug too . . ."



by Maurice J. Teitelbaum, D.D.S.

Dental Thisa and Data

According to the most recent reports we have seen from the U. S. Bureau of Labor Statistics, dentists' fees average 75 percent higher than they were prior to World War II. In comparison to the rise of other services and commodities, the BLS disclosed that for the same period haircuts went up 165 percent; shoes, 132 percent; and automobiles, 121 percent. It is interesting to note that dental care costs went up no more and no less than the over-all average for semi-skilled, skilled, and professional services.

Inci-dentals

The identification of a corpse by a dental examination creeps into the news every now and then, but did you know that the identity of the most famous corpse of all time was established by a dentist? Last year, after extensive study, a law court in Berchtesgaden announced that there was no doubt that Hitler took his own life before the fall of Berlin. During the hearings in the Bavarian alpine resort, a dentist, Doctor Fritz Echtmann, testified that after the war he presented the Russians with definite proof of Hitler's death but the Russians had never made the evidence public. Echtmann said he identified as Hitler's the partial sets of teeth and a mandible that the Russians had showed him during their initial investigation of the bombed-out ruins of the dictator's Berlin stronghold. . . . Odd Filings: About 400,000,000 prescriptions are written by doctors in the U. S. in one year.

Tic Tips

Next to a dentist's eyes, perhaps no part of the anatomy receives as much strain as the dentist's feet. Improperly fitting shoes can cause pains both in the feet and back. The Podiatry Society of New York, through its spokesman Doctor Benjamin Kauth, has offered these suggestions for buying better fitting shoes:

1. Buy shoes late in the afternoon, preferably the

afternoon of a rainy day. If your shoes fit snugly on a dry clear day the chances are that they will really pinch when the weather changes.

2. Always stand up when trying on shoes and walk about in them.

3. Perhaps this is unnecessary for men, but consider fit and comfort above appearance.

4. Always try on both shoes. Generally, one's feet are not of the same size and a shoe that fits just right on one foot might be too snug on the other.

5. In checking the fit, be sure that there is enough room to wiggle your toes; that the shoe does not cut into the ankle; that the shoe fits snugly at the heel and doesn't rub as you walk; and that the inner lining is not rough or irritating.

Gagging

This little story has nothing to do with dentistry or the dentist but a patient just told it to me this afternoon and before I forget it I'm setting it down. I don't know where he picked it up, but it goes like this:

A man who was a bug about playing poker every Friday night left his home one Friday to play cards with the boys and didn't return. On another Friday, five years later, he returned home and his wife greeted him with open arms. Filled with excitement, she rushed to the telephone to make a call.

"Who are you calling?" asked the husband.

"I'm going to call some friends so we can have a homecoming party for you," said the excited wife.

"Oh, no you don't," said the husband, "not on my poker night!"



These might include aid in establishing educational facilities where needed; providing fellowships for study at home or abroad; making teachers available in special branches of dentistry; developing courses in public health for dental personnel; supplying teachers and guidance for training of dental auxiliaries and ancillaries; assistance in the provision of training in dental health education for health workers, teachers, and other relevant personnel; and aid in providing the means for translating text-books so as to widen their effective use.

Studies Recommended

In discussing the advisability of national and international studies, the consultants advocate coordinating studies on such subjects as:

. . . scientific methods in preventing and curative services; etiology, pathogenesis, and epidemiology of dental diseases; nutritional problems in relation to dental diseases and habits; vehicles for fluoride consumption, and methods of topical application of fluoride; racial immunity to caries, and racial tendency to periodontal disease; statistical studies of the incidence of dental diseases in the light of environment factors, such as natural variations

in soil, water, etc.; problems of dental education and dental public-health administration; the role of auxiliary and ancillary dental personnel under varying conditions; methods of teaching dental health; governmental standards and regulations with regard to dental education and dental practice; and dental-educational institutions and their curricula in different countries.

Blueprint of the Future

This, in substance, is a broad blueprint of the thinking of some of the world's outstanding dental leaders, a setting up of sights for international dentistry as the nations of the world turn to their dentists for the establishment and operation of programs designed to attack and control the most widespread of all human disorders.

The alert dentist, anxious to recognize, analyze, and anticipate developments that are fashioning the dentistry of tomorrow, will keep up with this UN program with interest—an interest that will increase as he sees more and more clearly how the welfare of his profession is identified with the tremendous efforts being sparked by a great American dentist, a U. S. Public Health Service dentist.

Next Month, Part 2

DENTISTRY AROUND THE WORLD



(Authenticated News)

A mobile dental clinic in a specially built station wagon makes annual visits to remote districts of New South Wales, in the Australian outback, where there are no residents or visiting dentists. A voluntary agency operates the program.

A series of twelve:

**ORAL
CANCER**

by Joseph Murray, D.D.S.

PART 2

Symptoms of Mouth Cancer

What are the signs of mouth cancer? Any induration, no matter how slight, which is recent in origin and is increasing in size, or any ulcer which fails to heal within two or three weeks, should be considered cancerous unless proved otherwise.

A small-sized malignant tumor (less than 1 centimeter in diameter) often is not an early cancer. Some of the smallest lesions are the wildest growing and the most difficult to cure. No cancerous growth can be trusted—no matter how tiny. But, generally speaking, it can be said that the smaller the cancer, the earlier it is, and the greater are the chances of cure.

According to Doctor Hayes Martin, the most common and characteristic picture of early oral cancer is a coarsely granular ulcer with hard, raised, rolled edges, which infiltrates the mucous membrane for a varying distance. Frequently, however, the examining dentist will be confronted by a primary lesion which is small, smoothly granular, a fissured patch of leukoplakia, a slightly ulcerated, papillary tumor, an excavated ulcer with indurated edges, or a necrotic ulcer covered with slough.

Unlike most serious diseases where the symptoms are acute and disabling, the patient passing from a state of previous well-being to one of discomfort and disability, the clinical picture of mouth cancer at the beginning is insidious and mild. As a matter of fact, pain is not a specific symptom, and, in general, does not occur until secondary infection has developed in an ulcerated growth or because of pressure on the pain fibers of sensory nerves.

First Symptoms

Actually, the first or early subjective symptoms of oral malignancy vary according to the location of the primary lesion. For example, a growth on the lower lip can readily be detected by the patient because it is under daily scrutiny. Even here, it may be mistaken for an ordinary cold sore or a harmless fissure.

Within the oral cavity, the tactile sense of the

tongue will readily discover a "lump," "sore," or any area of irregularity, especially if located in the floor of the mouth, cheek, or anterior portion of the tongue.

Towards the posterior part of the oral cavity, like the tonsil, base of tongue and palate, where tactile and pain sensations are less acute, the primary lesion may reach the size of 2 to 3 centimeters before tenderness, discomfort, and pain manifest themselves.

Now, slight pain on swallowing or speaking may occur because the growth has become infected. (As a rule, pain or tenderness in a cancerous ulcer is seldom as marked as in a benign or inflammatory lesion of equal size.)

Moreover, in this same region of the mouth, the neoplasm may remain silent, and the initial symptom will be the discovery by the patient of an enlarged lymph node in the neck, a sign of dreaded metastasis.

With the continued growth of the tumor, ulceration and deep infiltration become more evident, accompanied by extensive secondary infection. At this time, pain and disability become marked. Because of the tendency for intraoral ulcers to undergo this secondary infection, early, they may exhibit swelling, redness, and pain.

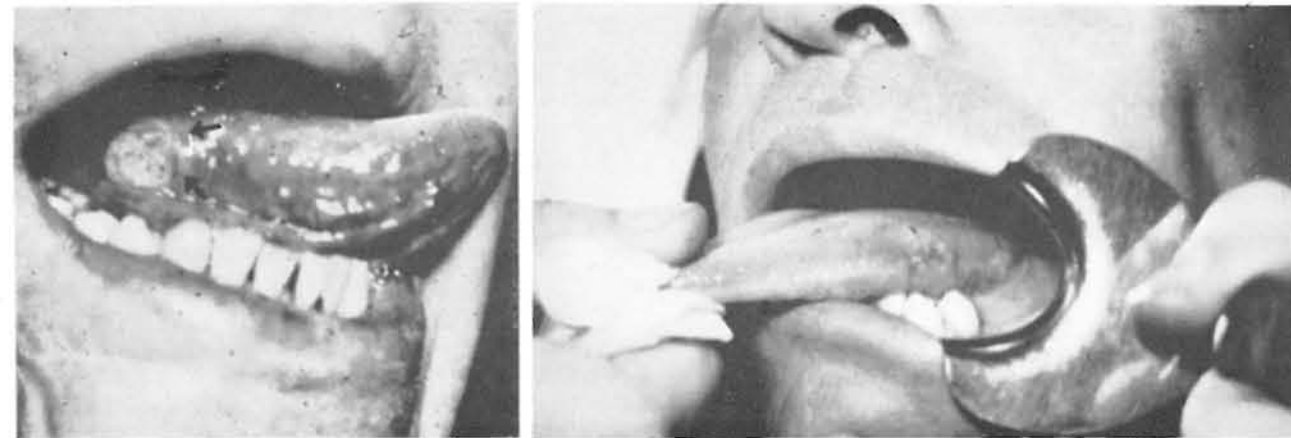
Herpes simplex, Vincent's infection, traumatic lesions, tuberculosis, and syphilis are ulcerative conditions which must be differentiated from cancer, but which do not necessarily rule out the simultaneous presence of oral malignancy.

In the later stages, says Doctor Martin, there is a steadily increasing infiltration of the tongue, the cheeks, the floor of the mouth, the tonsil, and the palate. Even the maxilla and mandible may be invaded and eroded, depending upon the site of the primary lesion.

Movement of the tongue and jaws may now be restricted (trismus); swallowing of food, drink, and saliva becomes more difficult and painful (dysphagia); difficult or labored breathing (dyspnea) due to encroachment of the expanding growth upon the lumen of the pharynx or larynx is likely to be present.

As the large blood vessels are eroded by the cancer, repeated hemorrhages may result. Death in uncontrolled oral cancer usually occurs from one or more of the following complications: sepsis, malnutrition and dehydration, pneumonia, hemorrhage, respiratory obstruction and metastasis.

Malignant tumors of the head and neck tend to metastasize along the lymphatic system which drains from the face and oral cavity into the neck. Sometimes the first sign of an oral or facial carcinoma is a hard, fixed swelling in the submental, submaxillary or cervical regions.



(Left). Nodular carcinoma of the lateral border of the tongue. Note the nodular base. The cancer is hard. (Right). A small ulcer of the lateral border of the tongue, but a treacherously malignant one. This is a squamous cell carcinoma, ulcerative type. No pre-existing leukoplakia. Note the modular elevated border. This elevated border is painless and characteristically hard.

Frequently, the primary lesion is only a few millimeters in diameter, yet enlargement of one or more cervical lymph nodes may already be apparent. However, during the advanced stages of malignancy, spread of the growth invariably takes place, with the appearance of a cervical mass, sometimes multiple and bilateral, often 10 to 15 centimeters in diameter.

These cancerous lymph nodes frequently tend to become infected, producing large, fluctuating liquefied abscesses. Involvement of some organs below the clavicle, such as the lungs or the liver, or the bones, is inevitable, should the growth in the mouth and in the neck remain uncontrolled.

Other Manifestations

Besides developing an awareness and a familiarity with the appearance of the primary lesion, the dental practitioner should be alert to other manifestations of mouth cancer.

Patients with oral carcinoma sometimes complain of loose teeth, even if there is no particular gingival or periodontal involvement. Frequently, tumors invade the jaws either directly, by metastasis, or from the gingiva or the antrum, destroying the periodontium and investing bone structure. Since extraction of such teeth may induce spreading of the cancer, the physician treating the case should be consulted first.

Asymmetry, evidenced by a swelling of the face or neck, or destruction of tissue in the oral cavity or pharynx, is usually indicative of the growing tumor.

Paresthesia, a sensation of numbness along the side of the jaw or face, caused by pressure of the cancer on the various branches of the sensory divisions of the trigeminal nerve, is an occasional complaint made by the patient.

Often, carcinoma of the parotid gland produces facial paralysis because of encroachment upon the facial nerve, by decreasing or eliminating the con-

ductivity of the nerve impulse to all or a portion of the facial muscles.

Sometimes pressure on the hypoglossal nerve, due to an intracranial lesion, may cause paralysis of one half of the tongue with atrophy and deviation to the affected side.

The muscles of mastication and the soft palate frequently become paralyzed, due to the compression of the motor fibers of the mandibular branch of the fifth nerve.

As was previously mentioned, inability to open the mouth (trismus), difficulty in swallowing, and pain are common symptoms of malignant tumors.

With necrosis and secondary infection, there is usually associated halitosis, pain, poor oral hygiene, and increased salivation.

Speech may be disturbed or defective in the case of a perforation or infiltration of the tongue or oral cavity by the lesion.

In early cancer, the growth may be traumatized with subsequent bleeding, which is not too serious. However, in a far advanced case, infection and necrosis, or invasion of a major blood vessel may result in hemorrhage that is fatal.

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INTERNATIONAL DENTISTS

The United States had 166 delegates at the World Dental Congress in Copenhagen last summer. Four of the best-known dentists in attendance included (left to right): Doctor Knut Gard, Secretary General, Norwegian Dental Association; Doctor John W. Knutson, Assistant Surgeon General and Chief Dental Officer, United States Public Health Service; (the third man is U. S. Charge d'Affairs M. Jandry); Doctor Oren A. Oliver, President, Federation Dentaire Internationale; and Doctor Harold Hillenbrand, Secretary, American Dental Association, and chief U. S. delegate to the Congress.

hood to advanced age, have been estimated to be afflicted with dental disorders; an examination of children in a mining town in South-West Africa revealed an "appalling amount of caries"; and, in a survey of children over five years of age in an area near Sydney, Australia, more than 97% were found to have dental caries.

Economically, dental diseases represent a drain upon both health services and individuals. For example, the National Health Service of Great Britain during 1949-50 spent approximately the equivalent of US \$110.3 million for general dental services, excluding the amount spent by local health authorities for the dental care of children and of nursing and expectant mothers; and, in the USA, about \$1.6 billion was spent by individuals for dental care in 1953.

Health Education

The statement then lists the major hazards to dental health—dental caries, periodontal diseases, irregularities of the teeth and jaws, hare lip and cleft palate, and oral cancer. It stresses the need to collect basic data for planning a dental-health program, and delineates the requirements for the organization and administration of a dental-health program. Health-education requirements are dealt with in part as follows:

Promotion of dental health requires education of the public in principles of balanced diet, oral hygiene, and other health practices which aid in preventing dental disorders. The methods used for this health education must be appropriate to the social, economic, and cul-

tural conditions of the people, and will vary accordingly from one country to another. Generally speaking, however, education for dental health should aim to stimulate recognition of dental health problems, aid in developing procedures for solving these problems, and encourage acceptance of responsibility for effecting improvements. To achieve these aims, the initiative, aggressive support, and participation of the population concerned must be enlisted.

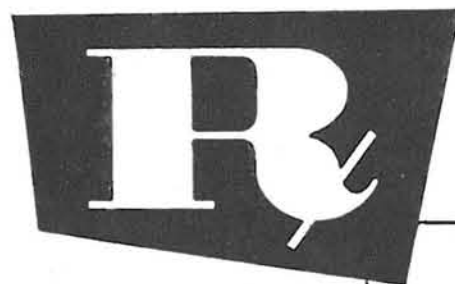
While means of mass communication—posters, books, film strips, etc.—may be effective in dental health education, particularly of children, a better approach might be through "educating the educators"—e.g., dentists, physicians, nurses, midwives, and teachers—who, if adequately informed and motivated, can do much to promote dental health.

Dental Training

For the dentist-reader who appreciates the significance of this initial official development in international dentistry, some of the "possible future developments" suggested by the dental consultants will be of special interest. For example, in explaining that advice and assistance should be given to strengthen the education and training of dental personnel, the group spelled out the following steps:



First of a series:



FOR LIVING

Public Health Service Dentist

by Joseph George Strack

This is the coming of age of international dentistry.

For the first time in history an organized, global effort is being made to focus the attention of the world's two billion human beings upon their dental health—and to do something positive about starting prevention programs in scores of countries to check the most universal of all diseases, dental ailments.

The world's first official international dental health program is being sponsored by WHO (World Health Organization), a division of the United Nations.

An American, Doctor John W. Knutson, was chairman of a distinguished international committee of dental consultants* who formulated the program.

Every dentist in the world has a stake in what WHO does—or proposes to do—in the field of dental health. It is worth-while, therefore, to read and think about this unique development—and watch it. Its implications are as diverse as they are numerous.

In outlining the public-health problem presented by dental diseases, a paper prepared by the consultant group states:

* Doctor Saiful Anwar, Director, Public Health Service, East Java, Surabaya, Indonesia; Doctor H. Berggren, Director, Eastman Institute, Stockholm, Sweden; Doctor P. E. Blackerby, Jr., Director, Division of Dentistry, W. K. Kellogg Foundation, Battle Creek, Michigan, U.S.A.; Doctor Knutson (Chairman) Chief Dental Officer, U.S. Public Health Service, Washington, D.C., U.S.A.; Doctor G. H. Leatherman, Secretary-General, Federation Dentaire Internationale, London, United Kingdom of Great Britain and Northern Ireland; Doctor C. F. Mummery (Rapporteur), Chief Dental Officer, Malayan Medical Service, Kuala Lumpur, Selangor, Malaya; and Doctor J. Stork, Honorary Treasurer, Federation Dentaire Internationale, Aerdenhout, Netherlands.

Dental diseases are not peculiar to any one group of people, whether defined geographically or ethnically; nor is their occurrence restricted to those of a certain age, sex or economic status. Probably no other group of diseases affects so large a proportion of the world's population. Evidence from widely separated parts of the world gives an idea of the universality of dental disorders; in the USA, more than 90% of the people, from early child-



(Photographic Section, National Institutes of Health)

RESEARCH PROGRESS IN THE UNITED STATES. "Of first-rate significance was the opening recently of the Clinical Center of the National Institutes of Health, for it gave the Dental Institute the long-awaited opportunity to extend research to patients." Above, one of the fully-equipped laboratories at the Center, where the Dental Institute carries on studies of the chemistry of the enamel, dentin, and gingival tissues.

Dental Wives:

Enthusiasm

by Kay Lipke

Women have a reputation for being more enthusiastic than men. At any rate, the men are able to keep their enthusiasm "under wraps" and maintain a reserved and nonchalant attitude, while women usually bubble over audibly each time something particularly strikes their fancy.

Women are born "recommenders." Not only do they like something, but they usually want all their friends to know about it and like it also. It may be a recipe, a new place to eat, a shop where the "most wonderful bargains are to be found," or it may be enthusiasm for a physician, or a dentist.

Ah, me! When a woman becomes overly enthusiastic about her dentist things are apt to happen immediately.

Recently a dentist and his wife had this type of experience. A friend arrived back in town after many months away from home. She needed a great deal of dental work and she needed it quickly. She wanted good dentistry and she wanted it at a reasonable price. She was amply able to pay but definitely wanted value received.

Immediately she got in touch with her dentist-friend, (who did no prosthetic work himself), and asked him to recommend someone. After deliberation, he chose a skilled, conscientious dentist from among a number of fine, reputable men he knew in his profession. He had been fairly successful in the past in recommending the right dentist for the right patient and this time was no exception.

The family friend was delighted with the dentist chosen for her. The appointments began at once, and at almost the same time the friend's enthusiasm began to bubble over also.

Each time the dental wife met her friend at some luncheon she heard in great detail how splendid the dentist was, how conscientious, and what fine work he was doing. Because in the past she felt that she had been charged exorbitantly for less satisfactory work, she was now extremely pleased with the amount of the fee she was paying.

Up to a point, this was very pleasant for everyone. She was happy, her dental friends were happy, and, no doubt, the D.D.S. who was taking care of her was pleased also. Nothing makes people happier than a general feeling of harmonious well-being.

However, like a good many women, she was a born "recommender." She was not content just to express her satisfaction with her dentist quietly, but

was determined to sell all her friends on the idea of going to this particular dentist also. She used high-pressure methods to dilate on his virtues and his reasonable fees until some of her more impressionable friends began to change from their own loyal reputable dentists, who, no doubt, had been taking good care of them for years, and began to drift to this new dentist who had been recommended so enthusiastically.

Suddenly the dental wife found herself caught in the middle of a situation which bothered her, and all because a very natural enthusiasm for a reputable dentist got out of hand.

She remembered that a great many of her own husband's patients had come to him through word-of-mouth enthusiasm by satisfied patients who had persuaded their friends to change their dentists. It had always pleased her when she heard about it, but now she began to wonder if this high-pressure enthusiasm which women, especially, possess was not a danger as well as a blessing.

Enthusiasm, up to a certain point, is a marvelous and electric quality of the mind and spirit which illumines all of life and makes it much more worthwhile and interesting. Without it, the lights would go out of the heart of all human living, and the world would be very drab and dismal indeed.

However, the danger of enthusiasm is that a little of it never seems to be quite enough. When we women like something or someone, far too many of us turn our enthusiasm into a sort of bludgeon with which we try to force those about us to join ranks behind us and follow in our path.



"NEW SUITE OF TOP-GRAIN COWHIDE? BOY, HAVE YOU GOT THE WRONG ADDRESS!"



Before

A pictorial record:

Remodeling A Home-Office

Illustrations and captions

by Douglas W. Stephens, D.D.S.

In commenting on his remodeled home-office Doctor Stephens says: "This floor plan is the best I have ever had. For example, one wash basin in the lab, centrally located, means less plumbing. At the end of the day, this layout means I handle more patients with less fatigue. The secretary's desk is so located that patients cannot leave without making necessary appointment, financial, and other arrangements first. "Because many dentists these days are building

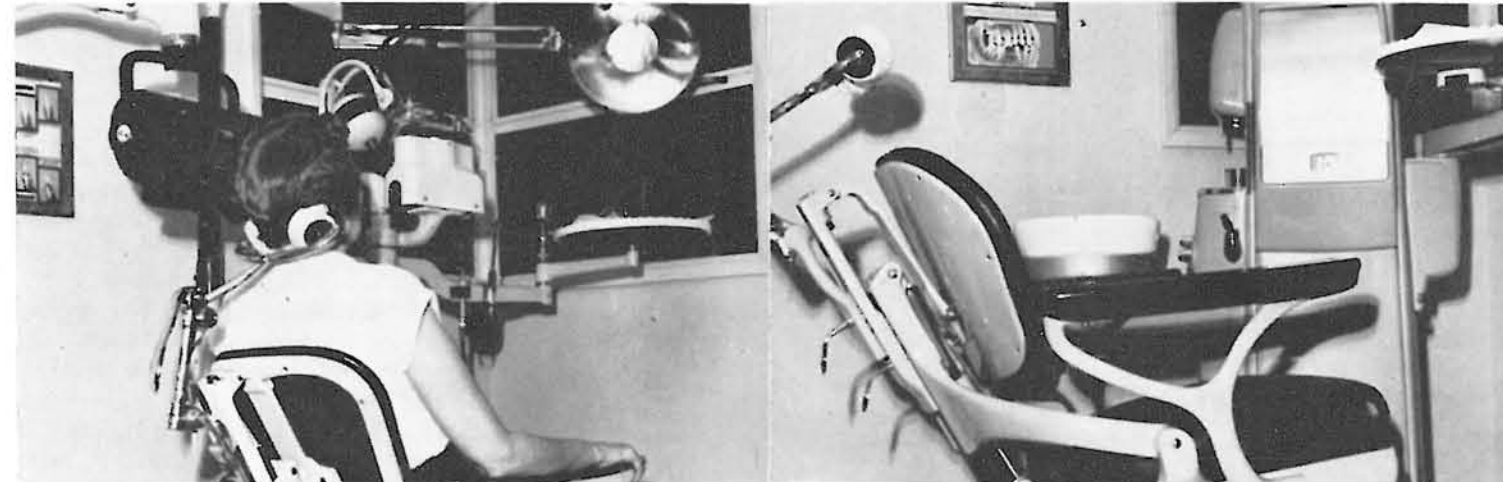
their own offices, I have emphasized in the captions some of the features that make this home-office set-up unique. Most dentists object to a home-office because they are afraid they will be bothered with after-hour patients. This is the reason I have a By Appointment Only sign on the door and the cut-off switch for the telephone, the answering service, and the private home phone. After more than a year of a very busy practice, I have had no bothersome after-hour calls."



After. House stuccoed to conform with new office, and old screens replaced with modern aluminum tension screens. Rock trim is Arizona Mint stone, a pale orchid and green natural rock.



Waiting Room (rear view). Mural scene on left wall gives effect of depth to narrow (7 feet wide) room. Glassed-in secretary's office to the right. Door at rear opens on ramp leading to rear patio back of house. The entrance is used by wheelchair patients.



Operating Room Number 1 (11 by 7 feet). It contains X-ray unit, chair, and two dental cabinets. Windows of both operating rooms are blue-green obscure glass for easy operating vision.

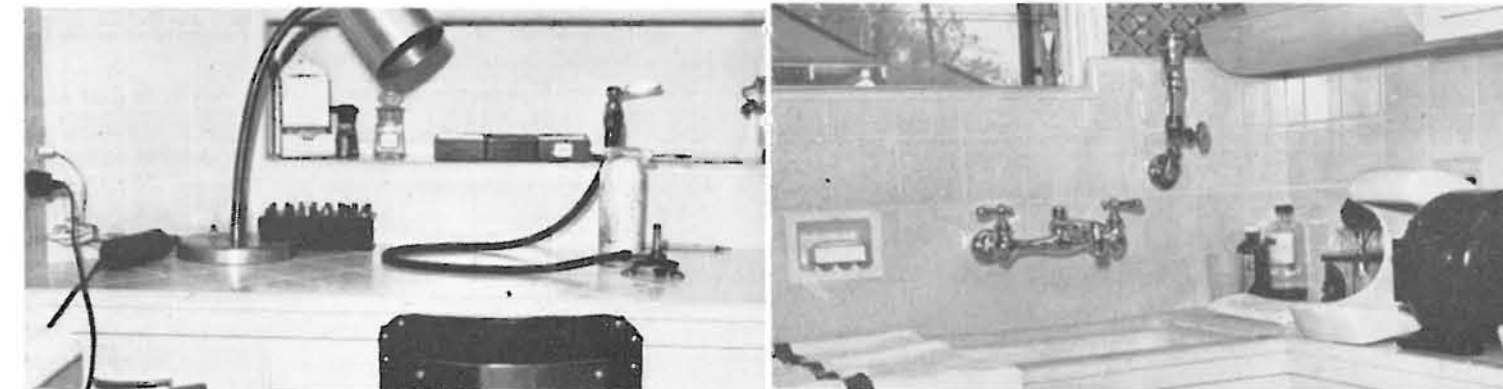
Operating Room Number 2 (8½ by 7 feet). Both operating rooms are painted on cuspidor and front walls, papered with washable wallpaper on rear and cabinet walls.



Glassed-In Secretary's Office. Built-in desk with cupboards and drawers below counter, which is desk height. The phone has switch to turn off bell at night when Dental Answering Service takes over calls. After hours, the answering service reaches the dentist by calling an unlisted telephone number in the house.



Rear Patio. Used in good weather as overflow waiting room and playground for children.



Built-In Tile Laboratory Bench. Top center drawer is metal-lined for catching gold grindings. The lower drawer is metal-lined for scrap plaster and waste. The air line connection is under the bench. Two 150-watt spot lights are recessed in the ceiling to illuminate the bench. The bench and other laboratory work tables are covered on top and back with tile.

Laboratory Sink (with extra water connection for attaching Whip-Mix Vac-U-Spot inlay investor). The casting machine is sunk in metal-lined and covered well (towel covers this). A sterilizer bench is on the opposite side of laboratory. All benches have storage shelves underneath, and storage cabinets are above benches on two walls.



Dentist's Business Office (off secretary's office). X-ray dark room is to the left, coat closet and storage shelves to the rear. Door to the right opens into living room of the house.