



# The Journal of the American Academy of Gold Foil Operators

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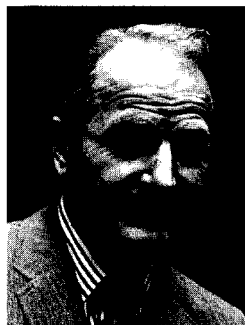
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## President's Message

I am proud and honored to serve as President of the American Academy of Gold Foil Operators.

I wonder if the founders and members realize the profound effect the Academy has had on the practice and teaching of dentistry throughout the world, but especially in the United States. Probably its greatest impact has been with the young enthusiastic and eager private practitioner. Here is where it should be. How encouraging and rewarding it is to see the new faces hungrily watching the clinical sessions at our regular meetings. They are not all young. Many are older men who have become enlightened to the fact that there is no dental material that is a good substitute for sound dentin-supported enamel. They have experienced the failures of all dental materials. They have realized that in spite of the ease of removing sound dentin-supported enamel, it is impossible to restore it to its original condition with our present materials.

For this reason, they are interested in the conservative principles of the American Academy of Gold Foil Operators. They become excited about the excellent visibility, retraction and management created by a properly applied rubber dam. They begin to realize that they, too, can operate routinely under these ideal conditions. They also realize that this in itself leads to conservative dentistry.

They suddenly realize that gold foil can be inserted in a cavity preparation which is far more conservative than that for any other restorative material — that although gold foil is not the equal of sound dentin-supported enamel, it still is the closest thing to it. I wonder if the founders of our academy really realize the extent of the influence the Academy has had on the everyday practices of these men. I'm sure many of the members do.

These are difficult times for many of our teaching institutions. There seems to be a wave of the de-emphasis throughout our dental schools regarding the sound principles of restorative dentistry.

Fortunately, many of our members are assuming positions of leadership in these institutions and are carrying on the struggle to maintain these principles. An excellent case in point is happening at Tufts University School of Dental Medicine. A group of New England dentists under the enthusiastic leadership of Dr. Jack Freese is teaching an evening study club for some very eager and hungry senior dental students.

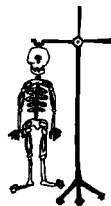
There is a renewed and stronger than ever emphasis on prevention sweeping the dental offices of the country. Where is there a greater need for the conservative principles of the rubber dam and gold foil but in the well-controlled mouth?

These are times of great change in the practice of dentistry. Not the least of these is the training of paradental people to perform certain dental procedures. Whether or not this is necessary has been and will be debated for years. However, it is encouraging that many of our members are assuming positions of leadership in planning and teaching of these programs.

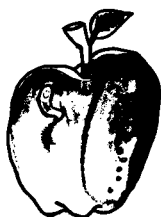
So it seems that our Academy has had a great impact on the practice and teaching of dentistry in this country and throughout the world. Yet the real challenge lies ahead. It will be most urgent that we as an Academy continue to grow so that our influence can be felt more than ever in this uncertain future.

We judge ourselves by what we feel capable of doing, while others judge us by what we have already done. — *Longfellow*

## Anatomy of a study club



**CONTINUING  
EDUCATION...**



**AAGEO.**



Study clubs and seminar groups have been a vital force influencing the ongoing development to the dental profession. Individualized attention from study club mentors and the mutual challenge of working alongside colleagues is a most effective form of continuing dental education. Peer review, critiques, instruction, and encouragement catalyze the dynamic development of skilled dental practitioners.

In his keynote address at the 1972 organizational meeting of the Academy of Operative Dentistry David Grainger stated that "men of action have a thorough grasp of both the present *and the future*."<sup>1</sup> He challenged dentistry to shift into the future tense. Our future study club efforts can most effectively be guided and directed if our present status is known. Therefore, in July 1972 a survey was made of the fifty gold foil study clubs listed by the American Academy of Gold Foil Operators Study Club Committee.

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*Presented to the First Annual Meeting of the Academy of Operative Dentistry, October 26, 1972, San Francisco, California.*

## MEMBERSHIP CLASSIFICATION



## PREPARATORY...



## ACTIVE...



## SENIOR ACTIVE (ALUMNUS)...



Fourteen study clubs responded to the questionnaire. Data from these groups is presented to allow a comparative self-appraisal for currently active groups and to provide helpful guidelines for those desiring to establish new study clubs.

The average study club is composed of fourteen members and meets eight times per year on a monthly basis. Most clubs schedule no meetings during the summer vacation months. The most popular meeting day is Saturday. Members ranged from one to fifty-nine years in practice. Three of the fourteen clubs indicated that they had active duty military members. Sixteen per cent of the responding study club members teach in a school of dentistry. Fifty per cent of the gold foil study club members are also members of the American Academy of Gold Foil Operators.

Certain clubs have established membership classifications. The "preparatory" member is instructed initially using plaster teeth and mounted extracted teeth; then he operates at a regular meeting and is formally elected to "active" membership. After seven years of active membership, he is eligible to become a "senior-active" member operating only twice each year. This results in a membership opening assuring a constant influx of new members. Several groups make a university-sponsored continuing education course on gold foil procedures a prerequisite to study club membership.

Annual dues range from \$10.00 to \$400.00 with the average being \$150.00. Some groups provide dental instruments for sale to their members. Study club discounts for supplies, gold, and instruments are often available.

Fifty per cent of the study clubs meet in dental school facilities with the others meeting in military dental clinics, members' offices, special study club rooms, and hospitals. Most meet in close proximity

to their members' office locations. However, one club indicated that one of its members travels nine hundred miles to attend meetings.

Officers in the study clubs are usually elected annually. Most clubs have a president and a secretary/treasurer. Some clubs have divided the responsibilities and have both a secretary and a treasurer. Other clubs add a vice-president who can also be chairman for essays and table clinics.

Each group has a director who acts as the study club mentor. Occasionally, the responsibility for teaching in the study club is shared by associate directors or senior members. In fifty per cent of the study clubs members teach also.

Usually the director's philosophy of dentistry pervades the study club through his method and style of teaching. Some groups focus on a specific design of cavity preparation, the mastery of which is the stated goal for club members. Other directors encourage studying various cavity designs, technics of gold placement, clinical research, and testing of new instruments and types of compacted golds.

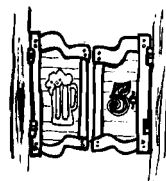
The director's annual honorarium ranges from \$540.00 to \$2,000.00 with an average being \$1,030.00. Several clubs give their directors a gift in lieu of a monetary honorarium. Some of the study clubs indicated that their director or the teaching senior member receives no remuneration. One study club stated that their director's honorarium was "classified."

A typical study club meeting involves an instructional operating session which usually is followed by a time of fellowship and a meal. Critiques of the clinical operations are presented. Thirty-six per cent of the study clubs provide a written critique supplementing the verbal evaluation of operations. Most study clubs fea-

**MEMBERSHIP  
DUES ...**



**MEETING  
PLACE ...**



**DIRECTOR ...**



**ASSOCIATE  
DIRECTOR ...**



**PHILOSOPHY...**



**DIRECTOR'S  
HONORARIUM...**



**INSTRUCTION...**



**CRITIQUES...**



ture a lecture by the director, a member, or a guest speaker. However, several clubs indicated that lectures were presented only by their director.

Although only three of the reporting fourteen clubs indicated that they have a manual, seventy per cent of the clubs stated that their members are provided with an instrument list, procedure technic outline, and club by-laws. Others have added pictures or diagrams of tray setups, instructions for assistants, clinic diagrams to designate chair assignments on the basis of class of cavity, a list of traditional annual events, and a history of the individual study club. One club which teaches a variety of cavity preparation designs has removable (5X) plaster teeth set in rubber arches to illustrate each type of preparation. Additional teaching aids include photography, closed-circuit and videotape television, illustrations, chalk board drawings, and flip charts.

Operators were assisted by their own office dental assistants, dental students, dental assistant students, or non-operating members. One group has an instructor from a local junior college dental assistant school who acts as a director of dental assistants. She demonstrates mal-letting, four-handed assisting technic, teaches instrument care and sharpening, gives at-the-chair instruction to the assistant students, and occasionally gives table clinics. Emphasis is placed on effective and efficient assisting to implement the clinical procedures.

Newsletters provide follow-up communication to members. A review of scheduled events, operation critiques, and future assignments establish the basic format. Comments by the study club president and director are also included.

Topics in addition to gold foil procedures and rubber dam utilization are presented in fifty-seven per cent of the study



clubs. In one group gold foil procedures are taught as only one facet of restorative dentistry technics. Several study clubs introduce these other dental topics through table clinics and essays given by the club members. Occasionally, guest speakers are invited to present lectures about their areas of expertise.

Most study club members are urged to operate during meetings of the American Academy of Gold Foil Operators. Regionally, there are associated or joint meetings of study clubs where clinical demonstrations and a mutual sharing of ideas takes place on an annual basis. A few study clubs urge their members to make table clinic, essay, and closed-circuit television presentations at their state dental association meetings. This disseminates current information about gold foil procedures and rubber dam utilization to members of the dental profession not actively engaged in a study club or in teaching. Also, members are challenged to develop the skills of professional presentation.

Most study clubs operating in the dental school clinics make provision for dental students to be part of study club activities. In some cases, students are invited to operate; however, most serve as assistants or attend as observers. Some dental schools have set up the instruction of gold foil procedures using a study club model, i.e., a small group of students are scheduled at the same time to do gold foil operations. The operating session is followed by a dinner and critique with their instructor.

Most study clubs reported a sprinkling of annual social events. Year-end parties for members (some with and some without wives), golf tournaments, and Christmas holiday gatherings were listed. The clubs indicating the most viable total program included fellowship activities in addition to clinical instruction.

Apparent from the general comments

**LECTURES AND  
ESSAYS...**



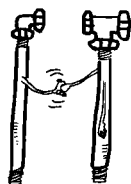
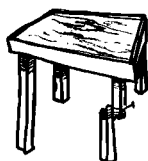
**MANUAL OF  
PROCEDURES...**



**MODELS**  
diagrams  
**TEACHING**  
**AIDS...**  
CLOSED CIRCUIT T.V.  
**PHOTOGRAPHY**  
**MANUAL**

**DENTAL  
ASSISTANTS...**



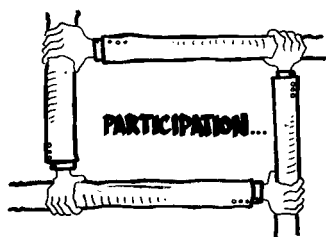
**NEWSLETTER...****JOINT  
MEETING...****TABLE  
CLINICS...****POST-DOCTORAL  
EDUCATION...**

section of the questionnaire was a trend toward exploration and study of restorative procedures in addition to gold foils. Using the gold foil restoration as an ongoing model of excellence, several study clubs are investigating additional areas of dentistry. One study club director stated that his "pure gold study club nearly folded four years ago." He "adulterated" it with the study of amalgams, composites, crown-and-bridge procedures, occlusion, and cements. "It (the study club) has been a progressive force since" in his community.

Because teaching itself becomes a learning experience, study club members occasionally should be given the responsibility of instructing during operating sessions. The director can supervise and coach his new teachers. Perhaps through this approach additional people will become available to assume command of new study clubs and to carry the lamp of learning when one of our present mentors is no longer available.

Directors with an eye to the future must be sensitive to the contemporary needs of the young practitioner. We must attract new members among recent dental school graduates to assure the revitalization and future life of our present study clubs. New groups can be formed. New teaching methods and styles can be introduced and tested while the strengths of the past are enhanced. Creative and inspiring teaching is imperative.

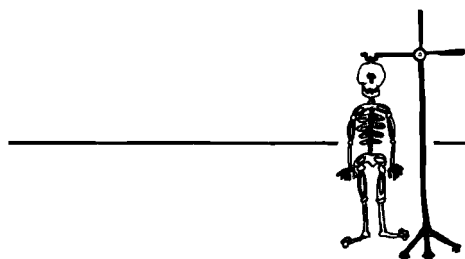
The idealistic young practitioner will certainly be attracted by the many challenging aspects of study club membership. A dentist, regardless of his previous accomplishments, can strive toward actualizing his professional potential in a study club. The atmosphere of excellence, peer approval, challenge of new concepts, theory and idea examination by colleagues, organization and discipline, comparison of alternative technics, and



interpersonal comradery catalyze individual and group development. The dental profession will continue to benefit from the study club approach to continuing dental education.

#### REFERENCES

1. Grainer, David A., "What are you operative dentistry and why are they saying all those nasty things about you?" *J. Amer. Acad. Gold Foil Oper.* 15:67-73. September 1972.



Training is everything. The peach was once a bitter almond; the cauliflower is nothing but cabbage with a college education. — *Mark Twain*

The things taught in schools and colleges are not an education, but the means of an education. — *Emerson*

## A philosophy and some technics of operative dentistry of vital interest to the general practitioner

You will note that the word, "philosophy", precedes the word, "technics" in the title of this presentation. This could be the real key to patient service. The greatest in technical skill and effort, without a sound personal philosophy, would only produce a hollow professional man.

It is good that the general dentist places emphasis on the prevention of dental disease. It is important that we study the science of occlusion, and appreciate the contours and esthetics of teeth. We must consider the expanding services and training of dental auxiliaries. Most dentists are aware of a need for improved cavity preparations and better restorative procedures. If we agree that these statements are valid, then any realistic and productive discussion must be based on a sound professional philosophy.

Scientific knowledge within the profession is vast and will constantly increase, but it will be of little value until it is related directly to the dental patient. To accomplish this, the dentist must very often be able to transfer his services and knowledge by means of his finger-tips to the patient. Of course, the dentist must be able to diagnose dental disease, prevent it, treat it, and finally be able to rehabilitate the dental organ.

Very often diseased and damaged teeth are the motivating factor that guides the patient into the dental office. And when he comes through that door marked, "Dentist," he has the right to presume he will find a person adequately prepared in the art of dentistry to render a service that will rehabilitate the dental organ so that it will serve for a considerable length of time. When this average patient enters the dental office, at a certain point,

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*Presented to the First Annual Meeting of the Academy of Operative Dentistry, October 26, 1972, San Francisco, California.*

*Dr. Stebner was born and raised in Wyoming. He attended college at the University of Denver and the School of Dentistry at Creighton University. He is a Life Member of the Woodbury Study Club, Past President of the American Academy of Gold Foil Operators, and the Wyoming State Dental Association. He is a Fellow of the American College of Dentists and International College of Dentists, and a member of the Academy of Restorative Dentistry*

no beneficial prescription can be written, nor can any scientific dialogue be recited, that will take the place of the working dentist who has been well trained in the art of operative dentistry. We hear much concerning diagnosis, but it is often of little value without effective treatment.

Well-planned and effectively constructed operative procedures will very often prevent the loss of teeth for a lifetime. On the other hand, we have all observed the unethical and shoddy philosophy of built-in obsolescence in many of the appliances we buy. Such actions are even more reprehensible if they are practiced, even unconsciously, by dentists. Whenever possible, we must avoid the construction of restoration that we know will fail. Too often they are replaced with other failures. The best we can do with the most ideal material and technic is none too good.

No one will argue that prevention must not be our prime effort, but those who place their total faith in this approach fail by not understanding human nature. Ovid, the Roman philosopher of the second century A.D. said, "*Video meliora proboque, deteriora sequor.*" which means, "I know the better and I want it, but I continue to follow the worse." Because of human desires, weaknesses and negative attitudes, patients often fail to follow the advice and warnings to prevent disease. The influence of smoking upon coronary disease and lung cancer is well documented, but still the sale of tobacco increases. If so many people refuse to follow the advice of their physicians regarding these killer diseases, we in the dental profession must accept the fact that many of our patients will not eliminate concentrated carbohydrates from their diet, nor routinely floss dental plaques. Few will consider their teeth to be of more importance than their lungs and their heart — or their very lives!

Eager young dental students can acquire a vast amount of knowledge of dental science in a surprisingly short period of time. But from such a foundation wisdom can only blossom by thoughtful cultivation with the elements of time and experience.

Once I asked Charlie Woodbury why I should not deviate from nature's anatomical form while I carved a dental restoration. He admitted that he could not understand the possible functions for many subtle anatomical details noted in natural teeth, but as his years passed by he sometimes discovered good reason for some of these details. Perhaps we should often simply copy nature rather than try to second-guess her. I have done this to some degree with my inlay technic. If a tooth is in good health, pulpally and periodontally, I find that I can usually maintain that dental health, function, and comfort by simply duplicating what nature has formed and the patient has acquired through years of use. This treatment philosophy permits me to maintain a practice free from the mysteries of complicated articulators. It seems that the more I simplify my procedures the more successful and happier I become.

Regardless of the greatest simplification possible, the practice of general, and particularly operative, dentistry is a most arduous and difficult endeavor. So I am amused and disturbed when dental educators advocate that quickly trained auxiliaries prepare cavities and construct amalgam fillings. Before they do this, they should review the efforts of many young dentists operating on their first state board examinations. It is also unrealistic for

them to suggest radical reduction of clinical hours for the student who should be eager to learn more of the technics of operative dentistry before he begins his practice. Previous generations of dentists apparently did not learn operative procedures too well for the benefit of their patients — even when there was less educational material available and more man-hours of clinical training available.

Even if we were to be successful beyond our wildest dreams, in the prevention of dental caries, it will take the concentrated effort of this generation of dentists the rest of their lives to replace all of the defective dental restorations, and to repair the many weakened and fracturing teeth. Beyond this work load is the need for operative services to restore tooth structure being eroded by mouthwashes, breath sweeteners, and the abrasion due to excessive wear, which afflicts many of our patients.

To meet this challenge, the operative dentist must have much help with new and improved materials and technics. But even more important — we must be examples of dedicated individuals whose talents and training are focused toward the health, function and preservation of our patient's teeth. I believe that today, and in the foreseeable future, the most effective tool will be operative dentistry.

The great man learns what he wants to learn; the mediocre man can learn what others think he should learn. — *George Moore*

Richard Adelson, D.D.S.

Peter R. Cunningham, D.D.S., Ed. M.

## Four-handed application of the rubber dam by the expanded duty dental auxiliary and a dental assistant

The material in this paper is a result of consultation and collaboration among all of the members of the Rubber Dam Committee of the American Academy of Gold Foil Operators. These committee members are Peter R. Cunningham, Chairman, Richard Adelson, Hunter A. Brinker, Richard J. Elderton, Loren V. Hickey, David L. Moore, and James E. Newman. The authors would like to acknowledge the participation of these committee members and thank them for their assistance and guidance.

The preparation and placement of the rubber dam can be accomplished by one person, but ideally it should be undertaken as a four-handed procedure. The procedure does not have to involve a dentist and thanks to the liberalization of the Dental Practice Acts in many states dental assistants in many areas are now legally allowed to perform this procedure. Remember, however, that it is no easier for a dental assistant to place a rubber dam without help than it is for you. It should still be done as a four-handed procedure. There are certain basic steps to be taken in the application of the rubber dam whether it is being applied by a dentist, an expanded duty dental auxiliary, or an assistant. This article will describe the task as performed by the EDDA with use of a trained assistant.

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*Dr. Adelson is Assistant Professor of Clinical Restorative Dentistry and Assistant to the Dean for Continuing Education at the School of Dental Medicine, State University of New York at Stony Brook. He is, of course, an active member of the American Academy of Gold Foil Operators.*

*Dr. Cunningham is an Associate Professor of Operative Dentistry at the State University of New York at Buffalo, School of Dentistry. He attended the University of New Mexico and received his D.D.S. degree from Loyola University School of Dentistry in Chicago. Following graduation, he served as an Assistant Dental Officer in the U.S. Navy for five years. He was awarded a fellowship by the American Fund for Dental Education and received his Master's Degree in Education in 1971.*

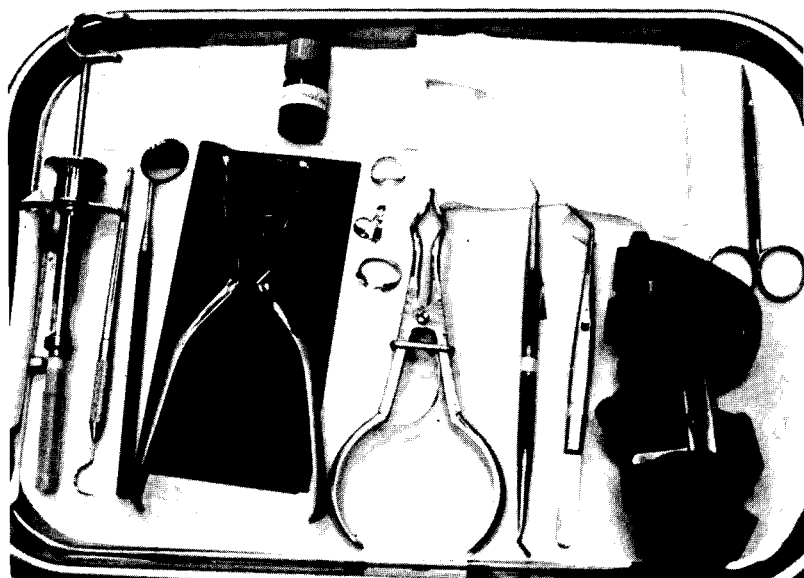


Figure 1. *Simplified anesthesia and rubber dam armamentarium.*

While the EDDA is occupied elsewhere the assistant seats the patient, places the bib and adjusts the chair. She places the instrument trays, (Fig. 1) in position for use and calls the EDDA. While the EDDA is examining the patient she describes for the assistant the extent of the field to be isolated and any alterations to be made in the usual positioning of holes in the rubber dam. In most cases it is desirable to isolate an entire quadrant but there are circumstances in which it would not be wise to do so. When contacts are extremely tight due to crowding and malalignment of the teeth or in cases having short clinical crowns and little or no contact, it is often difficult and impractical to isolate an entire quadrant. In these cases only the teeth to be operated upon and the immediately adjacent teeth are isolated, though we must realize that access and visibility are somewhat reduced when the field of isolation is smaller.

After examination of the patient, the EDDA applies topical anesthetic to the injection site, during which time the assistant selects the pre-stamped sheet of rubber dam and punches it according to instructions. The assistant applies lubricant to the dam on the tissue side of the holes to aid in passing the rubber dam through the contacts. During the injection of the local anesthetic the assistant selects the clamp as directed and engages the clamp with the forceps. She also attaches a long ligature to the clamp as a precautionary measure to prevent swallowing or aspiration. (While you may not agree with local anesthetic being administered by EDDA's, this procedure will be allowed by some states, and teaching materials are being prepared to instruct the EDDA's in the techniques of administering local anesthetics.) When anesthetic administration is complete the assistant passes the EDDA the clamp forceps





Figure 2. *Four hands allow this placement to proceed rapidly and without the edges of the rubber dam interfering with the operator's vision.*

with the clamp in the proper position for placement. The clamp is placed on the anchor tooth and it is checked to see if it satisfies the criteria for a stable clamp. If all four points of the jaws of the clamp are contacting the tooth at the same time, and this contact is below the height of contour, the clamp will be stable. If these criteria are not satisfied, she must either make appropriate modifications or select another clamp. The assistant next hands the EDDA the punched and lubricated rubber dam and holds the corners of the rubber dam out of the way as the EDDA passes the rubber dam over the clamp and through the easy contacts (Fig. 2). As you all know, the secret to this, which we must teach to our assistants who will be placing rubber dams, lies in placing only an edge of the interseptal rubber into the contact and not allowing this interseptal rubber to bunch up, but rather knifing it through the contact.

When the easy contacts have been passed, the patient's lips are lightly lubricated with silicare, a rubber dam napkin is placed and the EDDA and the assistant working together place the rubber dam holder (Fig. 3). We would encourage the use of a strap-type holder for most operations as the straps enable us to greatly increase the access and visibility in the operating field by retracting soft tissue.

After the holder is placed and adjusted, the operating team can pass the rubber dam through the more difficult contacts. Slight wedging of the teeth with a thumbnail will often allow the rubber dam to slip through a contact faster than using dental floss. If it is necessary to use dental floss or tape

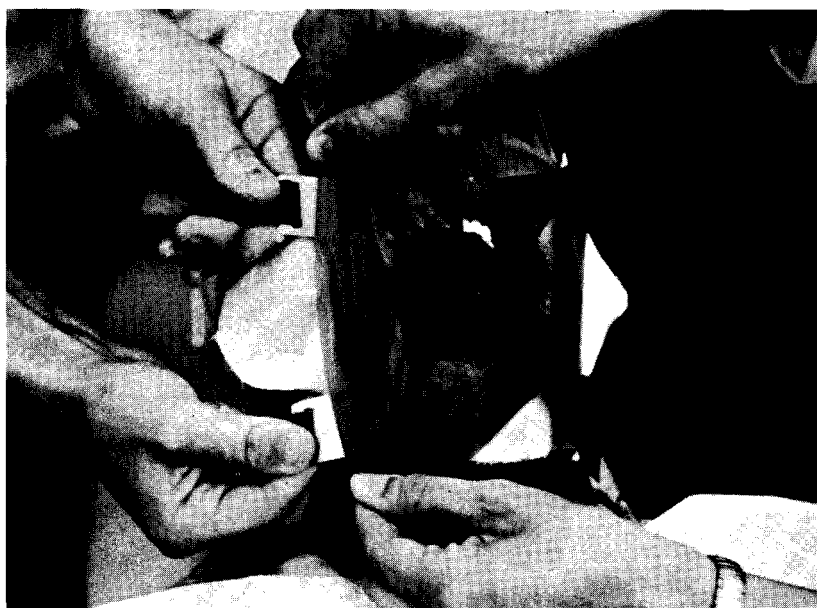


Figure 3. *Four handed placement of this Cunningham-Hygienic holder allows for positive and rapid retraction of soft tissues, increasing access and visibility in the operating area.*

for the passage of some contacts it can be a simple procedure if performed correctly. With the assistant leading one edge of the interseptal rubber into the contact and placing tension on the rubber dam without bunching it, the EDDA carries the tape and some of the rubber dam through the contact. Looping the floss over, double flossing the contact, and sliding the floss out underneath the contact will carry more rubber dam through and will eliminate the pulling of the rubber dam back through the contact by the dental floss. The EDDA must be very cautious in carrying out this procedure so that she will not damage the gingival tissue with the dental floss. Work with the fingers very close together with good finger rests and in control at all times.

When all contacts have been passed, the assistant passes the EDDA a mirror and plastic instrument and, using the air syringe, works with the EDDA to invert the rubber dam as required (Fig. 4).

If silicate restorations are present, the assistant now wets a cotton pellet with copalite and passes it to the EDDA who coats the silicate restorations to prevent dehydration. It is preferable to use copalite rather than vaseline, cocoa butter, or silicote, since these latter materials will contaminate instruments, cavity preparations, etc. in the operating field.

If interproximal cavities are to be prepared, the assistant passes wooden wedges to the EDDA with cotton pliers. The EDDA places these wedges in the interproximal areas to be prepared in order to depress the gingival tissue and the rubber dam to prevent the laceration of either. It often facilitates

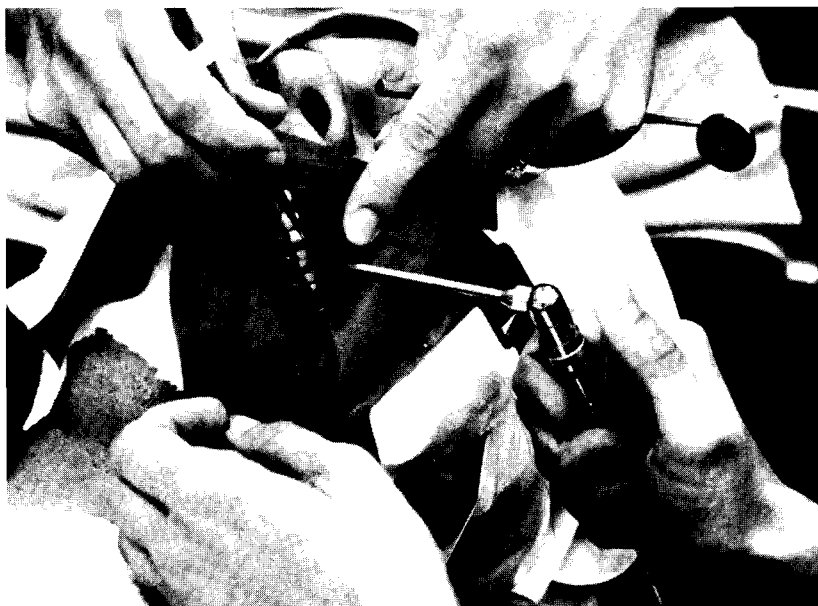


Figure 4. With EDDA and assistant working together, inversion of the dam is rapid insuring a complete sealing from moisture.

the placement of these wedges if the tip of the wedge is lightly coated with rubber dam lubricant.

In most instances, the saliva ejector is a nuisance and is somewhat uncomfortable to the patient. Most patients, if told ahead of time that they will have nothing in their mouths but their own saliva, and that if they begin to fill up with saliva, they can swallow, will have no difficulty in doing so, and get along well without a saliva ejector. For the occasional patient who feels the need of a saliva ejector, the assistant passes the EDDA a pair of scissors and the EDDA picks up the rubber dam with the cotton pliers in an area removed from the immediate field of operation and snips a small hole with the scissors. The assistant then lubricates the tip of a saliva ejector with rubber dam lubricant and places the lubricated saliva ejector through the hole in the rubber dam.

There are several alternate methods for placing the rubber dam and we should, perhaps, consider a couple of these since they may be more practical in some situations. In alternate method A, the EDDA still examines the patient and tells the assistant the extent of the field for isolation and any alterations to be made in the usual punching of the rubber dam. While the EDDA is placing the topical anesthetic and injecting a local anesthetic, the assistant punches and lubricates the rubber dam, selects a clamp as directed, and engages it with the clamp forcep. The assistant places the bow of the selected clamp through the hole which has been punched for the anchor tooth and passes the clamp forceps with the clamp and rubber dam to the EDDA (Fig.

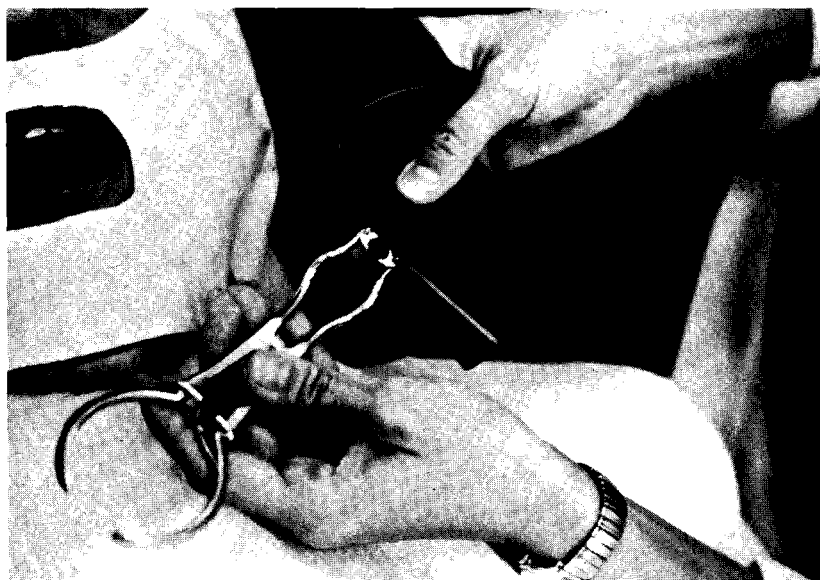


Figure 5. *This alternate method of carrying the clamp and rubber dam to the mouth together is preferred by some operators and is especially useful in cases where the ramus closely approximates the facial surface of the maxillary molars.*



Figure 6. *Some cases allow the placement of the rubber dam first followed by seating of the clamp. Access for properly holding the dam over the anchor tooth determines the feasibility of this technic of placement.*

5). If the dam is applied in this manner it is not necessary to place a ligature on the clamp. While the assistant is holding the rubber dam out of the EDDA's field of vision, the EDDA places the clamp on the anchor tooth, as usual, and carries the rubber dam over the jaws of the clamp. Working as a team they then proceed to isolate the field as outlined in the basic procedure.

The second alternate method is, to my knowledge, applicable only to a maxillary application. The initial steps by the EDDA and the assistant are the same. In other words, the examination, application of anesthetic and injection of anesthetic, punching of the rubber dam, selection of the clamp, and engaging of the clamp with the forceps. This method varies in that now the assistant passes the EDDA the lubricated rubber dam before the clamp has been placed. The EDDA places the rubber dam over the anchor tooth and passes it through one, two, or more contacts anterior to the anchor tooth, while the assistant holds the corners of the rubber dam out of the way. The assistant then passes the EDDA the clamp forceps with the clamp. The EDDA holds the rubber dam over the anchor tooth with the index and middle fingers of the left hand and places the clamp on the anchor tooth with the right hand (Fig. 6). The EDDA and assistant then continue the application of the rubber dam in the usual manner. This technic may be applicable to the mandibular application if the assistant is trained to place the clamp while the EDDA holds the rubber dam in place over the anchor tooth.

With the rubber dam in place the restorative procedure is completed, by the dentist and for the EDDA according to the legal limitations of the particular state.

Following the restorative procedure, the assistant passes the EDDA the



Figure 7. Care must be exercised when cutting the rubber dam to avoid injuring soft tissues. It is usually wise to place a finger between the rubber dam and the soft tissue during this procedure.

clamp forceps and the EDDA removes the clamp. A scissors is passed next, and while the assistant stretches the rubber dam and places a finger between the tissue and the dam, the EDDA cuts each interseptal piece of rubber (Fig. 7). The cutting of the rubber dam may be done either on the facial or lingual side. The EDDA and the assistant now remove the rubber dam, the napkin, and the holder, the assistant, using the rubber dam napkin to wipe the patient's mouth. The assistant then passes the EDDA a mirror and explorer and while the EDDA is examining the operating field for remnants of rubber dam, the assistant checks the rubber dam which has just been removed and informs the EDDA of any missing pieces. If any pieces of rubber dam remain in the mouth, they are removed by the explorer or with dental tape if required. After ascertaining that all bits of rubber dam or other debris have been removed, the EDDA lightly massages the tissues in the area of operation in order to stimulate circulation. The patient's mouth is then rinsed by the assistant with the water spray or mouthwash. Articulating paper is used to insure that the newly placed restorations are not in traumatic occlusion and a final check of the restoration is made. The patient is dismissed after having high quality restorative dentistry performed by the dental operating team.

## Conclusions

Use of the rubber dam is synonymous with quality restorative care. The application of the rubber dam can be an easy procedure when performed by well-trained operators and assistants, working as a team using four-handed procedures. The operator need not be a dentist for a dental assistant can be trained to competently perform the placement of the rubber dam.

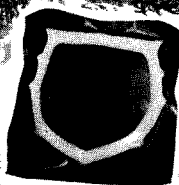
## REFERENCES

- Cunningham, P. R., Osborne, J., and L. Kaye, "Controlling the Operating Field by Use of the Rubber Dam," State University of New York at Buffalo, 1969.
- Ingraham, Rex, Koser, John R., "An Atlas of Gold Foil and Rubber Dam Procedures," 3d ed, Los Angeles, Department of Operative Dentistry, University of Southern California School of Dentistry, 1965.
- Gilmore, H. William, "Textbook of Operative Dentistry," The C. V. Mosby Company, St. Louis, 1967.
- Ireland, Leon, "The Rubber Dam, Its Advantages and Application," *The Texas Dental Journal*, March, 1962.
- Stebner, C. M., "Economy of Sound Fundamentals in Operative Dentistry," *Journal of the American Dental Association*, 49:294, January, 1937.



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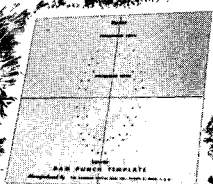
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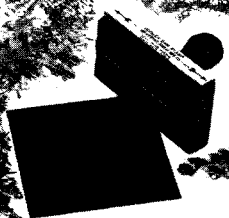
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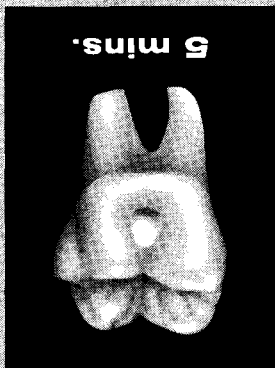


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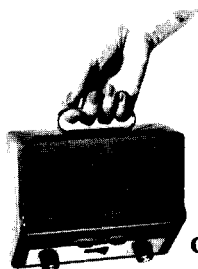
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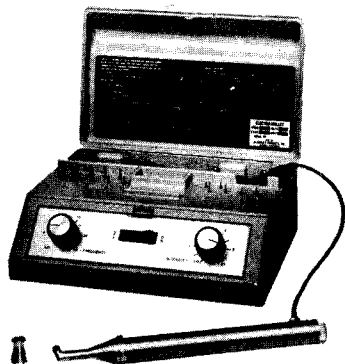
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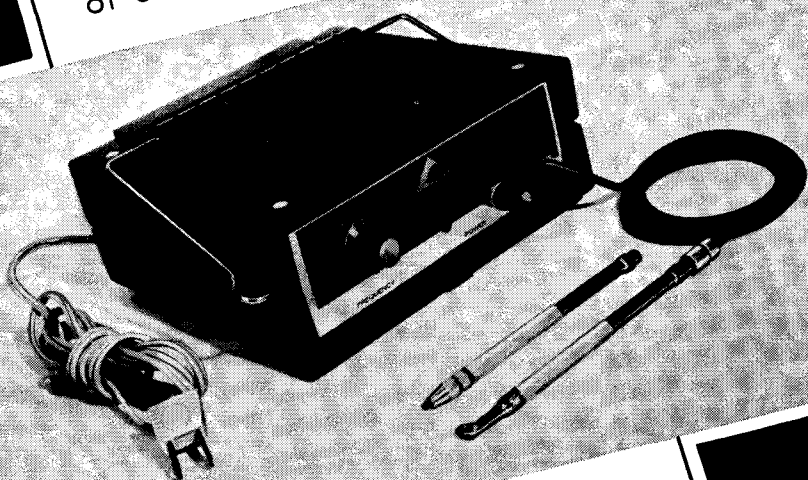
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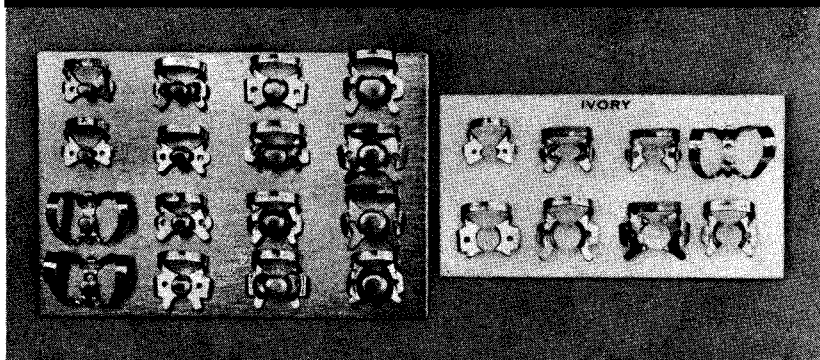


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