



NEWSLETTER

THE AMERICAN COLLEGE OF PROSTHODONTISTS

AN ORGANIZATION OF SPECIALISTS
DEDICATED TO SERVING THE PUBLIC

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PRESIDENT'S MESSAGE

It is hard to believe that there are only two months left of my presidency which has been one of the highlights of my life. I am pleased that so many of you have worked to make this a momentous year. In a whirlwind of activity in San Antonio, four days passed like minutes and the College now has an updated set of goals and objectives (subject to your approval). These goals and objectives continue to be the best of the original ones and add many new items that need your support; and that does mean you!

As laudable as the goals may be, they are of no value unless action is taken to achieve them. Some of the goals will need the active support of everyone if we are going to successfully execute them. There can be no doubt that ultimately College dues must be increased so that the challenges facing our speciality can be met. This action will relate to strategies which must be developed to carry out the objectives and budgeting will be part of these strategies. Ultimately it is you who will determine how much labor you will devote to the goals and how much money you feel is warranted for their achievement. In any case, the time frame for goal attainment will be proportional to the effort expended. This year we identified the goals/objectives and now we must decide how the objectives will be achieved.

I personally believe that this year has been successful in part because of our improved relations with the Federation of Prosthodontic Organizations. Last October the College reaffirmed its desire to be an active supporting member of the FPO and as such stands ready to respond to any assignment or request for assistance. We are an or-



ganization totally composed of specialists and therefore the speciality must be our primary concern. We recognize that other FPO member organizations are also concerned about the speciality and hope the FPO will act as the liaison agent to coordinate everyone's efforts. We realize that the College must support the discipline and stand ready to help other FPO member organizations in those activities. We are a young group with great energy and a desire to accomplish things and we hope the FPO will utilize our resources so that the College will truly feel that it is a member. As a loyal FPO member, what can we do to promote the speciality?

I can not end my remarks without urging all members to attend our annual meeting in San Diego. Don Garver, Mo Mazaheri, Alex Koper, and many others have worked both long and hard to plan a great meeting. It will be an active meeting with scientific activities for three full days. Please note that two new features have been added to this meeting: table clinics and a meeting of the leadership of the Sections.

My sincere thanks and appreciation goes to all of you who have made this year possible.

— Stephen O. Bartlett

SIX RESEARCH CONTEST SEMI-FINALISTS NAMED

Dr. Thomas P. Sweeney, Chairman of the Research Committee of the College, has announced that the semi-finalists in the John J. Sharry Prosthodontic Research Competition have been chosen. They and the title of their papers are listed below:

1. C. Wayne Caswell, D.D.S., M.S.
"Comparative Study of Bond Strengths of Three Abrasion Resistant Plastic Denture Teeth when Bonded to a Cross-Linked and a Grafted, Cross-Linked Denture Base Material"
2. Frederick A. Marsaw, D.D.S.
"A Volumetric Determination of Setting Expansion in Casting Investment"
3. James W. Simpson, D.D.S.
"A Study of Arbitrary Mandibular Hinge Axis Locations"
4. Kenneth S. Hebel, D.D.S.
"The Abrasion of Enamel and Composite Resin by Partial Denture Clasp"
5. Steven A. Aquilino, D.D.S., M.S.
"Evaluation of Condylar Position From Temporomandibular Joint Radiographs"
6. Ronald J. Shupe, D.D.S.
"Effects of Anterior Guidance on Jaw Muscle Activity"

Three finalists will be chosen from those listed above. They will present their work to the College members during the Scientific Session at San Diego. From these the winner of the competition will be named.

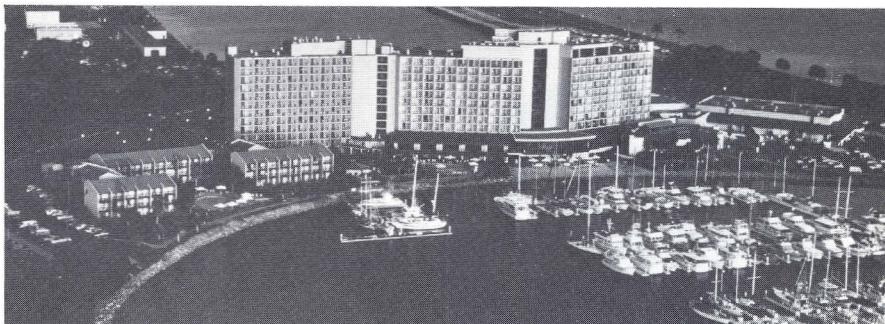
SCIENTIFIC PROGRAM AMERICAN COLLEGE OF PROSTHODONTICS 14th ANNUAL SESSION SAN DIEGO, CALIFORNIA

Wednesday, September 28, 1983

- 8:00** Welcome by Dr. Stephen O. Bartlett, President
- 8:15** Dr. Ronald E. Jordan—"Conservative Restoration of Anterior Teeth in the Young Patient"
- 9:05** Dr. Ronald D. Baker-Pathologic Lesions of the Head and Neck-Their Surgical and Prosthetic Management"
- 9:50** Break
- 10:20** Dr. Barrie Gillings—"Magnetic Retention for Overdentures"
- 11:10** Dr. Thomas J. Balshi—"Prosthodontics: The Specialty in Private Practice"
- 12:00** Private Practice Luncheon & Seminar

Thursday, September 29, 1983

- 8:00** Dr. Richard J. Grisius—"The Prosthodontic Aspects of Ridge Augmentation Procedures"



Meeting Site

- 8:50** Dr. William R. Priester, III—"Provisional and Transitional Splinting"
- 9:35** Break
- 10:00** John J. Sharry Prosthodontic Research Competition
- 11:05** Dr. David N. Firtell—"The Mandibular Discontinuity Defect-Evaluation and Treatment"
- 12:00** Luncheon
Luncheon Speaker: Dr. Michael Dean, Hypnotist
- 2:30** Annual Business Meeting
- Friday, September 30, 1983**
- 7:15** Table Clinics
- 8:00** Dr. Dwight J. Castleberry—"A Clinical Study of Alveolar Ridge Augmentation Utilizing Durapatite"

- 8:50** Dr. Russell H. Lee—"Conservative Rehabilitation of the Dental Arches"
- 9:35** Break (Table Clinics will continue)
- 10:00** Dr. Harry M. Baddour—"Head and Neck Abnormalities with Dental Significance"
- 11:05** Dr. William H. Pruden, II—"Oral Rehabilitation-A Prosthodontic Sub Specialty"
- 12:30** Affiliate/Associate Luncheon & Review Seminar
Dr. J. Crystal Baxter, Moderator
- 1:30** Educators/Mentors Seminar
Dr. William J. Pagan, Moderator
- 2:00** Regional Sections Executive Committees Meeting
Dr. Thomas J. Balshi, Moderator

NEW AMERICAN COLLEGE OF PROSTHODONTISTS ENDORSED INSURANCE PROGRAM

The Executive Council of the American College of Prosthodontists is pleased to announce the availability of a new insurance program being offered to our members. This program has been available to other dental specialty groups and has recently been made available to the College. The Council believes you will find this program unique from other association plans in that most of the plans offered are non-cancellable and guaranteed renewable (you own and control your plan).

The plans will be administered by Treloar and Heisel, Inc. who currently are the administrators for the American Association of Oral and Maxillofacial Surgeons, the American Association of Endodontists and the American Academy of Periodontology.

The highlights of the program are as follows:

- 1. Disability Income Plan**
 - Non-Cancellable and Guaranteed Renewable
 - Guaranteed level premiums to age 65

- Specialty definition of total disability (Prosthodontics)
- Up to \$8,000 of Monthly Benefits
- Lifetime accident and sickness
- Residual benefits (long-term partial)
- Cost of Living benefits
- Social Security benefits

2. Professional Overhead Expense Plan

- Non-Cancellable and Guaranteed Renewable
- Level premiums to age 65
- Specialty definition of total disability (Prosthodontics)
- Up to \$10,000 a month available

3. Term Life Insurance

- Non-Cancellable and Guaranteed Renewable
- Premiums guaranteed (5 years step-rate)
- Unlimited amounts available
- Available to spouse and children

4. Accidental Death & Dismemberment Plan

- High limits available (\$250,000)
- Family Plan available
- Extremely low rates

5. Employee Plan

- Disability Income benefits
- Term Life Insurance available
- May be used for corporate group insurance and fringe benefit plan

You will receive a mailing of Brochures from Treloar & Heisel in the very near future outlining the salient features of the plans available. Also, Treloar & Heisel will be in attendance at your Annual Meeting in San Diego, California to answer questions and for discussion with you.

NEWSLETTER The American College of Prosthodontists

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FROM THE SECRETARY

As you read through this issue of the **Newsletter** you will see evidence of the considerable amount of work that was accomplished at the marathon four day meeting of the Executive Council, Committee Chairmen and Past Presidents in San Antonio, on June 9-12, 1983. Two full days were devoted to defining and refining the goals and objectives of the College which will serve as the blue print for action for the next several years. One more important step must be taken and that is to attain the approval of the goals and objectives by the membership. Each of us should carefully study the goals and objectives and if we do not believe they reflect the direction the College should be moving, the time to speak out is at the Annual Business Meeting in San Diego.

Several other important decisions will be made at the Business Meeting. As an example, the Executive Council voted to establish a new policy which will allow commercial exhibits at the meetings because of the income that can be gained for the College. However, the final decision is made by the membership and we have an opportunity to express our opinions and to vote on this issue at the Business Meeting. Another issue to be discussed is whether we want to continue to tie our meeting to the time and geographic location of the ADA. If a mid-January meeting in an area with rustling palm trees is more to your liking, let it be known at the meeting.

Along with preparing the Minutes of the Executive Council and Business Meetings, the Secretary has the task of preparing a "chore list" following each meeting detailing the specific jobs that individuals or committees have acquired as a result of the meeting. A list of seventy chore items resulted from the June meeting which would indicate that it was a very productive meeting and that many people are going to be awfully busy between now and the San Diego Annual Official Session.

New Diplomates and new Fellows will be sporting distinctive ribbons on their name badges at the San Diego Meeting. Take time to shake their hands and congratulate them because they deserve to be recognized for their tremendous accomplishments.

The list of candidates for this year's election can be found elsewhere in the **Newsletter**. I personally feel that the candidates are extremely well qualified and should be elected. However, as

Secretary I should inform you that other nominations can be made. "Nominations can also be made by any active Fellow or Associate of the college provided such nominations are made in writing, signed by the nominee, endorsed by two other active Fellows or Associates, and delivered to the Secretary twenty-four hours in advance of the election."

The membership of the College is now 1340 which includes more than 85% of the Diplomates of the American Board of Prosthodontics. We now have twelve state sections and two more states are working on establishing their constitutions and by-laws. Several of the state sections have made great advances in the areas of peer review and third party payments. The American College of Prosthodontists continues to grow and is becoming increasingly more effective as the representative of the speciality of prosthodontics.

— William A. Kuebker



San Diego Skyline

SAN DIEGO WELCOMES THE ACP

All members are urged to attend the 1983 Annual Official Session of the College.

In addition to an outstanding scientific program, a visitor can bask in San Diego's near perfect climate, visit world famous restaurants, see the finest zoo in the world, go to Tijianna, etc., etc.

Though the fiscal year encompasses two College meetings, all Fellows, Associates and Affiliates should make every effort to avail themselves of the opportunity to participate in the finest college meeting yet!

DuFORT AND DiPIETRO NAMED 15th ANNUAL SESSION CO-CHAIRMEN

Dr. Charles R. DuFort and Dr. Girard J. DiPietro have been chosen by President-Elect Jack D. Preston to co-chair the 15th Annual Official Session of the College. The meeting will take place at the Hyatt Regency Nashville in Nashville, Tennessee from October 17-19, 1984. The Local Arrangements Chairman is Dr. Ronald P. LuBovich of Nashville.

Dr. DuFort is currently head of training for all laboratory technicians in the United States Air Force. His address is the School of Health Care Sciences, Sheppard Air Force Base, Wichita Falls, Texas 76302.

Dr. DiPietro is the Chairman of Graduate Prosthodontics at Emory University. His address is 1462 Clifton Road, N.E., Atlanta, Georgia 30322.

AFDH TO SUPPORT THREE PROSTHODONTIC FELLOWSHIPS IN 1983-84

The American Fund for Dental Health has announced the names of the successful applicants for Dental Teacher Training Fellowships for the 1983-84 academic year. This program, begun in 1958, has awarded over 200 fellowships to date, at a cost of approximately \$2 million dollars. It is intended to help assure the continued availability of qualified instructors for the nation's dental schools, and is supported in large measure by memorials and other restricted gifts. Three of the eleven fellowships granted were in the field of prosthodontics. The sponsors of the fellowships and the awardees are listed below:

The Mr. and Mrs. L. M. Anderson, Sr. Memorial Fellowship- Larry Breeding, D.D.S., Medical College of Georgia;

The American Dental Trade Association- John Holmes, D.D.S., University of North Carolina;

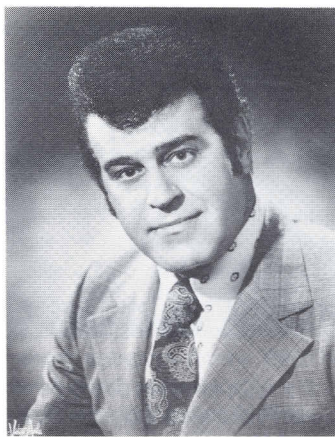
The George H. Whitley Family Memorial Fellowship- Richard Seals, D.D.S., The University of Texas Health Science Center at San Antonio.

WORLD'S FOREMOST HYPNOTIST TO SPEAK AT ANNUAL LUNCHEON

Dr. Michael Dean, the world's foremost hypnotist, will be the speaker during the ACP Annual Luncheon on Thursday, September 29, 1983. Dr. Dean received his Bachelor's Degree from the University of Minnesota, his Master's Degree from Columbia University and his Doctorate from Northwestern University. As you can see, Dr. Dean is more than a hypnotist.

Learning hypnosis in a parapsychology class as an undergraduate, Dean used the knowledge to put on small shows at local night clubs. His act eventually grew to where he could earn a very nice living in this manner.

Dean also is one of the gurus of the self-improvement movement. Besides developing countless cassetts, records and books on the subject, he lectures at Universities and Corporations and hosts his own seminars on the principles of success motivation.



Dr. Michael Dean - Luncheon Speaker

For all his many activities, Dean's stage show is still of primary interest to him. It is there that he can combine his scholarly background and his desire to help people improve themselves with his love of entertaining.

If you have never seen or heard about stage hypnotism, especially the brand performed by Dean, don't fail to attend the luncheon. It will be one of the most unique experiences you'll ever have.

SCIENTIFIC ARTICLES PUBLISHED IN NEWSLETTER

The Executive Council in San Antonio authorized the Editor of the **Newsletter** to publish scientific papers if they were available.

In this issue you will find two such articles authored by College members.

These were submitted to the Chairman of the Research Committee, Dr. Thomas P. Sweeney, who provided scientific review. These papers and any published in the foreseeable future will remain the property of the authors and permission to reprint these writings must be obtained from them.

Comments concerning this feature are welcomed by the Editor.

College members who have information they would like to share with the prosthodontic community may submit original articles to the **Newsletter** for prompt publication following review by the Research Committee.

PRIVATE PRACTICE SEMINAR LUNCHEON FEATURES DR. JOHN FIELD

The Annual Private Practice Seminar will begin with a luncheon at 12 noon on Wednesday, September 28, 1983, and be immediately followed by the program which will terminate at 5:00 p.m.

The luncheon speaker, Dr. John Field, will address the problems associated with pre-paid dental insurance programs. Following Dr. Field, the practice management team of Bent Erickson and Shurli Wilkinson will present the keynote address for the afternoon seminar.

Mr. Erickson's topic will be "How to Find, Hire and Keep the Right Employee". Ms. Wilkinson will speak on "How to Increase Production Through Effective Appointment Scheduling". The presentations will be geared to presenting useful information which attendees will be able to immediately apply in their practices.

Mr. Erickson and Ms. Wilkinson will act as facilitators for the workshop format to follow. The attendees will divide into four work groups, chaired by Mr. Erickson, Ms. Wilkinson, Dr. David Eggleston and Dr. Alex Koper.

SPECTACULAR HARBOR CRUISE FEATURED FOR SAN DIEGO

Once again the attendees at the 1983 Annual Meeting have an opportunity to strengthen their "sea legs" and qualify for sea pay. Wednesday, September 28, 1983, a Harbor Cruise and Steak Cook Out at the San Diego Naval

Officers Club will take place. The Cruise Boat will embark all passengers at the Harbor Island Sheraton Boat Dock, cruise one of the finest and most scenic harbors in America, and off-load participants at the Naval Officers pier for a steak dinner at the Admiral Kidd Club. Alex Koper and Jerry Ballard have also planned many other fine events for members, visitors, guests and their families.

SEE YOU IN SAN DIEGO!



Scenes from San Diego Harbor

TABLE CLINICS INCLUDED IN SCIENTIFIC PROGRAM

For the first time in the history of the College, table clinics will be presented during the annual meeting professional program. Friday morning, September 30, 1983, a table clinic session and continental breakfast will commence at 7:00 a.m. The clinics will close at 8:00 a.m. and reopen during an extended morning coffee break. This format will enable all attendees to hear the morning speakers and still allow approximately 1 hour and 45 minutes to visit the different table clinics.

Any doctor desiring to present a table clinic should contact Dr. Don Garver, Dr. M. Mazaheri or the ACP Central Office.

F.P.O. DELEGATION

The F.P.O. House of Delegates will meet in Chicago on September 15-16, 1983. The College will be represented by President Stephen O. Bartlett, President Elect Jack D. Preston, and Secretary William A. Kuebker.

Issues of interest to College members include - presentation for ratification by the House of Delegates of the new F.P.O. Council for Liaison with the American Board of Prosthodontics.

Dr. Gene King, the College's nominee for membership on the American Board of Prosthodontics will be considered by the House of Delegates.

HAVE YOU KEPT UP?

The Fourth Annual Self Assessment Examination will be distributed to registrants at the Annual Official Session of the College in San Diego in the Fall.

Dr. J. Crystal Baxter, Chairman of the Education and Advancement Committee, announced that the examination has been prepared and will consist of 25 facsimile questions from previous American Board of Prosthodontics Examinations.

Answers to the questions will be published in the Newsletter following the Annual Official Session.

Dr. Baxter also announced that the revised Study Guide for Certification will soon be available with 1981 and 1982 facsimile Board questions as well as recent material on the history of the College.

If you haven't taken the Self Assessment Examination before — **try it, you'll like it!**

WASHINGTON SCENE

The following are quotations from the Washington News Bulletin; Volume 16, Number 5, June, 1983, a publication of the American Dental Association.

Health Taxes: The Senate Finance Committee held the first hearings on S. 640, The Administration's proposal to tax employees on certain employer health benefits contributions. All dentists are urged, if they have not already done so, to contact their Senators and Congressmen expressing their views on this issue. Dentists also continue to respond extremely well in urging their patients to write in opposition.

The proposal would tax employees on employer contributions above \$175 a month for family coverage and \$70 a month for individual coverage. The stated purposes of this legislation are to raise revenues and to cause employees to modify their insurance benefits to less comprehensive coverage. The proponents argue that increased employee financial participation in their health care will reduce utilization and control health care costs.

All dentists are urged to stress to their Senators and Representatives that benefit shifts which do occur will be from cost effective coverage such as dental care which is not contributing to the spiraling health cost problems. Individuals will continue full coverage for expensive hospital and major medical services. These shifts from benefits such as dental care will reduce the employer contributions, thereby reducing or perhaps eliminating the revenue aspects of this legislation. It is the position of the American Dental Association that the legislation will not increase revenues, will not control costs but will result in a significant reduction in coverage of such prevention-oriented, cost-effective benefits as dental prepayment plans.

Federal Trade Commission: Last month the House Energy and Commerce Committee reported H.R. 2970, the FTC Authorization Act of 1983, which included a provision limiting FTC authority with respect to state regulated professions such as dentistry.

While the Association's representatives had approved the legislative language of Section 8 on the FTC's jurisdiction regarding professions, the accompanying Committee Report was not acceptable since it did not reflect the meaning and intent of actual legislation.

Report language, which accompanies all legislation as part of the legislative

history, usually contains a section by section analysis of the bill, which is utilized to clarify the meaning and intent of Congress in enacting legislation.

In this instance, the report language was so objectionable that ADA President Burton Press wrote Chairman James J. Florio (D-NJ) to object personally to major portions of the Committee Report filed in connection with H.R. 2970.

Specifically, Dr. Press stated that "the language under Section 8 of H.R. 2970 . . . addresses the major issue by restricting FTC's authority to invalidate state laws in the licensure area. The Report, however, virtually ignores this intent and instead concentrates on explaining the language of Section 25(c) which was added . . . to allay concerns expressed by some that the language of subsection (a) might be interpreted to protect illegal business and commercial practices such as price-fixing and boycotts."

The Association presently is exploring several options which may be undertaken to rectify the Committee Report situation.

State Legislation

Freedom of Choice: Oklahoma has enacted a Prepaid Dental Plan Act authorizing the state's commissioner of insurance to regulate prepaid dental plan organizations. A prepaid dental plan organization (DPO) must obtain a certificate of authority from the commissioner in order to operate, and it must comply with bonding, deposit and financial reserve requirements. The commissioner may suspend or revoke the certificate of authority in appropriate cases where the DPO is unable to provide or arrange for dental services or it engages in some impropriety.

The **Oklahoma** act also provides that any covered person in a prepaid dental plan shall be free to select any licensed dentist for his or her dental services. Prepayment or reimbursement determinations must be made without regard to whether the provider is a participating or nonparticipating member of the plan. This provision must be printed on the policy for membership coverage.

Previously, in its Official Board Interpretations and Declaratory Rulings and Resolutions, the Board of Governors of Registered Dentists of Oklahoma had determined that "a contract to provide group dental care is ethical and proper only where it preserves and guarantees the basic right of each individual patient to select his or her own dentist."

In **Tennessee**, a new law applies to

employers or unions providing to their employees or members group prepaid dental service plans that limit the provider dentist to designated dentists or groups of designated dentists. These employers and unions now must offer the option of selecting alternate coverage that permits covered persons to obtain dental services from any licensed dentist of their choice. In providing this alternative coverage, the employer or union must pay for such dental benefits to the same extent as provided in the limited-choice-of-provider plan. Additionally, prepaid dental plans are required to pay for second opinions. Under this provision, any prepaid dental plan that regularly provides benefits for obtaining a dentist's professional opinion must also provide equal benefits for obtaining a second opinion on the same dental procedure if requested by the covered patient.

New statutes in **Texas** provide that a dental health service corporation, health insurance policy or employee benefit plan cannot:

- 1) prevent any covered person from selecting the licensed dentist of his or her choice to render covered dental services;
- 2) deny any licensed dentist the right to participate as a contracting dentist; or
- 3) authorize any person to regulate, interfere or intervene in any manner in the diagnosis or treatment rendered by a dentist to his or her patient.

Overbilling: The Attorney General of Georgia has issued an opinion on state dental board regulation of overbilling. In November of last year, the Board of Dentistry adopted a rule establishing the abrogation of copayment provisions of a contract as grounds for professional discipline, if the claim submitted for payment from a third party amounts to a misrepresentation or it asserts a fee that is greater than the fee the dentist usually accepts as payment in full. In a letter to the joint secretary of the state examining boards, Mr. Michael J. Bowers, Attorney General, stated: "Based on the foregoing, it is my official opinion that a dentist who files a claim for third party payments in which he asserts a certain fee charged, when in fact the dentist has waived or intends to waive the patient's copayment for the service, without disclosure to the third party insurer that such waiver has or will be taking place, may be subject to disciplinary action by the Georgia Board of Dentistry. . . ."

Dental Hygiene—Independent Practice Litigation: The Supreme Court of Pennsylvania has refused to hear the appeal of Susan Edwards, the dental hygienist who has attempted to practice without supervision. This action lets stand the decision of the state's Commonwealth Court. That court had affirmed the order of the State Dental Council and Examining Board revoking the hygienist's license for performing dental hygiene services without direct supervision of a licensed dentist.

Delancy v. Garren, the independent practice case from North Carolina, is still pending before the U.S. Court of Appeals for the Fourth Circuit. Oral arguments have been heard, but a decision has not been rendered at this writing. In the meantime, a state superior court judge has ruled in a related case that a state dental board rule that prohibited dental hygienists from owning their own practice is unconstitutional.

In effect, the decision permits a dental hygienist to own a dental hygiene practice and to employ a dentist who supervises hygienist's work. The North Carolina Board of Dental Examiners will appeal the Superior Court's ruling.

Student Aid

The Department of Health and Human Services has released the long-awaited regulations governing delinquency rates in the Health Professions Student Loan Program (HPSL). The rules were published in the June 3 *Federal Register*.

The new rules, which became effective June 30, 1983, require dental schools to maintain delinquency rates of 5 percent or less in order to continue their participation in the loan program. Schools either may use percent of borrowers, or percentage of total loan dollars outstanding to meet the requirement. Accounts overdue by 60 days or longer are considered delinquent.

However, penalties do not attach until December 30, 1983, and schools which do not meet the 5 percent level by then still can remain in the program if their delinquency levels decreased by 50 percent during the previous six months.

Dental schools which do not meet the required levels could be suspended from the program, and would not be able to make new loans from the schools' revolving funds or be eligible to receive new federal HPSL capitalization.

The American Association of Dental Schools has reported a 34 percent

decrease in the number of delinquent borrowers over the past year.

Navy Dental Reorganization:

Responding to concerns expressed by the ADA (February *Washington News Bulletin*), the House Armed Services Committee has objected to a Navy Medical Department reorganization which threatens the command autonomy of the Navy dental service. The Committee in its Report to the House of Representatives on the 1984 defense authorization, directed the Navy "to take the steps necessary to ensure that the excellence of dentistry is protected and to ensure that the dental division has the opportunity to input at the highest levels within the medical department and the Navy."

CONGRATULATIONS!!! NEW FELLOWS WILL BE RECOGNIZED IN SAN DIEGO

As published in the last issue of the **Newsletter**, all new Fellows of the College will be recognized at the Annual Official Session in San Diego.

This recognition will take the form of a special name tag, an official group photograph, and an appropriate certificate.

At this time, all College members offer congratulations to the following members who passed the American Board of Prosthodontics examination and are now Diplomates of the Board and automatically have become Fellows of the College:

Dr. Stephen J. Ancowitz
Dr. Joseph R. Cain
Dr. Gerald R. Gifford
Dr. James P. Imp
Dr. Don W. Morgan
Dr. Robert L. Engelmeier
Dr. Lee M. Jameson
Dr. Randall R. Larson
Dr. Thomas D. Taylor

Of the 12 examinees certified by the Board in June, 1983, 9 were College members.

In addition to those named above, Diplomates who were approved for membership at the Annual Official Session in Monterey will also be recognized.

NOMINATIONS FOR COLLEGE OFFICE

Dr. Dean L. Johnson, Chairman of the Nominating Committee, presented to the Executive Council in San Antonio the following slate of candidates for office for 1983-84.

President Elect - Robert C. Sproull

Vice President - Noel D. Wilkie

Executive Councilor -

Ronald D. Woody

Vacancy on the American Board of Prosthodontics -

Robert M. Morrow

Membership on the F.P.O. Council for Liaison with the American Board of Prosthodontics -

Kenneth D. Rudd, 3 years

Stephen F. Bergen, 2 years

Daniel F. Gordon, 1 year

The voting membership will consider these nominations at the Business Meeting held in conjunction with the Annual Official Session in San Diego on Thursday, September 29, 1983.

AFFILIATES WILL ATTEND AFFILIATE/ASSOCIATE LUNCHEON AS GUESTS OF THE COLLEGE

The Executive Council voted to invite all Affiliates to attend the Luncheon on Friday, September 30, 1983, at no cost to them.

This Seminar which will relate to the American Board of Prosthodontics Examination, should be attended by all Affiliate members and the Executive Council wishes to make this possible.

The meeting will follow the same format as in previous years. Dr. J. Crystal Baxter will act as Moderator, Past President Johnson will discuss the ramifications of the Examination and why those who have the qualifications should take the Board.

Several candidates from previous examinations will discuss their experiences when taking the examination.

Following these presentations, table clinics relating to patient presentation and treatment at the Board Examination will follow.

This seminar should be on every Affiliate's "must" list.

NEWS FROM SECTIONS

The Chairman of the Committee on Sections, Dr. Thomas J. Balshi, reported that the College now has 12 Sections, and Illinois and Virginia are currently engaged in the project of drafting appropriate By-Laws as part of the process of forming Sections in those areas.

Reports from Sections follow:

Pennsylvania Section The Annual Meeting of the Pennsylvania Section was held in June in Harrisburg. The theme of the meeting was "the relationship between the specialty of prosthodontics and third party insurance carriers". The title of the program was "Dental Insurance and the Prosthodontist". Guest speakers addressing the group were Mr. Gary Redine, Executive Vice President and Chief Executive Officer of Delta Dental of Pennsylvania, and Dr. Donald Maze, Vice President of Dental Affairs, Pennsylvania Blue Shield.

The Annual Business Meeting of the Section was also held at this time. New Officers include Dr. Barry McKnight, President of Pittsburg, Pennsylvania; Dr. Thomas J. Balshi, President Elect of Ft. Washington, Pennsylvania; Vice President, Dr. Edward McCarthy of Pittsburg, Pennsylvania; Secretary-Treasurer, Dr. Bernard H. Olbrys of Temple University, Philadelphia, Pennsylvania. Honored at the annual meeting was Dr. John Ismail of Pittsburg, Pennsylvania, who received an award for his dedication to the Section from Dr. Ernest B. Mingledorff Temple University, the outgoing President.

Dr. Thomas Balshi was made Chairman of the Annual Session for the 1984 program. He has been charged with focusing the program on the relationship of the specialty of prosthodontics with the general public. Special attention will be given to educational methods and efforts to provide the public with information about the specialty of prosthetic dentistry.

Ohio Section At the official 1982 Annual General Meeting of the Ohio Section, held on February 26, 1983, at the Fawcett Center for Tomorrow in Columbus, it was decided to establish a newsletter. It will be published annually or bi-annually and will be titled "Denture". This title was derived from the following bit of reasoning. Most of the big professional journals in Great Britain have one worded titles, like Lancet,

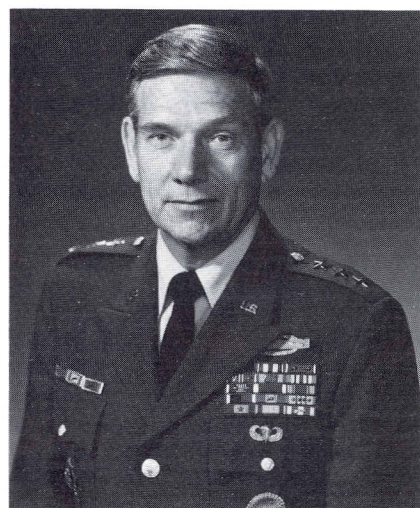
Probe, Blood, Brain and Gut. It was noted they do still have the Journal of the Royal Society of Gynecology (a line must be drawn somewhere).

"Denture" will include news from Section members, announcements of upcoming meetings or lectures, and reports from official meetings or events. The observer section, will be a casual forum where readers may exchange ideas.

Section Officers are William A. Welker, President; Robert A. Tanquist, President Elect; Harold J. Crosthwaite, Secretary-Treasurer; and Robert B. Stevenson, Editor. This Section has 15 members.

South Texas Section The South Texas Section of the College recently met and elected Dr. L. W. Carlyle, III Chairman of the Section; Dr. James A. Fowler, Jr. Vice-Chairman; and Dr. Martin Comella Secretary-Treasurer. This Section which was founded in December, 1981, has a current roster of 45 members.

National Capital Area Section The Section held its Annual Banquet on June 3, 1983, at the Officers Club, Bolling A.F.B., Washington, D.C. The banquet was hosted by the University of Maryland and the Section Chairman, Dr. Mark Stevens. The guest speaker was Lt. Gen. Dean Tice, U.S.A., Deputy Assistant Secretary of Defense for Military Manpower. General Tice spoke about future trends and the roll of dental officers in the military services. Dr. Marvin Baer, U.S. Air Force was installed as the incoming Chairman and Dr. James Jackson, Howard University, as the Vice Chairman. Dr. Joseph Nassif was in charge of Local Arrangements. The Section holds monthly meetings which were recessed until September, 1983.



Lt. General Dean R. Tice, U.S.A.



Prosthodontics
...for better
oral health

PATIENT EDUCATION BROCHURES AVAILABLE

The Pennsylvania Section of the College published a fine patient education brochure which has been distributed to the public.

The brochure has color illustrations which are most useful to the lay person in understanding what prosthodontists can do to help resolve some of the problems with which the potential patient is faced. These brochures are excellent ambassadors for prosthodontics to the public in general and to our dental and medical colleagues.

The Pennsylvania Section published 20,000 of the brochures and has approximately 3,000 left, which the Executive Council agreed to purchase at cost. They will soon be available from the Central Office at a price to be determined. They may be obtained by writing Ms. Linda Wallenborn, Central Office Director, 84 N.E. Loop 410, Suite 273, San Antonio, Texas 78216, stating the number desired and enclosing a check or money order to cover the cost of the requested brochures.

CAN YOU ANSWER THESE?

- Contraindications for internal precision attachments for RPD are:
 - Pulp position
 - Height of tooth
 - Cost to patient
 - Kennedy Class 1 design
 - All of the above
- What is the most important muscle in elevation of the palate?
 - Tensor palatine
 - Levator veli palatine
 - Superior constrictor
 - Palatoglossus
- What technique would you not use in the fabrication of complete maxillary and mandibular dentures?
 - Gnathology
 - Coble tracer
 - Height tracer
 - Wax registration

AAMP TO MEET AT DEL CORONADO

Due to remodeling, the Sheraton Airporter Hotel has cancelled the meeting of American Academy of Maxillofacial Prosthetics. An attempt was made to accommodate the Academy at the Sheraton Harbor Island but this was not possible. Therefore, The AAMP will meet at the Del Coronado Hotel on Coronado Island in San Diego on the dates originally scheduled.

The College offered to appropriate \$1000 to defer transportation costs between meeting sites of the two organizations. However, at this time, it is understood that Sheraton Hotels will provide and pay for transportation for those who are members of both organizations and desire to attend social events or committee meetings of both groups.

COMMERCIAL EXHIBITS - A FEATURE OF THE 1983 MEETING?

At the Executive Council Meeting in San Antonio in June the subject of commercial exhibits at the Annual Official Session was discussed.

It was determined to present the subject at the Annual Official Session Business Meeting for discussion and decision.

It was the concensus of the Executive Council that the idea had merit but no sales or orders for merchandise should be made or taken at the meeting. Nonetheless, it was felt that members might benefit from learning about recent commercial developments in the supporting areas of the speciality of prosthodontics.

Attend the Business Meeting and help participate in the decision of this issue.

THE WORLD FAMOUS SAN DIEGO ZOO — A VISITOR'S MUST

Friday morning, September 30, 1983, a trip to the world famous San Diego Zoo has been planned for College members, wives, and families.

The zoo is the area's leading visitor attraction. Its huge animal collection, set in a 100 acre tropical garden is noted for the many rare and exotic spe-



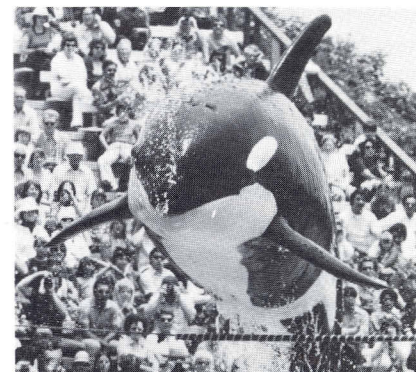
Cuddley koalas from Australia

cies exhibited. Cuddley koalas from Australia, long billed keewees from New Zealand, wild Przewalski's horses from Mongolia, and diminutive Pygmy chimps from Central Africa are just some of the animals seldom seen in other zoos, but which make their home here.

Also included in the San Diego Zoo's 3,200 animals of 800 species are the ever popular favorites - lions, tigers, bears, elephants, and giraffs. Most of the zoo's inhabitants are exhibited in barless, moted enclosures which resemble the animals' natural homes in the wild.

College members who will come early or stay after the annual meeting may be interested in seeing other local visitor attractions.

The San Diego Wild Animal Park is an 1800-acre wild life preserve where wild animals roam free over vast expanses as they would in their native habitats in Africa and Asia. The park is located in the San Pasqual Valley, 30 miles north of downtown San Diego, yet still within the city limits. Visitors enter the park by walking through a giant aviary housing over 100 species of tropical birds into Nairobi village. In the village's African-inspired structures are animal and special interest exhibits, food services, gifts shops, amphitheaters for animal shows and Tropical America, a jungle habitat where colorful birds, shy deer and playful monkeys wander freely in a tropical rain forest.



Shamu completes highjump

Sea World San Diego has earned its reputation as one of the nation's top attractions. The original of the four Sea World parks - others are in Aurora, Ohio; Orlando, Florida; and Long Key, Florida - the San Diego Oceanarium has in its 16 years developed into a lushly beautiful setting for some of the best family entertainment on the west coast. For the fourth year in a row, Sea World was named California's number two family fun attraction by SRI International (formerly the Stanford Research Institute). In its 6th annual rating of 24 attractions published in the June issue of PSA Magazine, SRI called Sea World "the world standard for marine shows parks. . ."

SYNOPSIS OF PAPERS PRESENTED AT THE MONTEREY ANNUAL OFFICIAL SESSION

By: Dr. Don G. Garber

TITLE: The Edentulous Ridge - The Ovate Pontic-Creating the Esthetic Illusion

Presenter: Dr. David Garber

Dr. Garber's presentation addressed the problem of making pontics look "real". His excellent overview of this subject proved that pontics do not have to look like they are sitting on top of the tissue, but can give the illusion of emerging from the tissue and thereby look more natural. Dr. Garber reviewed the esthetics of pontics, pontic form, pontic function and the hygienic possibilities relating to the new ovate pontic form.

The speaker classified pontics as ridge lap type, modified ridge lap type, and the ovate form. The ridge lap type of pontic seems to lie on top of the tissue and creates a serious plaque problem. The modified ridge lap variety is much easier to floss and also seems to sit on top of the tissue. The ovate form looks like it is emerging from the tissue, it is easy to floss, it is cleansible everywhere and creates an esthetic illusion. Successful use of the ovate pontic requires surgical preparation of the recipient site to make it concave.

Dr. Garber classified ridge types resulting from tooth removal as being (1) normal - that to which a pontic is easily adapted and (2) the deformed ridge - that to which it is very difficult to adapt a pontic. In the normal style ridge relationship resulting from tooth removal, pontic conformity to the tissue can be obtained by inserting the pontic at

the time of surgery, by doing a gingivoplasty or by doing an odontoplasty. Any of these procedures may be used when providing a patient with the ovate form pontic. During the gingivoplasty, the doctor develops a gingival margin and a root end area. This is allowed to heal for three weeks and then the pontic is placed in the tissue recipient area. In performing an osteoplasty in order to provide a pontic recipient area, a labial flap must be turned, the underlying bony ridge reduced, the tissue flap resutured, and the provisional coverage restoration relined in order to press and form an ovate pontic recipient area. Three to five weeks healing time is allowed before delivery of the finished restoration.

Dr. Garber discussed the difficulty of making the ovate pontic conform to deformed ridges. He stated that severe esthetic problems were created due to the necessity of replacing large amounts of tissue that were lost due to advanced periodontal disease, surgical trauma, accidental trauma, periodontal surgery, periapical pathosis, and/or unstable partial dentures. He also mentioned that bone loss may occur either vertically or horizontally or in combination of these. Solutions to severe tissue loss are the blended pontic, gingival tissue adaptation, and/or use of a removable prosthesis such as the Andrews Bridge. Dr. Garber suggested that surgical reconstruction was much better than any one of these three methods.

Surgical reconstruction involves ridge augmentation done by the roll method, the wedge technique method or the subepithelial graft. In the roll technique, or deep epithelial graft, a denuding of the epithelium with a diamond burr is accomplished, a flap is raised and sutured on itself and the palatal side of the flap granulates to form new tissue, thereby creating an ovate pontic recipient area and a simulated periodontal sulcus. In the wedge technique, connective tissue and an epithelial graft is used to effect the proper result. Initially, all of the malformed tissue is removed using a diamond burr and a connective tissue and epithelial graft is gained from the tuberosity area and it is sutured to place, packed and allowed to heal for 8-10 days. At that time, the ovate pontic is constructed and placed. The contraindication for the wedge technique is insufficient donor tissue.

Dr. Garber also discussed the surgical augmentation procedure which corrected horizontal bone loss by means of the subepithelial graft. The graft is

done by two methods: the pouch method or the flap method. The subepithelial graft is obtained from a donor site, usually lingual to the first molar area, making sure that no fat cells are included in the donor graft. In the pouch method indications for the technique are: having a normal mucogingival junction line, and/or a small edentulous space. If there is a large edentulous space which crosses the mid line, a double pouch procedure is used.

Dr. Garber presented fine illustrations of the procedure used for the pouch technique. A vertical incision in the vestibule area is made, and the donor connected tissue is delivered into the pouch and the pouch is sutured and allowed to heal. An alternative procedure in this technique is to make a horizontal incision at the crest of the ridge, followed by the development of a pouch and placement of the donor tissue into the pouch followed by suturing and healing. In some cases, a lingual surface incision is made pushing the pouch toward the labial and sliding the released donor tissue from the lingual surface into the labial pouch, and allowing the donor site to heal. The presenter was very positive in stating that the suturing should be accomplished with an FS 2, needle and silk thread.

Dr. Garber gave a fine presentation on ridge forms, pontic forms, (including the ovate pontic) and how deformed ridges can be prepared to receive this new esthetic pontic. He stated that the indications for the use of the ovate pontic were: (1) in patients with a very high smile line; (2) in patients with speech impediments that may be aggravated by using the standard type pontic; (3) in food impaction areas where the ovate pontic would help to prevent adherence of food and (4) in bizarre areas of bony and soft tissue ridge deformity.

Further information about or inquiries pertaining to this essay should be addressed to Dr. David Garber, Assistant Professor of Form and Function, University of Pennsylvania, Dental School, Philadelphia, Pennsylvania 19104.

TITLE: The Etched Metal, Resin, Bonded Fixed Prosthesis

Presenter: Dr. Gerald Barrack

Dr. Barrack discussed procedures used in providing partial coverage restorations in combination with the acid-etched techniques. He started his presentation with a listing of indications and contra-indications and a listing of

advantages of the prosthesis he was discussing.

He felt this type of restoration should be used in treating patients with periodontal problems, when endodontic treatment caused complications, and to minimize reduction of teeth. The technique is simple, requires no anesthesia, no provisional coverage, is not stressful to the patient and is less costly than conventional fixed prostheses. Some of the disadvantages are that it is a new technique, enamel is necessary to achieve bonding, metal may show through the incisal edges of maxillary and mandibular anterior teeth, there is no way to evaluate the etch in some areas of the mouth, and an absolutely meticulous technique must be used.

In listing the principles of design, Dr. Barrack was very positive that the techniques as being reported throughout the world sometimes eliminate or do not address the need for adequate design for the restoration. He suggested that a wrap around preparation extending as far labially as possible without showing metal be used, a resistance form be developed with minimal preparation in the enamel, that a vertical stop is essential to prevent masticatory forces from dislodging the restoration, that guiding planes be established for the proper placement of the prosthesis and that there should be parallel opposing walls to give as much retention as possible without the acid etched bond.

He then discussed his technique of tooth modification. Incisal reduction must provide for a 4mm thickness of alloy in non-interference with the opposing teeth. A slight chamfer at the lingual gingival must be made so that the technician can cast and finish the restoration to that particular margin. In the proximal reduction, the doctor should move the line angle to the lingual of the tooth and then come labially to that particular line angle in order to establish a finish line. Finally, Dr. Barrack suggested that a cingulum rest be provided for resistance to masticatory stresses. In posterior teeth it is essential that a proper occlusal rest be developed, that definite guiding planes be established, and that the use of multiple rests be explored if the proximal rests are in metal, since there is no bonding between such a restoration and the casting.

Dr. Barrack then demonstrated his impression technique by means of a slide presentation. During this presentation, he discussed the interception of passive eruption. This was done by

splinting the lingual surfaces of the lower anterior teeth and then eliminating offensive contacts.

In summation, Dr. Barrack restated the goals of this therapy as a means to provide a patient with dental health, comfort, esthetics and function. He also noted that it has limitations. The bonding technique is exacting and he suggested the use of a rubber dam, a 40% phosphoric acid etching agent, a bonding agent, a luteing agent, and finally proper finishing procedures that would result in a satisfactory prosthesis.

Further information about or inquiries pertaining to this essay should be addressed to Dr. Gerald Barrack, 101 West Street, Hillsdale, New Jersey 07642.

TITLE: Establishing and Controlling the "In-House" Dental Laboratory

Presenter: Dr. Joel Zahler

Dr. Zahler gave the premise that the establishment of an in-house laboratory is mandatory if quality control is the goal of the prosthodontist. He listed some factors effecting the relationship between the dentist and the dental laboratory: (1) Dental students are not being taught how to evaluate the fabrication of laboratory products. (2) Alteration of the laboratory work at the chair is often not done because there is a fear on the part of the dentist of not knowing what to do with the material when it has been altered. (3) Post Graduate students frequently are not learning how to cope with these material problems. (4) The more detailed the case the more there is a need for the presence of the doctor in the laboratory. (5) There are so many new products on the market that the doctor is not able to fully understand them, when only reading about them.

Dr. Zahler went on to say that the prosthodontist should not ask the technician to do things that are impossible and therefore it is necessary for he or she to be well informed on all techniques and all materials. Some doctors like to do their own lab work and others do not. No matter, as prosthodontists we must delegate to the laboratory if we are to treat more patients and provide more finished prostheses.

The "qualifications" of prosthodontic technicians were stated: (1) The first type of technician was called the "helper". This person is necessary to

do such things as make trays and copings, set articulators, perfect casts, etc. This type of person can usually be trained by the doctor himself. (2) The "general prosthodontic technician" has usually attended two years of formal schooling, is able to fabricate simple restorations and do waxings, castings and acrylic processing. The doctor is required to add to this particular person's skills to meet his specific needs. (3) The last class of prosthodontic technician is the "master technician". The individual possessing such skills is very difficult to find. The master technician is well trained, formally and informally, with many years of experience, and the prosthodontist may find it difficult for such a technician to adapt to the individual doctor's desires. Therefore it may be better to train one's own technician over a period of years, providing the opportunity for the technician to take many short courses.

Dr. Zahler gave a very fine pictorial presentation of space requirements and equipment utilization for a small in-house laboratory. He was very positive in stating that one should plan a lab that is large enough for three people, at least two technicians and a doctor. The lab should have central suction, a sitting and standing work area, be "servicable but not extravagant", have room for expansion, and it should be standardized, consistent and uniform relative to other aspects of the practice. Dr. Zahler cautioned the attendees no to try to incorporate every new product and piece of equipment into the practice or laboratory. Doing so, he stated will result in confusion. He further noted that equipment does not make quality, it is the people who use the equipment that fabricate fine prostheses.

Dr. Zahler spent a considerable amount of time discussing a stereoscopic microscope that he employs in his laboratory and suggested that it be used to achieve standardization in trimming dyes and waxing, finishing and fitting of all prostheses.

Finally, he commented that the increased cost of an in-house laboratory must be evaluated for at least a one year period since it will normally increase productivity and improve quality. These two factors will compensate for the overhead of an in-house laboratory.

Further information about or inquiries pertaining to this essay should be addressed to Dr. Joel Zahler, Bloomfield Medical Village, 6405 Telegraph Road, Birmingham, Michigan 48010.

TITLE: The Prosthetic Management of Patients with Oral Facial Anomalies

Presenter: Dr. Mohammad Mazaheri

Dr. Mazaheri commenced his presentation with an overview of the different types of oral facial anomalies. He also cited the incidence of such things as the cleft lip and palate, congenitally preperated, and those due to facial trauma. He also cited data related to the incidence of oral facial cancer. He noted that in 21% of all people having velopharyngeal anomalies, that they are discovered after the child has reached the age of 6-8 years. In his overview of the entire oral facial anomaly problem, he stated that team management is the best way to provide care for patients who have these deformities. He suggested that a plastic surgeon, a prosthodontist, an orthodontist, a pedodontist, a pediatrician, a speech pathologist and an otologist be involved in this treatment team.

In making diagnostic decisions prior to treating these patients, Dr. Mazaheri suggested that radiographs and photographs be taken, that proper diagnostic casts be made, and that cephalometry laminography and cineradiography be employed. He also suggested that nasal flow and pressure be measured and that speech, otologic and audiometric testing be accomplished. In the surgical management of cleft lips, he pointed out the time honored rule of 10 before any surgery is done, i.e. the child should be 10 weeks old, the hemoglobin should be 10 grams and the white cell count should be greater than 10,000. He also stated that in cleft palate operations, the age of 1 year should be a factor in anterior area surgery and three months later for posterior closure.

The prosthetic management of patients with oral clefts was discussed. In the infant, an impression must be secured, regardless of how difficult it may be to do so, in order that the arch can be evaluated and the necessary pre-surgical prosthesis be constructed. Pre-surgical orthopedics may be necessary using intra or extra oral appliances, expansion appliances, pre-maxillary retraction appliances. Finally, in the infant, a feeding appliance may sometimes be necessary. In the young child, a primary speech aid may be constructed or some type of prosthesis such as a transitional or stimulation appliance may be necessary to encourage the growth of tissue which will later be used in surgical closure. A

Velopharyngeal lift may necessary to help reduce the velopharyngeal gap. Any of these appliances may be used in combination with orthodontia for the adequate treatment of young patients. In the adult treatment plan, primarily a prosthetic speech aid is required. Transitional appliances may be necessary or postoperative appliances such as twin bulb operators for shortened palates may be needed. Stimulation type appliances may be utilized post-operatively and in such instances the bulb must be reduced from time to time as the tissue grows from stimulation. Lastly, Dr. Mazaheri discussed the velopharyngeal life appliances for the adult patient.

He continued his presentation with a discussion of speech appliances, the history of these prostheses and their requirements. He projected office and laboratory procedures for the construction of speech prostheses. Dr. Mazaheri then discussed lifts for velopharyngeal insufficiency. He stated that a cephalometric evaluation to diagnose the non-closure in the velopharyngeal space was indicated and he also suggested that it may be necessary to stretch the palate by means of the lift, if in fact, surgery is to be done. Indications for the speech appliance are, wide cleft and deficient soft palate problems, patients who have a wide cleft of the hard palate, neuromuscular deficiencies of the velopharynx and for those whose surgery must be delayed for a period of time. He discussed the position of the pharyngeal section of the speech appliance in relation to the Atlas of the spine, the palatal plane, the posterior and lateral pharyngeal wall and to muscular activity. He also discussed the design of the pharyngeal section of the appliance in the superior and inferior aspect. He noted the different types of pharyngeal sections, such as: hinge, metal, fixed and resilient. Finally, Dr. Mazaheri concluded this section on speech appliances and lift prostheses by stating the objectives of a velar lift. They are, to reduce hypernasality and the escape of nasal air, to reduce the degree of velar disuse atrophy and to increase the velopharyngeal function.

The lecturer concluded by asking for more comprehensive training for the student of prosthodontics in this area of treatment.

Further information about or inquires pertaining to this essay should be addressed to Dr. Mohammad Mazaheri, H. K. Cooper Clinic, Lancaster, Pennsylvania 17602.

PROSTHODONTICS WELL DEFINED IN JADA SPECIAL ISSUE

Congratulations and thanks go to Dr. Roger Scholle, editor of the JADA, for his sensitive approach to and accurate description of the speciality of prosthodontics as published in the special issue of the JADA "Guide to Dental Health".

All members should refer to Pages 34, 35 and 36c of that publication and read the section headed "Crowns and Dentures", and then the entire edition.

Editor Scholle conferred with President Bartlett and Dr. John Burton to provide the text as it appears in this special issue. A "well done" to all three men.

WHERE AND WHEN SHOULD ACP HAVE ANNUAL SESSION?

Almost since its inception 14 years ago the College has held its Annual Official Session the week prior to the American Dental Association meeting and in a city close to that in which the ADA will meet.

The question has been raised whether or not the membership wishes to continue this relationship. For those members who wish to attend the ADA meeting this may be a mixed blessing. Two weeks out of the office is a long time, but travel is only required once. Some think a meeting in the southern states during the winter, perhaps in February, would be a welcome respite from the rigors of a northern winter, and so the discussion goes. Those who have an opinion about this matter should inform Dr. Richard J. Grisius, School of Dentistry, Georgetown University, 3900 Reservoir Road, N.W., Washington, D.C. 20007

WHERE YOU RIGHT?

- 1.) Answer (e)
- 2.) Answer (b)
- 3.) Answer (a)

MEMBERS URGED TO RETURN ACHIEVEMENT QUESTIONNAIRES

Several months ago Fellows and Associates received a questionnaire from the Historian asking for information concerning past and recent career involvement in professional organizations and their employment.

Dr. Lucius W. Battle, the College's Historian, reports that the response has been good. He would like to hear from all members, however, and therefore, those who have not returned the questionnaires are requested to do so as soon as possible.

CHANGE TO FINANCIAL SUPPORT FOR ANNUAL SESSION CLINICIANS SUGGESTED

It has been the policy of the College to provide First Class air fare, a \$300.00 honorarium, and one day per diem to non-member clinicians who address the scientific session of the College.

However, inflation has raised air fare to the point that it is felt that a policy change is needed.

The Executive Council has proposed that in the future clinicians be offered Coach Fare vice First Class Fare and an honorarium of \$500.00 vice \$300.00, one day per diem of \$95.00 and an invitation to all social functions related to the Annual Official Session.

If this policy change is approved by the membership, it will take effect commencing with the 1985 Scientific Session.

TIPS FROM READERS

Dr. J. Crystal Baxter, Chairman of the Chairman of the Education and Advancement Committee, would like to initiate a new column in the Newsletter, "Tips from Readers".

If you have a helpful hint or some simple technique that you find useful in your practice and wish to share it with you colleagues, let Crystal know, she will use it in her new column and give you credit for sending it to her and sharing it. In any case, please address your replies and send your contributions to Dr. J. Crystal Baxter, 155 N. Harbor Drive, #1303, Chicago, Illinois 60601.

MEMBERS IN THE NEWS

Dr. Frank C. Jerbi-retired in 1982 from the University of Maryland Dental School-a fund has been established in his name to support an annual award to: "that senior dental student who excelled in removable partial prosthodontics during the course of his or her education".

Dr. Henry J. Bianco, Jr.-appointed Associate Dean for administrative affairs at the West Virginia University School of Dentistry where he is professor and chairman of the Department of Prosthodontics. His areas of responsibility as associate Dean will include coordination of the basic sciences in instruction, research and clinical practice; activities involving the school and its alumni association, the WVU Foundation, the practicing profession and other individuals in external agencies; and planning, and management of physical facilities and non-academic units.

Dr. Stephen F. Bergen-appointed Chief of Dental Service at Manhattan Veterans Administration Medical Service. It is the only dental service in the Veterans Administration System with residency programs in all the adult dental specialties.

Dr. Don G. Garver-retired from the United States Navy, will join Dr. Thomas J. Balshi and the Ft. Washington Dental Associates in the clinical practice of prosthodontics.

EXECUTIVE COUNCIL PROPOSES REVISED GOALS & OBJECTIVES

President Bartlett at the 1982 Annual Session in Monterey, CA appointed an ad hoc committee charged with revising the Goals and Objectives of the College. The ad hoc committee members were Cosmo V. De Steno, Chairman, Mark Connelly, Gerard DiPietro, Robert Sproull, and Noel Wilkie. The ad hoc committee, the Executive Council and a number of Past Presidents were to develop the revised Goals and Objectives at the summer meeting in June.

A pre-work questionnaire, printed in the last issue of the **Newsletter** was developed to gather input from members of the College. A more detailed five page questionnaire was sent to those who would be attending the Executive Council meeting. The Goals and Objectives meeting began on Thursday, June 9th and adjourned on Saturday, June 11th.

Lt. Col. Joel Severson, a facilitator, was retained to lead the workshop. He familiarized himself with the College by reviewing existing College Goals and Objectives as well as other historical information such as past **Newsletters**. The workshop participants were divided into groups of approximately four or five and charged with the responsibility of formulating the Goals. The list of Goals were reviewed and revised by all participants. The groups were again sequestered and asked to create specific objectives for each of their goals. This was a real brainstorming session.

Col. Severson's expertise helped to make the meeting a success. At the end of the third day, Col. Severson compiled all of the information and presented the committee with a seventeen page document which included the new Goals and Objectives. This document was then reviewed by the Executive Council members. The proposed set of Goals and Objectives follows:

PURPOSE: The purpose of the American College of Prosthodontists is to represent and lead the specialty of Prosthodontics and to advance the specialty through improved education, research and patient care.

The following goals were developed:

1. To be the accepted, recognized authority in the specialty of prosthodontics
2. To promote excellence and provide guidance in prosthodontic education, and to stimulate and support prosthodontic research
3. To establish effective communication
4. To enhance an awareness, understanding and demand for the specialty of prosthodontics
5. To monitor the financial and remunerative aspects of prosthodontics
6. To encourage all eligible individuals to seek and maintain membership in the College
7. To identify the existence of and provide access to qualify dental laboratory service
8. Develop quality assurance standards relative to the specialty practice of prosthodontics
9. To act as a sponsor for the formation of an International College of Prosthodontics
10. To improve and refine the organizational structure of the ACP

11. To encourage maximum participation in the American Board of Prosthodontics certifying examination and to aid candidates in its successful completion

12. To promote excellence and to provide guidance in the clinical practice of prosthodontics

13. To improve the remunerative aspect of treating patients with maxillofacial abnormalities

- (1) **Goal:** To be the accepted, recognized authority in the specialty of prosthodontics

Objectives:

(a) To become as soon as possible the organization contacted by the Council of Dental Education of the American Dental Association and Council of Prosthetic services and dental laboratory relations relative to the specialty of prosthodontics

(b) To sponsor workshops of specialty organizations which will encourage interspecialty cooperation

(c) Encourage members of the American College of Prosthodontists to join and be active in organizations concerned with the discipline of prosthodontics

(d) Sponsor a workshop of all chairmen of undergraduate prosthodontics programs which will establish guidelines for instruction in prosthodontics

(e) Invite officers of other specialty organizations (without charging a fee) to our Annual Official Session

- (2) **Goal:** To promote excellence and provide guidance in prosthodontic education and to stimulate and support prosthodontic research

Objectives:

(a) Determine optimum student/-faculty ratio for pre-clinical and clinical prosthodontic teaching and disseminate this information to schools by January 1985

(b) Determine prosthodontic procedures that should be evaluated by state and/or regional licensing board, and convey this information to appropriate agencies by 1985

(c) Establish and support liaison between the American College of Prosthodontists and the American Association of Dental Schools in order to provide input

to the councils/sections of the Association which are involved in prosthodontics

(d) Organize a workshop which will develop guidelines for site visit evaluation for prosthodontic consultants to the American Dental Association Council on Education

(e) Encourage the development of stipends for students in advanced prosthodontic programs

(f) Provide awards for advanced prosthodontic students for outstanding published articles in prosthodontics

(g) Make recommendations to appropriate institutions and agencies which will stimulate funding of prosthodontic research

(h) Publicize the prosthodontic section of the International Association of Dental Research

(i) Develop areas of research for future study

(j) Continue John J. Sharry Award for winner of Annual Research Competition

(k) Give American College of Prosthodontists members engaged in research priority consideration as speakers at the Annual Official Session

- (3) **Goal:** To establish effective communication

Objectives:

(a) Conduct a study to identify all possible uses of the Central Office computer which will enhance communication between the American College of Prosthodontists and its members by February 1984

(b) Use the caption (in bold print) Questions, Ideas, Problems — Call Central Office, Phone # 512-340-3664 — in every **Newsletter**

(c) Establish liaison with health insurance carriers to familiarize them with the purpose of the College in order to better define procedures and fees by January 1984

(d) Begin initiatives which will start publication of the Journal of the American College of Prosthodontists to be refereed with preference given to College members as soon as possible

- (4) **Goal:** To enhance an awareness, understanding and demand for the specialty of prosthodontics

Objectives:

(a) Produce telephone tapes and other media for the lay public describing prosthodontic services and how to obtain them. To be made available through an 800 number by FY 84-85

(b) To establish an approved yellow page format for section use, consider the use of newspaper announcements and consider use of College logo in both

(c) Encourage other public and professional groups to invite speakers from the American College of Prosthodontists

(d) To monitor and evaluate the progress and results of all public relations activities of the American College of Prosthodontists

(e) Disseminate Pennsylvania Public Relations Brochure and develop a replacement brochure

(f) Budget for professional public relations consulting and guidance on an ongoing basis to begin fiscal year 1984-85

(g) Develop and procure bumper stickers prior to the Annual Official Session 1983

(h) Develop a Central Speakers Bureau, which will be developed from a Speakers Training Program at the Annual Official Session

(i) Develop a standard presentation on the American College of Prosthodontists to be utilized by members as desired

- (5) **Goal:** To monitor the financial and remunerative aspects of prosthodontics

Objectives:

(a) Determine the net income from prosthodontics by practice category by the 1984 Annual Official Session

(b) Establish the recognition by 3rd party payors of prosthodontic specialty treatment within 5 years

(c) Establish remuneration by 3rd party payors which is commensurate with the level of prosthodontic specialty care within 5 years

(d) Determine guidelines for overhead costs related to the Private Practice of Prosthodontics by 1985

(e) Determine costs associated with the establishment of a private practice by 1985

(f) Determine the cost of post doctoral education by the Annual Official Session in 1984

- (g) Determine the cost of obtaining Board certification by the Annual Official Session in 1984
- (6) **Goal:** Encourage all eligible individuals to seek and maintain membership in the College
- Objectives:**
- (a) Identify all individuals eligible for membership in the American College of Prosthodontists by the Annual Official Session 1984
- (b) Recruit 50% of non-member eligible prosthodontists to membership in the American College of Prosthodontists by 1985
- (c) Recruit 100% of all eligible advanced prosthodontic students to membership in the American College of Prosthodontists at once
- Encourage those who have terminated their membership to reinstate at once
- (7) **Goal:** To identify the existence of and provide access to quality dental laboratory service
- Objectives:**
- (a) Establish criteria for quality prosthodontic laboratory service by the Annual Official Session in 1985
- (b) Establish a central referral list of recommended dental laboratories by the Annual Official Session in 1985
- (8) **Goal:** Develop quality assurance standards relative to the specialty practice of prosthodontics
- Objectives:**
- (a) Establish criteria for evaluating specialty level prosthodontic care by the Annual Official Session in 1985
- (b) Establish formal peer review procedures for use by College members by the Annual Official Session in 1985
- (c) Establish acceptable guidelines for the provision of prosthodontic care by the Annual Official Session in 1985
- (d) Establish and appoint an Ad Hoc Committee on Ethics by 1984
- (9) **Goal:** To act as a sponsor for the formation of an International College of Prosthodontists
- Objectives:**
- (a) Provide support and encouragement to the Committee for the Formation of the International

- College of Prosthodontists by 1983
- (b) Maintain active liaison with the founders of the International College of Prosthodontists through the Ad Hoc Committee of the American College of Prosthodontists
- (10) **Goal:** To improve and refine the organizational structure of the American College of Prosthodontists
- Objectives:**
- (a) Disseminate the "Goals and Objectives" to the membership before the Annual Official Session in 1983
- (b) Finalize and approve "Goals and Objectives" in the Executive Council by the Annual Official Session in 1983
- (c) To have the general members approve the "Goals and Objectives" at the Annual Official Session in 1983
- (d) Initiate implementation of "Goals and Objectives" when approved and conduct progress reviews at the Summer Executive Council Sessions
- (e) Evaluate need for a complete review of "Goals and Objectives" by 1988
- (f) Convert Ad Hoc Committee on Sections to standing committee status by 1984
- (g) Encourage and aid the formation of new Sections including the development of a model section by-laws
- (h) Affect a by-laws change which will change Regions terminology to Sections by 1984
- (i) Define geographic boundaries of Sections by 1984
- (j) Standardize Section administrative positions and titles by 1985
- (k) Define the American College of Prosthodontists Section relationship and ensure all Sections operate in accordance with the American College of Prosthodontists by-laws
- (1) Financial aspects by 1984
- (2) Ensure membership eligibility of Sections conforms with American College of Prosthodontists guidelines by 1983
- (3) Monitor Section activity by requiring timely submission of annual financial reports, mem-

- bership rosters, and minutes of meetings
- (l) Convert the Central Office Liaison Committee to standing committee by 1984
- (m) Review job description of Central Office Director by 1984
- (n) Evaluate Central Office space, equipment and location by 1985
- (o) Evaluate coverage and need for additional personnel by 1985
- (p) Poll the membership to determine influence of collateral meetings on site of Annual Official Session by 1984
- (q) Poll the membership to determine preference of dates and sites of Annual Official Sessions by 1984
- (11) **Goal:** To encourage maximum participation in certifying examinations and to aid candidates in its successful completion
- Objectives:**
- (a) Continue publication of American College of Prosthodontists guidelines and related educational materials which aid in the certification process
- (b) Improve Affiliate participation at Annual Official Sessions by 1983
- (c) Establish short courses which aid in achieving certification by 1985
- (d) Survey, determine and record the benefits of certification to the individual and to the public by 1986
- (12) **Goal:** To promote excellence and to provide guidance in the clinical practice of prosthodontics
- Objectives:**
- (a) Continue Private Practice Seminars at Annual Session
- (b) Update and correct clinical practice designation in the membership directory for the purpose of providing better referral of prosthodontic patients
- (c) Promote increased knowledge of systemic factors and those diseases which influence prosthodontic care in geriatric patients
- (d) Establish guidelines which will address prosthodontic treatment plans for geriatric patients
- (e) disseminate information rela-

tive to drug therapy and its effect on the geriatric prosthodontic patient

(f) Promote the advantages of interdisciplinary care of the compromised prosthodontic patients to those institutions responsible for their care

(13) **Goal:** To improve the remunerative aspect of treating patients with maxillofacial abnormalities

Objectives:

(a) Define the scope of the problem (actuarial data) by 1985

(b) Collaborate with American Academy of Maxillofacial Prosthetics in developing appropriate codes for Maxillofacial prostheses

(c) Acquire and disseminate information on currently available support by 1985

(d) Analyze data and identify needs and opportunities for additional support of the maxillofacial patient

(e) Develop program which will encourage 3rd party carriers to recognize the problem of correct levels of remuneration for treatment of the maxillofacial patient

PAPERS OF INTEREST TO PROSTHODONTISTS PRESENTED AT THE AADR & IADR MEETINGS

The following are papers presented at the 1983 Annual Session of the American Association of Dental Research held at Cincinnati, Ohio, on March 17-20, 1983, and those presented at the 61st General Session of the International Association of Dental Research, held August 1-3, 1983, at Sydney, Australia. They are provided through the courtesy of the Associations' Central Offices.

Those from the AADR follow:

TITLE: "Masseter Activity of Edentulous Patients Sleeping With and Without Dentures"

By Drs. A. S. vonGonten and J. D. Rugh of the University of Texas Health Science Center, Houston, Texas, Abstract #1105

...If your sleep with your dentures in place, are you aware that they are "busier" than you think?

A new study reinforces the recommendation of most dentists that patients should not wear their dentures while sleeping. Dental investigators Drs. Ann Sue vonGonten and John D. Rugh found that, during sleep, muscle jaw activity (with dentures in place) is reduced.

These researchers reported to the American Association for Dental Research that 21.6% of the U.S. civilian population and more than one-third of the people over the age of 60 wear at least one complete set of denture, according to the ADA. Dr. vonGonten told the group that other studies have shown that chewing efficiency with dentures drops to about 20% of that possible with natural teeth—an 80% reduction!

Dentists have traditionally felt that patients undergo a learning period during which they must adapt muscular skills necessary for successful denture wear. The two researchers monitored jaw muscle activity during sleep, and compared activity levels with and without dentures in the mouth. Drs. vonGonten and Rugh found that patients who wore upper and lower dentures for more than a year demonstrated significantly decreased muscle activity when dentures were worn at night.

TITLE: "Soft and Firm PNF Denture Liners"

By Drs. L. Gettleman, R. J. Leboeuf, Jr., and H. R. Rawls of the Gulf South Research Institute, New Orleans, Louisiana, Abstract #725

...Artificial dentures are made of rigid, durable, plastic material that can be fitted extremely close to the jaw ridge. However, because of changes in the underlying bone, the denture may loosen beyond adjustment, and the soft tissue may become irritated from undesirable movement of the hard plastic against the tissues. A soft, plastic liner is commonly placed in the denture to overcome these problems. However, current denture liners are not satisfactory. Although somewhat soft at first, some become rigid in time, while others become so permeated with food residues and bacteria that they are extremely malodorous. Therefore, a long-standing need exists for a denture liner made of a durable cushioning material that is impermeable to oral fluids and is comfortable for the patient, yet has sufficient firmness to support chewing forces and to enable the dentist to taper the outer edges of the

device to fit the contours of the jaw.

Dr. Gettleman's team of scientists, supported by the National Institute of Dental Research, Bethesda, MD, have modified an elastic, polyphosphazine polymer, called PNF, to serve as a permanent denture liner. They have formulated it in several consistencies to adjust to the patient's anatomy and also to facilitate handling.

To the PNF resin, the scientists added pigment for color, and small-sized particles of barium sulfate as a filler. They suspended these dry substances in a solvent (methyl methacrylate) along with magnesium oxide to remove unwanted acid. They also added lauroyl peroxide, a curing agent. The solvent, blending the diverse substances, was then mixed into the resin to make the final soft, but solid, liner which bonds to the acrylic denture base. The softer version of the liner contained 10% barium sulfate and 2% of the solvent, whereas the firmer liner contained 25% barium sulfate and 6% of the solvent. The material was cured at 100°C under ordinary laboratory conditions.

The new formulation appears to be impermeable to fluids in the oral environment, and to possess other desirable characteristics, including the ability to bond firmly to the polymethyl methacrylate of the denture base. In addition, the texture of the liner is easily adapted to clinical requirements by adjusting the proportions of the filler and the solvent as necessary. In the pre-curing stage, the softer material can be inlaid in the weight-bearing region, while the firmer elastomer remains at the edges of the denture for easy adjustment and polishing. A more comfortable and longer-lasting denture should result.

Those from the IADR are:

TITLE: "Acid-Etched Bridge Bond Strength Utilizing a New Retention Method"

By Drs. P. C. Moon and F. J. Knap of the Medical College of Virginia Dental School, Richmond, Virginia, U.S.A., Abstract #296

...At the 61st General Session of the International Association for Dental Research, Dr. P. C. Moon, Director of Dental Materials Science at the Medical College of Virginia, reported on a new bonding procedure for dental bridges. The procedure was developed by Dr. Moon and colleagues after five years of research on this application.

Dr. Moon explained to the group that there are many reasons the improved retention procedure for dental bridges

would appeal to both the patient and dentist. For the patient, it is less traumatic, takes fewer appointments, and is significantly less expensive. The procedure does not require anesthesia to deaden the pain because sound teeth do not have to be cut down. For the dentist, it is less time-consuming and demanding. Patients may now seek treatment who would have avoided it before because of cost or fear.

The retention procedure developed is simple in principle: It uses small cubic crystals of salt embedded in the bonding surface of the acrylic framework pattern. The exposed crystals are dissolved out by water to provide a roughened surface with a dental resin to the etched tooth enamel. By procedures which were also developed by these researchers, it is possible to vacuum-invest, burn-out, and cast the shape of the acrylic pattern in metal to reproduce the cubic voids in the metal for bond retention. It was determined that salt crystals, sized between 149 and 250 micrometers, produced the strongest bond. Clinical studies are very promising, with no failures in 40 bridges for up to six months of service.

TITLE: "Complete Denture Retention Using Threaded Titanium Implants and Closed Field Magnets"
By Drs. B. R. D. Gillings, L. P. Oliver, and K. Tyler of the University of Sydney, Australia, Abstract #280

...Small but very powerful cobalt/samarium alloy permanent magnets have been used since 1977 to retain partial and complete dentures. The system is simple and effective. Dr. B. R. D. Gillings reported to the researchers assembled for the General Session of the International Association for Dental Research that one or more of the patient's natural teeth are root-treated, then trimmed flush with the gum, and fitted with small stainless steel discs. Magnets are then fitted to the patient's dentures so that with dentures inserted, the magnets grip the tooth root discs magnetically with a force of 250 grams per root. The system offers advantages over other denture-retention systems—the most important being a built-in limitation to forces applied to the tooth roots, and many teeth which might otherwise be extracted can be kept to aid in denture retention and to preserve the bone.

At present, only patients who have some remaining teeth are suitable for this form of treatment. Unfortunately, despite the dramatic fall in dental car-

ies, 10% of the population in Australia are completely without teeth. Their complete dentures must rest on the soft tissues, which, in many cases, do not provide effective denture retention and support. Studies are now in progress to develop artificial tooth roots which can be used with magnetic retention to assist these patients.

Artificial tooth root implants have been used with limited success for many years. Modern technology has provided a number of materials and techniques which have greatly increased the success rate. Suitably shaped artificial roots of titanium, aluminum oxide, or artificial bone are buried in the jaw and left until the patient's bone grows against them. The denture is built on this superstructure. A number of investigators have reported success with this system.

In the present study, the superstructure is eliminated. Instead, each artificial root is fitted with a small stainless steel disc, which is inserted level with the gum. The patient's existing denture is then fitted with magnets to provide retention by gripping the discs magnetically, while the implants, being fixed to the bone, provide denture support. This approach has been successful in the short term, but is still in the experimental stage. If success is maintained for a longer period, and in a larger number of patients, the investigators believe that such a system may become a routine procedure, available for any dentist.

TITLE: "Retentive and Stress Characteristics For a Magnetically Retained Partial Denture"
By Drs. R. Highton, A. A. Caputo, and J. Matyas, of the University of California at Los Angeles, U.S.A., Abstract #279

...Over the years there have been many attempts to utilize magnets for dental and medical applications. A major shortcoming has been the lack of material that could be made into strong magnets of sufficiently small size. The development of such a magnetic material from the elements cobalt and samarium has generated new interest in the use of magnets for partial and complete dentures. These magnets have been shown to be strong enough to be used to retain dental appliances.

Reporting to the 61st General Session of the International Association for Dental Research, Dr. Ronald Highton of the University of California at Los Angeles (UCLA) told the researchers about his study of the utilization of these new magnets for use in retaining removable partial dentures. The thrust

of the investigation has been to determine the biomechanical characteristics of these dentures, which include retention properties and their ability to distribute chewing forces. For these applications, the magnets are placed in the underside of the denture and are embedded in the supporting teeth. The attractive force between the magnets keeps the denture in place without the unsightly clasps commonly associated with partial dentures.

Dr. Highton, working with Drs. A. Caputo and J. Matyas, has shown that the retention potential of partial dentures with magnets is comparable to that of the conventional type. An important finding was that dentures constructed with these magnets produce less stress on the supporting teeth, and, therefore, can add to the longevity of the remaining dentition.

In conjunction with these laboratory tests, Dr. Highton is clinically testing these magnets on selective patients in his private practice. The researchers are also extending these studies to optimize designs using magnets and to develop techniques that can be easily employed by the general dental practitioner.

TITLE: "Advances in Adhesive Bonding of Composites To Dentin and Enamel"
By Drs. R. L. Bowen and E. N. Cobb of the American Dental Association Health Foundation Research Unit at the National Bureau of Standards, Germantown, Maryland, U.S.A., Abstract #254

...A new bonding process has been developed that will help dentists conserve more tooth structure, rebuild damaged teeth, and make invisible cosmetic repairs of front teeth. Supported jointly by the National Institute of Dental Research, American Dental Association, and the National Bureau of Standards (NBS), this research achieves a goal pursued by dental scientists for over 25 years.

Dr. Rafael Bowen, Acting Director of the ADA Health Foundation Research at NBS, detailed the successful adhesive bonding procedure at the 61st General Session of the International Association for Dental Research. This is the first time that scientists have been able to achieve strong bonding of dental composites to the dentin, with the crown portion covered with an outer shell of enamel.

The acid-etch technique, widely used in dentistry today, is very effective

in bonding resins and composites to enamel. This method, however, does not produce a good bond to dentin—a hard tissue frequently involved in dental repairs. The new procedure uses compounds not previously applied in dental practice to achieve better adhesion.

In laboratory tests with extracted teeth, Drs. Bowen and E. N. Cobb used a ferric oxalate solution to prepare the surface of the hard tissues. Two other surface-active materials dissolved in solvents were then applied to act as "coupling agents" to help bond plastic filling materials to the dentin. Finally, a typical commercial composite resin was applied to the surface and allowed to harden. Because of the specialized tooth preparation, the material bonded firmly to both enamel and dentin.

Scanning electron microscopy at NBS shows that the ferric oxalate solution changes the surface of the enamel and dentin. The surface-active materials then provide molecules that are bound to the tooth surface and combine with the resin of the composite material. Tests have also confirmed that the initial strong bonding is retained in water for at least seven days. Previously, most materials applied to dentin lost bond strength when immersed in water for only one day. Water resistance is essential if a restoration is to survive in the mouth.

This new process has potential for treating eroded necks of teeth, root decay, deep caries, and other dental conditions which pose significant problems in current dental practice. If durable bonding of the strength and resistance achieved in the laboratory can be confirmed in animal and clinical tests, the new procedure should also minimize the amount of drilling necessary to "lock in" a composite restoration, reduce treatment time, and increase patient comfort.

**QUESTIONS?
IDEAS?
PROBLEMS?
Call The
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(512) 340-3664**

BOOKS AVAILABLE

The "Study Guide for Certification", "Classic Prosthodontic Articles" and the "Index to the Journal of Prosthetic Dentistry" are available. To get your copy (ies) of these valuable books, complete the form below and mail to the Central Office Director, 84 N.E. Loop 410, Suite 273 West, San Antonio, Texas 78216.

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- I would like ___ copy(ies) of the REVISED 1981 Phase I, Part I Questions and Answers for the American Board of Prosthodontics as a Supplement to the Study Guide (Price \$1.00)
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- I would like ___ copy(ies) of the "Index To The Journal of Prosthetic Dentistry" (Price Members \$25.00; Non-members \$35.00, plus \$3.00 postage for out of the country mailings)

Amount enclosed \$ _____

Make checks payable to:

The American College of Prosthodontists

CLASSIFIED

Position Available: Applications are being accepted for a post-graduate program in prosthodontics commencing July, 1984. A two year certificate or a Masters of Science program is available. A small stipend is awarded to program participants. For information write to Dr. Mark M. Stevens, Director, Post Graduate Prosthodontics Program, University of Maryland Dental School, Baltimore, Maryland 21201.

Correction: Dr. Martin F. Land is the Director of the Graduate/Post Graduate Prosthodontic Program at Loyola University of Chicago, School of Dentistry, vice Dr. William Malone.

Session Scheduled: The International Congress of Implantologists World Congress VII for oral implantology will meet in Munich, West Germany at the Munich Sheraton Hotel on June 21-24, 1984. For details, contact Mr. Clifford J. Kershner, Executive Director, International Congress of Oral Implantologists, P.O. Box 2277, Grand Central Station, New York, New York 10163.

Prosthodontics Award: The Prosthodontics Research Group of the International Association for Dental Research

(IADR) announces the continuation of its Novice Award Competition. Eligible participants are those who will be making their first presentation at the IADR / American Association for Dental Research meeting March 15-18, 1984, in Dallas.

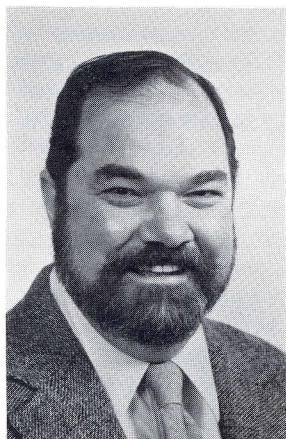
The Novice Award is sponsored by Coors Biomedical Company. Abstracts are due by October 4. Further information is available from Dr. John B. Huston, 700 Bay Street, suite 404, Toronto, Ontario, Canada, M5G 1Z6

VOLUNTEERS NEEDED

Dr. J. Crystal Baxter, Chairman of the Education and Advancement Committee, has requested that those who will take the 1984 American Board of Prosthodontics examination please contact her in order to assist in retrieval of questions from that examination which will be given next February. Please write as soon as possible to Dr. Baxter, 155 N. Harbor Drive, #1303, Chicago, Illinois 60601.

THE DIAGNOSTIC ROLE OF A DENTAL SURVEYOR

Dean L. Johnson D.D.S. M. Ed.



*Planning the path of insertion/dislodgment is a complex diagnostic procedure which depends upon the dental surveyor to measure dimensional relationships of oral anatomy. By establishing the path of insertion/dislodgement in the mouth, functional retentive qualities of the clasps are more predictable. If mechanical retention of a clasp is deficient, its effectiveness can be increased by several methods. "Tightening" a clasp already in contact with its abutment is **not** one of them. Although reciprocation of retentive clasp forces is highly desirable, it is not always achievable. When a removable partial denture is fully seated, its retentive clasps should be passive.*

Removable partial dentures are uniquely different from each other because they are designed to serve the individual needs of the patient. Such individualized designs are composed of selected elements that have been chosen to serve specific functions. In order to identify the needs of a patient, practitioners commonly gather diagnostic information through the health history, clinical examination, radiographic survey, analysis of mounted diagnostic casts and consultations as required. This discussion focuses on the role of the dental surveyor as a diagnostic tool in the analysis of diagnostic casts.

In removable partial denture treatment many clinicians perceive that retention of the denture is of primary importance, for if retention fails, all else fails. In reality, retention of a removable partial denture can be viewed as the product of a group of elements whose function is to prevent dislodgment from the fully seated position in the mouth.

In attempting to identify the magnitude, frequency, duration and direction of forces acting to unseat a removable partial denture, one can observe that the action occurs in the mouth and is directed away from the support tissues. While this description falls woefully short of complete identification of dislodging forces, it does alert us to the need to have retention occur in the mouth at locations that best resist dislodgment of the denture.

Retentive Factors

Dislodging forces may be multiple in nature and combine to produce a cumulative effect. The weight of materials used in a maxillary denture tend to contribute to the other dislodging forces such as tacky foods, rotational forces generated by occlusal contacts and occasionally muscle function at the

borders. Just as dislodging forces are multiple and varied, so are the retentive resources that resist them. Factors that provide retentive qualities in most removable partial denture are adhesion between dissimilar molecules of mucosa, saliva and denture base and cohesion of salivary molecules interposed between the closely adapted surfaces of mucosa and denture base. The latter relationships also enhance retention through interfacial surface tension.¹ In addition, the seal promotes retention through the effect of atmosphere pressure. Gravitational forces act to increase or diminish retentive qualities depending upon the type of materials used and the dental arch in which they function. Frictional resistance to dislodgment is generated by parallel guiding walls of teeth and their metal counterparts.

In distal extension removable partial dentures dislodging forces may act to unseat the restoration in a rotational manner. As this action occurs the mechanical retainers resist dislodgment and a potential axis of rotation develops between the two contralateral retentive clasp tips located nearest the denture bases. Simultaneously, framework elements located beyond the potential axis will rotate downward onto the soft tissues unless rests are supplied to prevent this tissueward motion. If rests are omitted, the potential axis becomes fully active and tissue trauma can be expected. Most often though, rests are supplied to maintain the position of the anteriorly located elements. These rests then become the determinants for the functional axis of unseating rotational movement. Thus, the most remotely located rests prevent tissueward movement and enable the retentive clasps to function to their full capacity. *Fig. 1.* Such rests contribute indirectly to the quality of retention and are called indirect retainers². In ante-

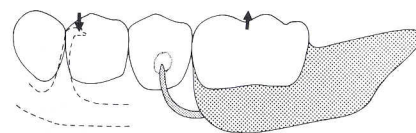


Fig. 1. A dislodging force acting on this distal extension denture tooth activates the retentive clasp tip. The most anteriorly located rest resists downward movement. Thereby preventing trauma to the soft tissues and permitting the clasp to function to full capacity. Indirectly, the anterior rest assists the clasp tip to function and becomes known as the indirect retainer.

rior extension and maxillofacial cross-arch dentures, the relationships and functions of denture elements behave the same way even though the intraoral location of the elements are markedly changed.

Mechanical Retention

Of the devices and methods available, the type that is most commonly used is the extracoronal mechanical retainer (clasp). There are two basic styles of extracoronal clasping. They may be described according to the direction from which the body of the clasp approaches the survey line i.e. suprabulge or infrabulge. Traditionally, suprabulge clasps have been designed as an encompassing retention generated by clasp tips which engage undercuts that are dispersed around the dental arch, or remaining group of teeth, in such a fashion that, no matter what direction the denture unseats, clasps will be forced to flex and produce retention. The situation is similar to the design of lids on old fashion jelly jars. Originally, the lid was sealed by vacuum at the factory. To open, one simply snapped the center of the lid downward and lifted at the edges. Once removed, the lid could be inverted in order to deflect the center portion

upwards. When replaced on the jar mouth the edges were pressed down over the external lip of the jar until the lid was fully seated again. The action consisted of flexible metal engaging undercuts to varying depths upon removal and placement. The system required only that flexible metal be placed into undercuts that were dispersed more than 180° around the container. A similar requirement exists with clasps i.e. they must enter undercuts that are dispersed more than 180° degrees around the dental arch or remaining group of teeth. Since the path of dislodgment is not specifically controlled by guideplanes, the depth of the undercuts must be great enough to produce adequate retention. More than .01" undercut is frequently used.

The second system of mechanical retention depends upon the existence of a finite path of insertion/dislodgment in the mouth. Such a path is planned in detail³ with the dental surveyor on a diagnostic cast and then carefully prepared in the mouth. It is important to realize that the location and depth of undercuts are identified on the diagnostic cast by using styli that are secured in line with the proposed path of insertion. Only when tooth contour alterations for guideplates, minor connectors and plating, specifically delineate the path of dislodgment in the mouth, will the functioning retention qualities equal those planned on the diagnostic cast⁴. The situation is much like that of a piston sliding within the cylinder of an engine block. If the design of the piston head was changed to become merely a thin disc having no flat surface around its periphery, it could become disoriented within the cylinder during function. However, by providing the piston head with a straight walled periphery, its motion is controlled by the close fitting walls of the cylinder block.

Since the guiding surfaces for the path of insertion/dislodgment must be parallel and prepared in enamel, the direction of the path must not be angled more than a few degrees from the common long axis of the teeth. Consequently, the final tilt of the diagnostic cast will seldom be more than 8°.

Intraoral Preparation of Guiding Surfaces

To, produce the path of insertion/dislodgment intraorally, align a straight walled rotary instrument in a contra-angle handpiece with one of several previously identified proximal walls of the abutments, or other accessible vertical wall, which exactly parallels the path of insertion on the diagnostic cast.

These orientation, or key walls should be identified when the cast is tripodded. Holding the rotary instrument parallel to the planned path of insertion/dislodgment, prepare the first guideplane. This preparation then serves to orient the rotary instrument in preparing the remainder of the intraoral guiding surfaces. If the remaining teeth are located so that the guiding surfaces are dispersed more than 180° around the dental arch, or group of remaining teeth, the path of dislodgment will exist in the mouth.

The key walls also help to orient working casts upon which wax patterns are being formed for cast crowns on abutments. It occasionally happens that the anatomic surfaces upon which the tripod marks are scribed on the diagnostic cast are not present in the fixed partial denture working cast. When these landmarks are missing, the correct orientation can still be made by aligning the key walls with the wax carver on the dental surveyor.

Reshaping of teeth intraorally requires careful hand-eye coordination by the clinician. To assist in making the preparations, a thin plastic wafer can be formed on a duplicate diagnostic cast and precut to serve as a template in the mouth⁵. Ideally, the precut preparations should be made with a straight handpiece that is attached to the dental surveyor and perfectly aligned to the path of insertion/dislodgment.

For many years we have operated under the assumption that by tipping the diagnostic cast, the location and depth of undercuts automatically changed in character intraorally. Testing services and licensing boards perpetuate the myth by stating that tipping a mandibular cast down in the anterior region causes the depth of a mesial undercut on a lower molar to increase⁶. As you read this, test the statement yourself. Suppose the cast was a positive reproduction of your mandibular arch, tip your head forward, as was done with the cast. Has anything changed? Has the undercut on the mesial of your lower molar become deeper? Not really. It will not happen until existing vertical tooth contours are made straight occluso-gingivally to produce surfaces which guide their metal counterparts in a specific path of insertion/dislodgment.

In spite of the close attention the clinician gives to planning and preparing the path of insertion/dislodgment, the process may be compromised by factors such as a sheer lack of three guiding tooth surfaces that are dispersed more than 180° around the dental arch

or remaining group of teeth. Even when this encirclement is accomplished there may be too little contact surface to control the direction of dislodgment in large removable partial dentures. In the dental office, the use of tapered rotary instruments or inclination of straight rotary instruments, produce divergent guiding surfaces and again the path of dislodgment becomes compromised. Laboratory factors which compromise the path are blockout instruments that taper, the Austenal surveyor which automatically produces a 2° taper, play in the vertical spindle of dental surveyors and indiscriminate polishing of the guideplates.

During the process of planning a removable partial denture there arises a need to estimate how effective the guideplates, minor connectors and plating will be in controlling the path of a dislodgment. Upon this judgement will rest the effectiveness of mechanical retention in the mouth. Given a clinical situation where only six mandibular anterior teeth remain with one canine having bountiful undercut while the other none, there arises a tremendous urge to simply tilt the diagnostic cast and proclaim that sufficient undercut now exists on both. Unfortunately, when such a denture is placed into function it will be found that no retention exists, Fig. 2, 3. Design decisions made in the laboratory become effective only when the path of insertion/dislodgment is firmly established in the mouth. In the example just cited, the two guideplates do not encompass more than 180° of the remaining teeth,

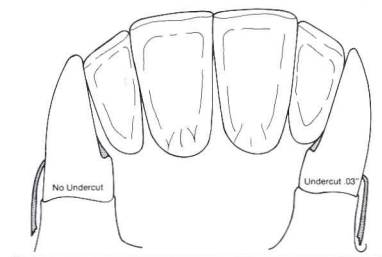


Fig. 2. Abundant undercut on one canine cannot be shared to produce bilateral retention unless an angled path of insertion/dislodgment is established in the mouth.

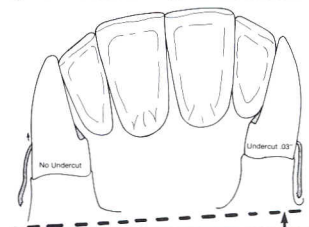


Fig. 3. Tilting of the diagnostic cast may appear to change the path of insertion/dislodgment. However, design decisions made in the laboratory become effective only when adequate guiding surfaces are prepared intraorally.

control the path of dislodgment and do not guarantee effective retention in the mouth. However, upon insertion the path way appears to be precise because finger force can be applied at a location and direction which facilitates seating. Such forces are markedly different from the randomly applied and undirected forces of dislodgment.

Increasing Mechanical Retention

On occasion retentive clasps do not produce effective retention. It should first be determined whether the retentive clasp tip lies in contact with the abutment. If it does, retention can be improved by deepening the existing undercut with a rotary instrument and then permanently deforming the clasp into contact again. Care must be exercised in preserving the suprabulge contours located immediately above the clasp tip. An alternative method is to readapt the clasp tip into a natural undercut nearby. In a case where a suprabulge contour has worn away from long term use, retention can be improved by restoring the bulge with dense durable materials.

Where there is a need to improve mechanical retention, but the clasp tip already contacts the tooth, **never** "tighten the clasp". Such an action will either cause the denture to rebound after forceful seating, induce constant stress in the clasp and compression in the crown (if perfect reciprocation exists) or produce orthodontic movement of the abutments. In the latter case, the framework will shortly appear to not fit the mouth, i.e. molar has tipped forward or canines drawn toward each other bilaterally, etc. Early detection and deactivation of the clasp tips will permit the abutments to return to its fully seated position and then deeper undercuts can be prepared to provide adequate retention.

Reciprocation

No matter what design or material is selected, a retentive clasp must be capable of flexing, be located so that it will be activated when a random dislodging force occurs, be passive when fully seated and be reciprocated whenever possible. Although the primary goal in producing retention is that the clasp tip must be forced to flex,⁷ a very important secondary concern is that those forces generated against the abutment during flexure be reciprocated. Counterbalancing the retentive forces can be achieved by utilizing combinations of proximal natural tooth contacts, guideplates, minor connectors,

plating and reciprocal arms set into prepared contours of cast crowns. In order to be effective, reciprocating elements must contact the opposite side of the abutment at the same level and during the whole time in which the retentive clasp travels from its first suprabulge contact to its fully seated position, Fig. 4. In spite of these methods that are available, reciprocation may still be impossible to achieve. Sloping lingual inclines of canines make reciprocation difficult to obtain, Fig. 5. Likewise lingual reciprocation is difficult to obtain for buccal retainers located on maxillary molars and premolars that are tipped buccally. The same problem arises with lingual retainers on mandibular molars that are tipped lingually.

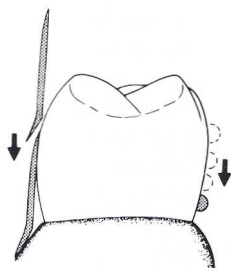


Fig. 4. In order for effective reciprocation to occur, plating must contact the abutment as the retentive clasp tip traverses the opposing tooth surface.

In such situations the opposing vertical wall is markedly inclined so that true reciprocation cannot be achieved. Consequently, the biologic resources in the periodontal attachment and alveolar bone must dissipate the force generated by a retentive clasp as it passes over a bulging contour.

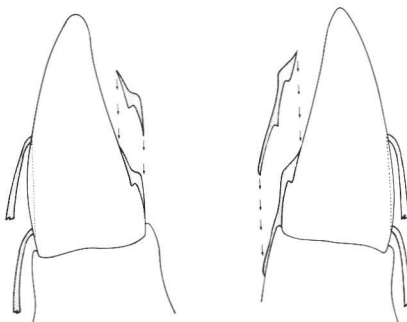


Fig. 5. A retentive clasp tip stresses the abutment from the point of initial suprabulge contact until the time it becomes fully seated. When reciprocal components on the opposite side do not make contact until the denture is fully seated, true reciprocation does not occur.

Summary

Planning the path of insertion/dislodgment is a complex diagnostic procedure which depends upon the dental surveyor to measure dimensional relationships of the oral anatomy. For one style of retention, it is imperative that guideplanes be prepared in the mouth. Such guideplanes must be formed and dispersed more than 180° around the dental arch, or group of remaining teeth, so as to control the path of dislodgment when a random force acts to unseat the denture. If the path is controlled, then retentive elements will perform as planned and .01" undercut will often suffice. Without control over the path of dislodgement, retentive clasps should be dispersed around the dental arch or group of remaining teeth, more than 180° so that retention occurs no matter what direction the dislodgement takes. Such an encompassing style of retention often employs .02" undercuts. These recommendations are made with the understanding that the variables in clasp shape, material and approach angles are considered constant. When the retentive quality of a clasp is deficient, it can be increased by several means. "Tightening" a clasp already in contact with the abutment is **not** one of them. Retentive clasps must be passive at rest. And although reciprocation is highly desirable, it is not always achievable.

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PROSTHODONTIC HEALTH AND FIBER CONSUMPTION IN OLDER AMERICANS

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It is the responsibility of the Prosthodontist to keep the geriatric patient in optimal oral health, with a sound dentition or adequate prosthetic replacement. This will enable the patient to eat a well-balanced diet with proper fiber content which in turn may contribute to superior systemic health.

Studies of populations of geriatric individuals in the United States have illustrated that numerous elderly persons are consuming a nutritionally substandard diet. A survey of 27 studies found that the mean caloric intake was below standard in the majority of studies which were reviewed.¹ Calcium was deficient in most of the studies, indicating that more women were likely to have an inadequate intake than men^{2, 3, 4}. Other nutrients which were commonly found to be deficient were iron⁵, Vitamin A⁶, and thiamine⁷.

One area which has not been studied extensively but is dentally related is the subject of fiber consumption. The American Public as a whole is fiber deficient⁸. Fibrous foods require more mastication than highly refined foods. A patient who has a diseased dentition or who is edentulous is more apt to substitute highly refined foods for foods of more fibrous content. A statement commonly heard is "In America, you really don't need teeth to eat." This comment, sadly enough, is true. But the question is "To eat what?" Certainly not to eat as one should to attain maximal health.

The purpose of this article is to review the dangers of a diet low in fiber and high in refined carbohydrates.

Definition and History of Fiber

The refinement and processing of food has been a trademark of civilization and Western style culture. Along with this increase in refinement, has come an increase in constipation, hiatal hernia, hemorrhoids, varicose veins, diverticulitis and colonic cancer. These diseases are common in economically developed countries, but are almost never found in Third World populations. Processing and refining foods allows for many additives and potential carcinogens to become a part of our diet. Perhaps even more important than what is added in the process of refinement is what is taken away, i.e., the very important and once unnoticed combination of nutrients called fiber.

It is important to realize that dietary fiber (DF) is not one nutrient, like calcium or potassium but a complex combination of nutrients, perhaps best called a physiochemical complex⁹. The main elements of dietary fiber are cellulose, hemicellulose, lignin and pectin. Many dietary tables measure only crude fiber (CF), which is the residue of plant food left after sequential extraction with solvent, dilute aqueous acid and dilute aqueous alkali. On the average, 80% of the hemicellulose and 50% to 90% of the lignin are removed before this residue is examined, and about 50% of the cellulose is also destroyed. This makes the crude fiber tables of little value in estimation of true dietary fiber.

In order to simplify the picture, let us use a definition introduced by Trowel in 1974 who defined "dietary fiber" (DF) as that part of the plant food that traverses the small intestine and is not digested by the endogenous secretions within it. All fiber, except for lignin, is polysaccharide in nature. Because dietary fiber is passed on, undigested, and is really not utilized in a specific way, such as other nutrients are, it was taken for granted that it really had no particularly useful purpose. If this had indeed been true, then removal of fiber from the diet would only have left us with less undigestible waste. Except for the irritating problem of constipation, no other harm would befall the "fiber deficient" individual.

No more than 50 years ago, refinement of food was relatively rare, even in the "civilized" United States, and other economically developing countries. In the past decades refinement of foods has become commonplace in these civilized countries. With the increased consumption of refined foods, various pathological conditions have increased also. Recently, researchers have noticed the correlation between lack of fiber and various pathological conditions, and some excellent theories have appeared as to the actual mechanisms of these diseases.

Pathologies Related to Low Fiber Consumption

The following will serve as a review of the various diseases related to low fiber intake and the latest theories on the relationship of fiber deficiency to those diseases.

Constipation—Although not properly labeled a disease, constipation is an irritating condition found in almost one-third of our adult population. True constipation may be defined as a decrease in the frequency of bowel movements, accompanied by the passage of a very hard stool, followed by a sensation of incomplete evacuation. Laxative addiction is common. The FDA (Food and Drug Administration) panel that reviewed safety and effectiveness of laxatives concluded that there was a widespread overuse of laxatives which tended to increase with age. In 1975 there were over 132 over-the-counter laxative products for which Americans spent over 241 million dollars.¹⁰

Constipation is a "civilized" occurrence. Laxatives are unheard of in third World countries. The need for laxatives results from a low fiber diet, inadequate fluid intake, and sedentary existence.

Cellulose is the part of the fiber which contributes mainly to the bulk of the stool. This is the primary mechanical factor initiating the emptying of the rectum. Without cellulose, there is less bulk, and this results in difficulty with elimination. The chronic use of laxative agents result in damage to more than the pocketbook. Chronic use of mineral oil laxatives destroy the intestines ability to absorb the fat soluble vitamins. Deficiencies of Vitamins A, D, K, and E may be the result of long term useage. Other laxatives alter water absorption and can cause aberrations in mineral metabolism when taken over long periods of time.

Diverticulitis—Internal pathologies labeled "diverticulitis" have increased epidemically over the past 50 years. Like constipation, the condition is present in almost one-third of Americans

over 60. Diverticulitis is almost always found in the individual with a low fiber diet. The patient with a low fiber diet does not have the bulk necessary to push the waste products along the intestines in a normal fashion. In order to allow for the movement of the waste products, increased pressure must be used inside the intestine. This results in an increased ratio of pressure between the intestine and peritoneal cavity. The increased pressure gradient causes small herniations of the mucosa and submucosa into the muscular wall of the intestine. These herniations then become irritated, and the condition of diverticulitis is the result.

Hernia, Hemorrhoids and Varicosity—All of these conditions are related to high intercolonic pressures such as caused by a low fiber diet. When increased intraluminal pressure occurs, it is not limited to the intestine alone. In the upper part of the alimentary tract, this increase in pressure can force the gastroesophageal junction upward and allow for stomach acids to enter the esophagus. Repeated occurrence of this type of action could result in hiatal hernias and ulcerations. The pressures are likewise increased at the lower end of the alimentary tract. Increased pressures transmitted to the anal veins from the abdominal veins are a probable factor in the etiology of hemorrhoids.¹²

Finally, it should be pointed out that increased colonic pressures are easily transmitted from the colon into the intra-abdominal veins, and in a retrograde manner, to the veins draining the legs. At first, the valves of the veins can stop the reversed pressure, but as this pressure is increased and repeated, the veins will dilate, and the valves will become damaged, until this pressure damages the valves throughout the venous system of the limbs. Varicosities are then the result.

Cancer of the Colon—This is the most serious disease which has been related to lack of dietary fiber. This form of cancer has been on the upswing in the United States over the past decade. It accounts for more than 50,000 deaths per year, second only to lung cancer as a prime cancer killer. Cancer of the colon is most common in well developed countries such as the United States and Canada where diets high in refined sugars and low in fiber can be found. The opposite is true in the less developed countries, which illustrate a low incident of colonic cancer with low refined sugars and high fiber consumption.

Several theories have been suggested to explain how fiber might serve as a protective agent against potential carcinogens. First of all, fiber causes intestinal transit time to be much shorter. Peristalsis is promoted by the bulk of the fiber in the colon, and the waste products are moved along at a more rapid rate. Any carcinogens present in the waste products would then have much less time to react on the epithelial surface of the gut, promoting carcinogenic changes.¹³

The second point is that through sheer bulking capacity, fiber decreases the concentration of carcinogens in the colon. Fiber has the ability to bind water, sterols, bile acids and fat, thus promoting a large bulk to the intestinal waste. Any carcinogens in the waste products will then be simply diluted by the bulk present in the stool. Lower concentrations of toxin result in less carcinogenic effectiveness.¹⁴

The third and most important theory of the anti-carcinogenic properties of a diet high in fiber relates to its chemical binding capacity. Fiber binds with bile salts and bile acids thus decreasing their intestinal degradation. When these products are acted upon by the bacteria in the human colon, they are broken down to phenanthrene compounds with proven carcinogenic effects. When bile salts and acids are bound by fiber, this bacterial breakdown does not occur, and fewer carcinogenic agents are produced.¹⁵

Related to the above, it is a proven fact that fiber consumption is related to a change of bacterial flora in the gut. Diets high in animal protein, fat, and refined carbohydrates cause many anaerobic bacterial strains to reproduce in the intestines. These strains, especially Clostridia, have been related to cancer of the bowel. Clostridia are found in 70% of persons with bowel cancer as compared to only 9% of a normal population. These anaerobes do not fare well in a high fiber diet. Consumption of fiber decreases the number of anaerobic bacteria in the gut, and allows for greater numbers of the harmless anaerobic strains to reproduce. Aerobic bacteria allow for normal breakdown of fecal waste, without production of carcinogenic by-products.

Upon reviewing the above facts, it can be seen that fiber is not just as "in trend" promoted by some faddist sector of the population, but a natural protective agent which has been depleted from our diets. Chemical food colorings and additives have increased a thousand fold since World War I, while fiber consumption has decreased dras-

ticall. Constipation, hernia, diverticulitis, hemorrhoids, varicose veins and cancer of the colon have increased significantly with a decrease in fiber consumption. There is too much positive data to ignore this aspect of disease prevention.

Dietary Suggestions For Increased Fiber Consumption

Ideally, it would be best to go back to a more primitive diet of raw fruits and vegetables. Realistically, this is a difficult and radical change to expect of our patients. However, any diet can be modified to contain more fiber without gross changes in habits.

Suggestions for a higher fiber consumption include:

- Breakfast** Substitute whole grain breads for white bread toast. Eat bran and shredded wheat cereals instead of highly refined sugared cereals.
- Lunch -** Sandwiches can be made with whole grain breads and buns. More salads and raw fruit should be consumed. Peanut butter is also a good fiber source.
- Dinner -** Miller's bran or other wheats can be added to ground meats for meat loaf, hamburger, or casserole dishes. At least one raw vegetable or a lettuce or spinach salad should be served.
- Desserts -** Date or nut cakes, carrot cakes, dried or fresh fruit should be substituted for highly refined desserts.
- Snacks -** These can include raw vegetable sticks (also very good for the weight watcher) peanuts or peanut butter, whole wheat crackers, dried or fresh fruit pieces.

An increase in the amount of high fiber foods can help normal self-defense mechanisms protect the body against colonic disorders. Fibrous foods are inexpensive and plentiful. It is wise to utilize this defense as much as possible to aid the body in avoiding gastro-intestinal pathology.

Summary and Conclusions

It is the responsibility of the Prosthodontist to keep the geriatric patient in optimal oral health, with a sound dentition or adequate prosthetic replacement. This will enable the patient to eat a well-balanced diet with proper fiber content which in turn may contribute to superior systemic health.

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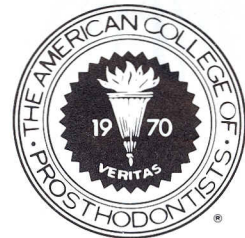
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