Updating Clinical Endodontics

American Association of Endodontists 39th Annual Session

April 21-25, 1982 Phoenix, Arizona



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President's Message

Welcome to the 39th Annual Session of the American Association of Endodontists. The program is designed to provide information which is helpful to you in the daily practice of endodontics. We hope you find it so.

The Officers and Directors of the AAE join me in thanking the membership for allowing us to serve the organization during this

past year.

HENRY J. VAN HASSEL, DDS, PhD President

American Association of Endodontists



Henry J. Van Hassel President



Noah Chivian President-Elect



Warren T. Wakai Vice-President



Michael A. Heuer Secretary



Donald E. Arens Treasurer



Irving J. Naidorf Editor

Board of Directors

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Ex Officio Members of Board of Directors

Immediate Past President: Edward M. Osetek Executive Director: Irma S. Kudo (without vote)

Welcome

This is the first time that the American Association of Endodontists is meeting in Phoenix, and it may be the beginning of many more annual sessions in this beautiful area of the Southwest. The general arrangements committee has scheduled numerous activities which take advantage of the pleasant climate and scenic location of the Valley of the Sun.

The Civic Plaza, with its spacious Convention Center, will provide excellent facilities for scientific sessions, exhibits and registration. An extensive program of clinical, scientific, and business topics are scheduled. The entire 1982 Annual Session Committee sincerely hopes that the membership and guests of the American Association of Endodontists will enjoy the leisure activities and benefit from the educational programs.

LEIF K. BAKLAND, DDS Program Chairman

1982 Annual Session Committee



Leif K. Bakland Program Chairman



Raleigh R. Cummings General Arrangements Chairman

Program	
Co-chairman ('83)	Bernard Grothaus
Clinical Essays	Jerry F. Taintor
Research Seminars	
Table Clinics	
Financial Management Luncheon	John G. Hockin II
Educational Resources	Barry H. Korzen
Endodontic Roundtable Seminars M	lanuel I. Weisman, chairman
	Mitchell Levine, co-chairman
ExhibitsM	. Cameron Crump, chairman
	Irma S. Kudo, manager
Printed Program	Irma S. Kudo

General Arrangements	
	Joseph D. Maggio
breaklasis	Sandra C. Peterson
Luncheons	Edward R. Hintzen
	Martin L. Goldman, Robert A. Lees II
Receptions	Michael C. Bailey
	James M. Kramer
Banquet	
Host	Richard E. Schmidt
	Maurice Cutler
riogistration	Dominic J. Niccoli
Llabara/manitara	
	Robert V. Bravin
Signs	Charles L. Siroky
	K. Norwood Clancy
Special Events	I. Robert Matloff

Women's Auxil	iary	
Chairperson		. Donna Hardy
Co-chairperson		. Gayle Siroky

Charles L. Siroky

John W. Gillan

General Meeting Information



AAE Headquarters Office

The Headquarters Office is located in the Convention Manager's office of the Phoenix Convention Center. It will be staffed by Central Office personnel—Laura Cancilla, Claudia Argyris and Maria Oliveros—and members of the Annual Session Committee. Office hours are 8:00 a.m.—6:00 p.m., Wednesday—Friday; 8:00 a.m.—1:00 p.m., Saturday.

General Registration—Assembly Hall, Phoenix Convention Center

 Wednesday
 8:00 a.m. - 6:00 p.m.

 Thursday
 8:00 a.m. - 6:00 p.m.

 Friday
 8:00 a.m. - 5:00 p.m.

 Saturday
 8:00 a.m. - 12:30 p.m.

AAE Members (after March 25) \$175 (includes 2 receptions, 3 luncheons, 4 continental breakfasts, one ticket to Dinner Dance)

Non-AAE Member Professional \$150 (Welcome Reception, scientific session)

Dental Auxiliary Personnel \$ 25 (Welcome Reception, scientific session)
Student \$ 25 (Welcome Reception,

AAE Women's Auxiliary Member \$ 25 (2 receptions, complimentary gift)

Non-member Women's Auxiliary \$ 25 (2 receptions)

Exhibits

The exhibits are located in the Assembly Hall, Phoenix Convention Center.

Exhibit hours are:

Thursday 8:00 a.m. – 5:00 p.m. Friday 8:00 a.m. – 5:00 p.m. Saturday 8:00 a.m. – 12:30 p.m.

Message / Information Center

If you wish to contact an attendee during the day, or if you would like information pertaining to local attractions, restaurants, etc., please check with the Message / Information Center located in the exhibit area. Be sure to check with the Center to see if there is a message waiting for you.

Endodontic Roundtable Seminars

Tickets reserved in advance are enclosed in each doctor's registration packet.

To register for an open endodontic Roundtable Seminar, or to exchange tickets, the ERS Desk is located in the general registration area.

Financial Management Luncheon

The Financial Management Luncheons will be held at the Hyatt Regency Hotel, on Friday, 12:45–2:15 p.m.

Tickets reserved in advance are enclosed in each doctor's registration packet.

To register for an open luncheon or to exchange tickets, you must do so before 10:00 a.m. on Thursday at the special desk, general registration area. There is no charge to AAE MEMBERS (excluding Student Members). All others are required to pay \$10.00.

Cassette Tape Recordings

Eastern Audio Associates will record many of the sessions. The cassette tapes are available for purchase at the EAA booth located in the exhibit hall.

Saturday Dinner Dance

Your table selection for the Saturday banquet must be made as soon as possible before 12 Noon on Friday by exchanging your voucher for a banquet ticket at the registration desk. If you wish to make up a party, you must present a voucher for each person in your group in order to reserve the space. No exceptions will be made.

Smoking

For the comfort of others, all smokers are requested to sit at the rear of the meeting rooms.

No smoking permitted in the Endodontic Roundtable Seminars.

Buses

All buses for AAE tours and other activities will depart from the Monroe Street entrance of the Hyatt Regency Hotel.

ADA Continuing Education Registry

Individuals* whose constituent societies, federal dental services or state boards of dentistry participate in the ADA Registry program will receive continuing education credits as follows:

5 credits for general attendance at Annual Session. This includes attendance at table clinics and/or exhibits.

Hour-for-hour credit for attendance at a scientific presentation of at least one hour's duration. This must be of a scientific or clinical nature.

A separate form for each presentation attended, as well as a separate form for general attendance, should be completed in detail, and deposited in the special box located in the AAE Head-quarters Office.

*Refers only to individuals from Connecticut, Georgia, Iowa, Maine, Massachusetts, Minnesota, New Hampshire, North Dakota, Rhode Island, South Dakota, Tennessee, Vermont, Wisconsin, U.S. Army, Veterans Adm.

Academy of General Dentistry

Members of the Academy of General Dentistry may have their course forms validated at the AAE Headquarters Office.

BADGES MUST BE WORN AT ALL OFFICIAL AAE FUNCTIONS

Program

MONDAY, APRIL 19

9:00 am- 5:00 pm	ABE DIRECTORS' MEETING Hyatt Regency–Russell C
	TUESDAY, APRIL 20
9:00 am- 5:00 pm	ABE ORAL EXAMINATIONS Hyatt Regency–Russell A-B-C, Borein A
9:00 am- 5:00 pm	E & M FOUNDATION TRUSTEES' MEETING Hyatt Regency-Remington B-C
	WEDNESDAY, APRIL 21
8:00 am	Buses depart for golf
8:15 am	Buses depart for tennis
	Buses depart from Monroe Street entrance, Hyatt Regency Hotel.
8:00 am	REGISTRATION OPENS Phoenix Convention Center-Assembly Hall
9:00 am- 5:00 pm	ABE ORAL EXAMINATIONS Hyatt Regency-Russell A-B-C, Borein A
9:00 am- 5:00 pm	AAE BOARD OF DIRECTORS' MEETING Hyatt Regency–Remington B-C
	CONTINUING EDUCATION COURSE (Advance registration required)
9:00 am- 5:00 pm	The inflammation and immunologic response in endodontics Hyatt Regency–Phoenix Ballroom
6:00 pm- 8:00 pm	WELCOME RECEPTION Hyatt Regency-2nd Floor Atrium

WEDNESDAY WELCOME RECEPTION-6-8 pm

Hyatt Regency Hotel-2nd Floor Atrium

Open to all attendees. No ticket required.

THURSDAY MORNING, APRIL 22

ABE PAST DIRECTORS' BREAKFAST

7:30 am

7.50 am	Hyatt Regency–Remington A-B
7:30 am	AAE COMMITTEE BREAKFAST MEETINGS (Refer to page 14 for listing)
8:00 am	CONTINENTAL BREAKFAST Phoenix Convention Center-Yuma Room
8:00 am	REGISTRATION AND EXHIBITS OPEN Phoenix Convention Center–Assembly Hall
	OPENING SESSION Phoenix Convention Center-Tucson Room
9:15 am	Welcome: HENRY J. VAN HASSEL, DDS, PhD, AAE President LEIF K. BAKLAND, DDS, Program Chairman RALEIGH CUMMINGS, DDS, General Arrangements Chairman
	Speaker: HERBERT SCHILDER, DDS, Boston
	Topic: Current status of clinical endodontics
	CLINICAL ESSAY Phoenix Convention Center-Tucson Room
10:00 am	Moderator: RAYMOND G. LUEBKE, DDS, MSD
	RADIOLOGIC INTERPRETATION OF SIGNIFICANCE IN ENDODONTICS Clinician: EUGENE NATKIN, DDS, MSD, Seattle, WA
	Dr. Natkin is Professor of Endodontics at the University of Washington in Seattle. He received his M.S.D. from the University of Washington in 1962 and took a post-doctoral year in dental radiology at the University of

12:15 pm LUNCHEON WITH CULTURE Phoenix Hilton Hotel-Grand Ballroom

Toronto (1978-79).

THURSDAY LUNCHEON-12:15-2:15 p.m.

Luncheon with Culture-Phoenix Hilton Hotel

An opportunity to enjoy and appreciate the local Indian culture.

The presentation will focus on a variety of abnormalities of teeth and bone whose radiographic interpretation is of interest and significance to endodontists.

VISIT THE TECHNICAL EXHIBITS



THURSDAY AFTERNOON, APRIL 22

CLINICAL ESSAYS Phoenix Convention Center-Flagstaff Room

2:30 pm-5:30 pm

2:30 pm

Moderator: ALVIN A. KRAKOW, DDS INSTRUMENTS AND MATERIALS

Clinicians: MICHAEL A. HEUER, DDS, MS, Chicago IVAR A. MJÖR, BDS, MSD, MS, Dr. odont., Oslo, Norway DAG S. ØRSTAVIK, DMD, Dr. odont., Oslo, Norway

Dr. Heuer is Professor of Endodontics, Chairman of the Department and Director of Graduate Endodontics at Northwestern University in Chicago. He is also Secretary, American Association of Endodontists.

Dr. Mjör is Director of the Scandinavian Institute of Dental Materials and Head of its Biological/Clinical Division. He is immediate past president of the Dental Materials Group of the IADR and president of the Norwegian Dental Association. He is the editor of two dental journals and has co-authored the text, *Histology of the Human Tooth*.

Dr. Ørstavik is Senior Scientist at the Scandinavian Institute of Dental Materials and is also in part-time practice in general dentistry. He has authored publications in oral biology, microbiology, and dental materials.

The presentations, divided up into several short presentations, will focus attention on the significance of biological testing with reference to proposed techniques for national and international specifications. The review of specification and standardization work in endodontics will be presented and their importance to clinical practice will be discussed. The emphasis will be on root canal instruments and materials used for obturation.

ENDODONTIC RESEARCH SEMINARS-Group A Phoenix Convention Center-Prescott 1

Moderator: MELVIN GOLDMAN, DDS

Influence of clinical factors on prognosis of endodontic therapy—a multivariate quantification analysis

HISASHI NAGASAWA*, DDS; KAZUTOSHI KOJIMA, DDS, Kyushu University, Japan

Clinical and radiographic observations were made on endodontically treated teeth for one week up to 29 months postoperatively. Two hundred and thirty-two teeth (incisors, canines and premolars) of 90 patients were subjected to endodontic treatment in two visits. Clinical factors on the prognosis of endodontic treatment were all recorded on punch cards and tabulated with the aid of a computer.

3:00 pm

Localization of cyclic nucleotides, cyclic AMP and cyclic GMP in human pulpal and periapical tissues by immuno-histochemical methods

MORRIS YIP*, DDS, PhD; HIROSHI NAKAMURA, DDS, PhD; JOHN GREENSPAN, BDS, PhD, University of California at San Francisco

Adenosine 3',5' monophosphate (cyclic AMP) and guanosine 3',5' monophosphate (cyclic GMP) have been implicated in many biological phenomena involving inflammation, bone remodeling, repair, hormone action and pain. The purpose of the present study was to localize these cyclic nucleotides in normal pulpal and periapical tissues.

3:30 pm

The influence of full coverage on the compressive strength of posts and cores in posterior teeth

MARTIN GELFAND*, DDS; ERIC SUNDERMAN, DDS; MELVIN GOLDMAN, DDS, Tufts University

Six different post and core systems were cemented into extracted molars. Half were covered by a full cast crown with a 1 mm collar on tooth structure. The others were left uncovered. All teeth were compressed to failure on an Instron testing unit and compared statistically.

4:00 pm

Intraseptal or ligamental injection; clinical and physiological investigations

SYNGCUK KIM*, DDS, PhD; LENNART EDWALL, DDS, PhD; HENRY TROWBRIDGE, DDS, PhD; BRIAN WEBER, DDS; DORY CALEV, DDS; CHANDURPAL GAHANI, BDS; ANDREW MELINGER, DMD, Columbia University, Karolinska Institute, and University of Pennsylvania

Effects of intraseptal injection on the pulpal blood flow of dog teeth were studied using the 15 micron radio-isotope labeled microsphere injection method. The intraseptal injection with a vasoconstrictor containing anesthetic (e.g., Xylocaine with 1:100,000 Epinephrine) results in a drastic decrease in the pulpal blood flow of the dog. Clinical studies demonstrate that success of anesthesia with intraseptal injection depends very much on using an anesthetic containing vasoconstrictor. Therefore, it is postulated that one of the mechanisms for the anesthesia using the intraseptal injection is a temporary cessation of blood flow to the pulp.

4:30 pm

Pulpal pain: its structural basis

G. REX HOLLAND*, BDS, PhD, University of Iowa

Pain is the characteristic sensation experienced after excitation of the pulp by a wide variety of stimuli. Recent investigations have revealed specialized structural features such as the numerical dominance of narrow fibers, extensive axon to axon contact and specialized terminal morphology which may explain this unique and disturbing property.

5:00 pm

Endodontic surgery using thermoplasticized injected gutta percha and amalgam retrogrades

JAY MARLIN*, DMD, Harvard University

A video-tape demonstrating three endodontic surgical procedures on the same patient.

*Presenter

ENDODONTIC RESEARCH SEMINARS-Group B Phoenix Convention Center-Prescott 2

Moderator: SAMUEL SELTZER, DDS

2:30 pm An evaluation of cancellous bone autografts in periodontal osseous defects associated with treated pulpless teeth

CHARLES J. CUNNINGHAM,* DDS, University of Kentucky

The reduction of periodontal bony lesions with bone-inducing materials placed in the defects is well documented. Published studies have had apparently vital teeth adjacent to the periodontal lesions. However, the success rate of these procedures may be influenced by the viability/permeability of the dentin. This investigation will evaluate the influence of the treated pulpless tooth on the treatment outcome of periodontal osseous defects with cancellous bone autografts.

3:00 pm Clinical implications of condensing osteitis

KATSUEI MORI*, DDS, Tokyo, Japan

Long term follow-up studies of condensing osteitis frequently encountered in dental practice will be presented with a brief review of pertinent literature. Its relation to bone homeostasis, differential diagnosis and its importance in determining the prognosis of periodontic and endodontic lesions will be emphasized.

3:30 pm The influence of the smeared layer on tubular penetration of the prepared root canal

ROBERT R. WHITE*, DMD; MELVIN GOLDMAN, DDS, Tufts University

Extracted human teeth were instrumented and filled with Hydron and silicone filling materials. In the control group, no specific effort was made to remove the smeared layer. In the experimental group, the smeared layer was removed with EDTA and NaOCI prior to filling. Models of the fillings were recovered and evaluated by SEM for penetration of the material into dentinal tubules.

4:00 pm The influence of the smeared layer on the tensile strength of cemented posts

MAURICIO PIER*, DDS; RUSTAM DeVITRE, DDS; MELVIN GOLDMAN, DDS, Tufts University

Removing the smeared layer from the canal walls exposes the dentinal tubules. The resistance to removal of posts cemented with and without smeared layer removal using several cements was tested with an Instron testing unit.

4:30 pm The effects of intentional apical plugging with dentinal filings and calcium hydroxide powder on apical sealability

KENNETH L. ZAKARIASEN*, DDS, PhD, University of Iowa

Biologic stimulation of periapical tissues by apical dentin plugs has been reported. This study was designed to ascertain whether the intentional apical dentin plug has an effect on canal sealability and compares it with an apical plug of condensed calcium hydroxide powder, an alternate material possessing similar calciogenic stimulating properties. Significant differences were found.

5:00 pm Analysis of dentin and pulp tissue covered with calcium hydroxide; a scanning electron microscopic evaluation

FERNANDO GOLDBERG*, DDS; ENRIQUE J. MAS-SONE; JULIO C. SEQUEIRA; CARLOS SPIELBERG, Buenos Aires, Argentina

The action of calcium hydroxide on the dentinal wall and in contact with pulp tissue after direct pulp capping and pulpotomy was evaluated in human premolar teeth that had to be extracted for orthodontic reasons. The specimens were analyzed by SEM.

*Presenter

6:30 pm- FELLOWSHIP FIESTA

8:30 pm Hyatt Regency Hotel-Regency Ballroom (Admission by ticket only)

THURSDAY FELLOWSHIP FIESTA-6:30-8:30 p.m.

Hyatt Regency Hotel-Regency Ballroom

A gala evening with food, music and decor that will highlight the Mexican culture of the region.

ALL BUSES DEPART FROM MONROE STREET ENTRANCE, HYATT REGENCY HOTEL.



FRIDAY MORNING, APRIL 23

5:30 am Buses depart for 10K Run (Monroe St. entrance, Hyatt)

7:30 am AAE COMMITTEE BREAKFAST MEETINGS (Refer to page 14 for listing)

7:30 am NEW MEMBER BREAKFAST Hyatt Regency Hotel–Phoenix Ballroom

8:00 am CONTINENTAL BREAKFAST, REGISTRATION, EXHIBITS
Phoenix Convention Center–Assembly Hall

CLINICAL ESSAYS
Phoenix Convention Center-Flagstaff Room

ENDODONTIC SURGERY

Moderator: JOHN I. INGLE, DDS, MSD

9:15 am Principles of surgical endodontics

Clinician: DONALD D. ANTRIM, DDS, MS, MA,
Bethesda, MD

Dr. Antrim is the assistant Head of the Endodontics Department and Assistant Director of the Endodontic Residency Program at the National Naval Dental Center, Bethesda, Maryland.

The essay will present a clinically oriented approach to pre-surgical considerations such as armamentarium, flap design, and patient preparation. The main effort will be given to a detailed, step-by-step description of surgical techniques for both anterior and posterior teeth.

10:45 am Furcation therapy: a periodontal point of view Clinician: WILLIAM F. AMMONS, DDS, MSD

Dr. Ammons is Associate Professor of Periodontics at the University of Washington, Seattle.

This discussion will include periodontal diagnostic factors that influence the treatment method for root amputation and hemisection. The emphasis will be placed on which root and why.

11:45 am Correcting endodontic mishaps without surgery

Clinician: GERALD M. CATHEY, DDS, MSD, Gainesville, FL

Dr. Cathey is Professor of Endodontics at the University of Florida, Gainesville. He is a Director of the American Board of Endodontics.

There are several types of procedural mishaps which can accompany endodontic treatment and, if not corrected, can compromise case success. Of these, the largest proportion will usually require surgical intervention. However, some types may be corrected nonsurgically and these will be presented via slide demonstration and discussion. The discussion will include prevention as well as corrective therapy.

ENDODONTIC RESEARCH SEMINARS— GRADUATE STUDENT—CLINICAL SCIENCE SECTION Phoenix Convention Center—Prescott 1

Moderator: SEYMOUR OLIET, DDS

9:15 am The application of peer and self evaluation to undergraduate endodontic education

GERALD SCOTT*, DDS, University of Iowa

Peer review has become a topic of interest in all disciplines of dentistry. This study utilizes peer and self evaluation within a pre-clinical endodontics curriculum under controlled conditions to investigate its potential positive educational benefits and to introduce the dental student to the concepts of quality review.

9:40 am Pulpal prognosis of extrusive luxation injuries in permanent teeth with closed apices

THOMAS DUMSHA*, MS, DDS; ERIC HOVLAND, DDS, University of Maryland

A clinical evaluation of pulpal prognosis of permanent teeth with closed apices following extrusive luxation was undertaken. Pulpal necrosis was verified in 51 of 52 teeth in 36 patients after a period ranging from 4 weeks to 1.5 years. A comparison of this study with other trauma related papers will be presented.

10:05 am Comparison study of the apical seal between thermoplastic condensation and lateral condensation of gutta percha

LEONARD EVANSON*, DDS, University of Illinois

The leakage of in vitro gutta percha obturation of 30 root canals using two techniques was studied. The techniques were lateral condensation of gutta percha and sealer with finger pluggers and the thermoplastic (McSpadden) compaction of gutta percha both with and without sealer. The efficacy of obturation was studied via evaluation of horizontal sections of the teeth by radioautography after soaking the teeth in 45Ca.

10:30 am The in vitro ability of several materials to seal the apex in apical surgery

DAVID P. AULOZZI*, DDS, MS, Marquette University

Poly-HEMA, zinc free amalgam, cold burnished and hot sealed gutta percha were tested in vitro as retro-filling materials. One-hundred and twenty extracted lower anterior teeth were used in the study. A model system using *Proteus vulgaris* and *Streptococcus salivarius* to test porosity and leakage was utilized. Leakage was determined using a pH indicator in a broth medium.

10:55 am

The influence of the smeared layer on the permeability of dentinal tubules to microorganisms

SCOTT WILLIAMS*, DDS; MELVIN GOLDMAN, DDS, Tufts University

A model system utilizing a motile, swarming organism, *Proteus vulgaris*, was used to determine the penetrability of the dentinal tubules (with and without the smeared layer present) under composite fillings in the crowns of extracted teeth.

11:20 am

Intrapulpal injection: distribution of an injected solution

G. NORMAN SMITH*, DMD, MS; SANDRA A. SMITH, DMD, MS, Medical College of Georgia

This study traced the path of solutions injected intrapulpally. In the study, fifty single and double rooted dog teeth were injected with a solution of a radiocontrast medium and colloidal carbon. The injection paths were traced radiographically and in thin sections.

11:45 am

Incidence of post-treatment endodontic pain associated with the use of calcium hydroxide as an interappointment canal medicament

ISAAC F. HOLTON, JR*, DMD, Medical College of Georgia

A clinical study was designed to evaluate the various factors on the ability of a calcium hydroxide paste to prevent or alleviate post-treatment endodontic pain. Factors studied include operator, patient age, sex, and race; tooth classification; pulp status; presence or absence of a periapical radiolucency; response to percussion; and the presence of pre-operative pain.

*Presenter

9:15 am repeated 11:00 am

ENDODONTIC ROUNDTABLE SEMINARS Phoenix Convention Center-Yuma/Tucson Rooms

Chairman: MANUEL I. WEISMAN, DDS Co-Chairman: MITCHELL LEVINE, DDS

(Pre-registration required. Tickets still available may be obtained from ERS Information Desk, General Registration Area)

Room S-1 ERS 1 and ERS 2 Pulpal responses: "The clinical connection" HAROLD R. STANLEY, DDS, MS, Gainesville, FL

Room S-2
ERS 3 and ERS 4
The molar mystique: "Taking the uncertainty out of endodontic molar surgery"
RALPH BELLIZZI, DDS, APO New York

Room S-3 ERS 5 and ERS 6 Making photography fun in endodontics: "Creative slide production" ALBERT C. GOERIG, DDS, MS, Ft. Leavenworth, KS Room S-4 ERS 7 and ERS 8

The patient, referring dentist, and endodontist: the triad successful practice

WILLIAM R. SCHARWATT, DMD, Portland, OR

Room S-5 ERS 9 and ERS 10 Reinforcing and restoring pulpless teeth JOHN SAPONE, DDS, San Francisco, CA

Room S-6
ERS 11 and ERS 12
Avoiding grievances, legal headaches, and malpractice in endodontics
JACK A. WEICHMAN, DDS, JD, Los Angeles, CA

Room S-7
ERS 13 and ERS 14
Practical pharmacology for the endodontic patient
BENJAMIN F. GURNEY, DDS, MS, Glen Ellyn, IL

Room S-8 ERS 15 and ERS 16 The endo-antral syndrome HOWARD S. SELDEN, DDS, Bethlehem, PA

Room S-9 ERS 17 and ERS 18 The role of calcium hydroxide in dental injuries RAYMOND T. WEBBER, DDS, MS, Gainesville, FL

Room S-10 ERS 19 and ERS 20 The complete "L.A.R."--'Local Anesthesia Review:' latest techniques and armamentarium ROBERT C. BIESTERFELD, DDS, MS, Golden Valley, MN

SATURDAY DINNER DANCE-7:30-12 Midnight

Be sure to exchange your voucher for a reserved ticket before 12 Noon on Friday.



FRIDAY AFTERNOON, APRIL 23

12:45 pm

FINANCIAL MANAGEMENT LUNCHEON Hyatt Regency Hotel

Chairman: JOHN G. HOCKIN II, DDS, MS

(Pre-registration required. Tickets still available may be obtained before 10 am Thursday from the Management Luncheon Information Desk, General Registration Area)

L 101–Remington A Western and natural art as investments DANIEL S. MAY, Scottsdale, AZ

L 102-Curtis A A new testing method for hiring employees WAYNE G. BEMIS, DDS, Torrance, CA

L 103-Russell B How to evaluate investments in oil, gas and stock NORMAN L. VANCE, Las Vegas

L 104—Regency Ballroom A Economic survival in the 1980's G. BARTON HEULER, DDS, Orange, CA

L 105-Curtis B Stamp collecting as an investment ROBERT A. UCHIN, DDS, Ft. Lauderdale, FL

L 106–Regency Ballroom B Computer programs for endodontic offices GRANT SADLER, Tustin, CA

L 107–Remington C How to safely invest in second trust deeds DUAYNE D. CHRISTENSEN, DDS, Westminster, CA

L 108-Regency Ballroom C All you want to learn about professional corporations and plans JULIAN FOX, CPA, Tarzana, CA

L 109-Phoenix Ballroom B (West) Classic cars as an investment DONALD WILLIAMS and THOMAS W. BARRETT, III, Scottsdale, AZ

L 110–Regency Ballroom D
Developing and operating a small business as a
second income
ROBERT R. TAYLOR, Johnson City, TN

L 111–Phoenix Ballroom A (East) Tax banditry ROBERT SHAHIN, Los Angeles

CLINICAL ESSAYS Phoenix Convention Center-Flagstaff Room

POST-ENDODONTIC TREATMENT

Moderator: JERRY F. TAINTOR, DDS, MS

2:30 pm Restorative considerations unique to endodontically treated teeth

Clinician: JOHN D. TOWNSEND, DDS, MSD, FRCD (c), Seattle

Dr. Townsend is Assistant Professor of Restorative Dentistry, University of Washington, Seattle.

The restoration of pulpless teeth presents unique considerations for both the endodontist and the restorative dentist. The biomechanical aspects of restorations will be addressed for teeth with varying amounts of missing tooth structure and different dentogingival relationships. Pertinent references from the dental literature will be cited to support treatment approaches.

4:00 pm Vertical root fractures

Clinician: HAROLD GERSTEIN, DDS, Milwaukee, WI

Dr. Gerstein is Professor and Chairman, Department of Endodontics and Director, Graduate Education, and Director, Endodontic Graduate Program, Marquette University School of Dentistry. He is Director, American Board of Endodontics, and consultant to the Editor of JADA.

The presentation will emphasize diagnosis and prognosis of vertical root fractures and include a review of the literature and a discussion of possible etiologic factors. Clinical cases, highlighting pertinent signs and symptoms, will be presented along with possible treatment modalities and suggestions for measures to avoid iatrogenic root fractures.

4:45 pm Preserving our roots

Clinicians: CAROL S. MARLIN, BA, MA, Worcester, MA ROGER P. DESILETS, JR., DDS, Worcester, MA

This is a report consisting of a small portion of an oral history project, sponsored by the AAE Endowment and Memorial Foundation. Many of the great pioneers of endodontics have contributed their fascinating memories to preserve for history the development of our special field of endeavor.

SEE THE SPECIAL DISPLAY OF PAST ANNUAL SESSION PROGRAMS IN THE EXHIBIT HALL, BOOTH #109 (arranged by Dr. Louis I. Grossman)

ENDODONTIC RESEARCH SEMINARS-GRADUATE STUDENT-BIOLOGICAL SCIENCE SECTION

Phoenix Convention Center-Prescott 1

Moderator: CALVIN D. TORNECK, DDS, MS

2:30 pm The effects of age on human pulp collagen synthesis CHRISTEN J. NIELSEN*, DMD, MS, University

of Oregon

Based on the premise that active collagen synthesis is characterized by the presence of reducible intermolecular cross-links (Robins et al., 1973) and a measured decrease in pulp collagen's major cross-link, dihydroxylysino-norleucine, this study demonstrated human coronal pulp collagen synthesis decreases significantly between the ages of 16 and 40 years.

2:55 pm Study of anti-invasive factors in periodontal ligament tissue

GARY B. CARR*, DDS, University of Illinois

Several investigators have shown human periodontal ligament tissue to have anti-collagenase (anti-invasive) activity. This research project attempts to learn whether this anti-collagenase is produced by fibroblasts or epithelial rest cells. Using cell culture techniques developed for porcine PDL, human periodontal ligament tissue was cultured and subcultured until pure cell lines were established. Media from both cell lines were analyzed for collagenase and collagenase inhibitors using gel electrophoresis. Endothelial growth inhibition tests were also utilized to detect anti-collagenase activity.

3:20 pm Replacement therapy for the control of dental caries

BERNARD YAPHE*, DDS; K.P. JOHNSON, DDS; J. D. HILLMAN, DDS, Harvard University

Replacement therapy for the control of dental caries involves utilization of a competitive non-pathogenic bacterium to prevent colonization by a pathogen. Low acid production by lactate dehydrogenase-deficient mutants of *S. mutans* make them a prospective effector strain for use in both adults and children. Current work is directed at isolating an idealized effector which can both colonize the oral cavity of humans and eliminate indigenous *S. mutans*. Strain VQ, a bacteriocin producing natural isolate which inhibits the growth of all 100 *S. mutans* strains was tested.

3:45 pm A technique for electron microscopic study of the radicular dentinal tubule in undecalcified human bicuspid teeth

WILLIAM F. WARREN, JR.*, DDS, MS; DENNIS W. FOREMAN, PhD, Ohio State University

The purpose of this investigation was to develop a method for ultrastructural study of human radicular dentin. The method required minimal tissue manipulation before fixation and embedding, and allowed the selection of a specific sample site for investigation with the transmission electron microscope. Observations of odontoblasts, dentinal tubules, and cementum, cut in serial cross-sections from pulp to cementum, were recorded.

4:10 pm Bone healing in the presence of bimetallic produced electricity

KEVIN M. KEATING*, DDS, MS, Marquette University

Dissimilar dental alloys have been shown to be capable of forming bimetallic couples which are capable of generating significant amounts of electricity in vivo and in vitro. Bone responds to electrical stimulation with resorption or deposition. Small bimetallic couples were manufactured by condensing dental amalgam against a gold post which had been placed in polyethylene tubing. These devices were placed in rat tibiae and osseous reactions were evaluated microscopically up to 112 days after surgery. The small currents produced by the experimental implants did not interfere with the normal healing process. The implications of this study to clinical situations are discussed.

4:35 pm An in vivo study of the use of a nonresorbable ceramic hydroxylapatite as an alloplastic graft material in periapical surgery

ROBERT J. BECK-COON*, DDS, Indiana University

The purpose of this investigation is to determine if Durapatite (Sterling-Winthrop, Rensselaer, NY), a non-resorbable calcium phosphate ceramic, may be used successfully in the reduction of osseous defects left by periapical surgery. The determinants of success are not only the histopathologic response, but also the speed, quality, and predictability of the bony reconstruction as compared to controls. As an adjunct to the light microscopy, scanning electron microscopy is used on selected sections.

*Presenter

6:30 pm BUSES DEPART FOR RAWHIDE (Monroe Street entrance, Hyatt Regency Hotel)



SATURDAY MORNING, APRIL 24

7:30 am AAE PAST PRESIDENTS' BREAKFAST Dr. Van Hassel's Suite

7:30 am AAE COMMITTEE BREAKFAST MEETINGS (Refer to page 14 for listing)

8:00 am CONTINENTAL BREAKFAST, EXHIBITS, REGISTRATION
Phoenix Convention Center–Assembly Hall

ENDODONTIC RESEARCH SEMINARS Phoenix Convention Center-Prescott 1

Moderator: JOSEPH I. TENCA, DDS, MA

9:15 am Sterilization of gutta percha cones during endodontic filling proceduures

AIDA CHOHAYEB*, DDS, MSD; HAROLD A. LINKE, PhD, Howard University and New York University

Sterilization of gutta percha cones inoculated with gram positive and gram negative microorganisms immersed for five minutes in 70% Ethanol, Eugenol, Betadine and Gram's lodine Solution proved ineffective. However, five minutes application of 1.25% Sodium Hypochlorite, .53% Zephiran and 3% Hydrogen Peroxide prevented the growth of these microorganisms.

9:45 am Physical and biologic aspects of zinc oxide type root canal cements

LOUIS I. GROSSMAN*, DDS, Dr. med. dent., University of Pennsylvania

A report will be given of 26 essential oils that were tested biologically as a substitute for eugenol. Anethole, anise, eucalyptol, and oil of pimenta leaf were found to be less irritating than eugenol. The effect of these oils on the setting time when used in conjunction with a standard root canal cement powder was tested under controlled conditions of temperature and humidity. Also, three commercial cements were examined under controlled conditions and one was found to have too long a setting time.

10:15 am Single visit treatment: is it a portal to the future?

JAMES B. ROANE*, DDS, MS, University of Oklahoma

This study consists of an analysis of a practice which has relied completely upon single visit procedures for all care over the past nine years. The data is accumulated from more than 5,000 individual patients and considers clinical implications of treatments ranging from devitalization to those involving facial cellulitis. The data available includes a study of post treatment pain frequency, the frequency of post-operative complications and the observed healing success of treatment as determined by recall examinations.

10:45 am A radiographic evaluation of the periapical status of teeth treated by the guttapercha-eucapercha endodontic method: a one year follow-up study of 458 root

canals

DONALD R. MORSE*, DDS, MA; JOHN V. ESPOSITO, DDS; CALVIN PIKE, DDS; M. LAWRENCE FURST, PhD,

MPH, Temple University

In a part-time endodontic practice, the author (DM) did complete nonsurgical endodontic therapy with the guttapercha-eucapercha method for 585 procedural accident-free teeth. Of these teeth, 220 with 458 root canals were available for recall (mean follow-up time 12.1 months). Radiographic analysis by the author (JE) (uninvolved in the treatments) will be presented.

11:15 am A method to eliminate the tetracycline discoloration of teeth

MARWAN ABOU-RASS*, DDS, MDS, PhD, University of Southern California

Efforts to correct the esthetic problem caused by systemic administration of Tetracyclines during childhood has been fraught with unpredictable results, complications, and failure. The vital bleaching has been clinically less than satisfactory. The disadvantages of veneering are becoming more apparent as the measure of time passes. Full coverage restorations are rehabilitive in nature and can have occlusal, periodontal, and pulpal complications. A new method with predictable and effective clinical esthetic results will be presented and discussed.

11:45 am Bacterial invasion of the pulpal dentine wall

ENOSAKHARE S. AKPATA*, MDSC, FDS; HARRY BLECHMAN, DDS, University of Lagos, New York University

Instrumented root canals of extracted human teeth were inoculated with known pulpal bacterial isolates. The inoculated teeth were immersed in the appropriate culture media and incubated at 37° C for varying periods. Streptococci multiplied in the root canals and invaded the radicular dentinal tubules. The extent of bacterial invasion was time dependent. This experimental model may be useful in investigating the effect of intracanal medicaments on microorganisms lodged in the pulpal dentine wall.

*Presenter

SATURDAY LUNCHEON-12:45-2:15 p.m.

Coolidge Memorial Luncheon-Phoenix Hilton Hotel

Presentation of awards, followed by a special musical program under the direction of AAE's own, Dr. H. David Prensky.

9:15 am repeated 11:00 am

ENDODONTIC ROUNDTABLE SEMINARS Phoenix Convention Center-Yuma/Tucson Rooms

Chairman: MANUEL I. WEISMAN, DDS Co-Chairman: MITCHELL LEVINE, DDS

(Pre-registration required. Tickets still available may be obtained from ERS Information Desk, General Registration Area)

Room S-2 ERS 23 and ERS 24 A rational approach to periodontal endodontic problems HERBERT F. SPASSER, DDS, New York

Room S-3 ERS 25 and ERS 26 Endodontic surgery—why, when, and how CLIFFORD J. RUDDLE, DDS, Santa Barbara, CA

Room S-4
ERS 27 and ERS 28
It's difficult to treat what you can't find—locating and instrumenting fine canals
PIERRE R. DOW, DDS, MSc, Vancouver, BC, Canada

Room S-5 ERS 29 and ERS 30 Luxations and fractures to teeth: diagnosis, treatment design, and prognosis PAUL E. ZEIGLER, DDS, San Diego, CA

Room S-6
ERS 31 and ERS 32
Let's take the complexities out of sealing canal systems
NGUYEN T. NGUYEN, DDS, San Francisco

Room S-7 ERS 33 and ERS 34 Endodontics for children and adolescents CALVIN D. TORNECK, DDS, MS, Toronto, Canada

Room S-8 ERS 35 and ERS 36 Controlling pain and anxiety in endodontic treatment W. PAUL RADMAN, DDS, Dallas

Room S-9 ERS 37 and ERS 38 Endodontic radiology in the space age ROBERT J. MICHELICH, DDS, Atlanta

Room S-10 ERS 39 and ERS 40 Work smarter, not harder—utilization of dental auxiliaries in endodontic practice WAYNE H. PULVER, DDS, Willowdale, Canada 9:15 am-12:30 pm

TABLE CLINICS Phoenix Convention Center-Assembly Hall

Chairman: DONALD D. ANTRIM, DDS, MS

GRADUATE STUDENT SECTION

- Comparative apical canal leakage analysis in small and large canals RICHARD G. BEATTY, DDS, University of Iowa
- Rubber dam isolation of fixed prostheses WAYNE J. DOLLARD, DDS, National Naval Dental Center
- 3. Some thoughts on root canal anatomy GARY B. CARR, DDS, University of Iowa
- A functional splint for traumatized teeth MARTIN D. HICKEY, DMD, National Naval Dental Center
- Reading the x-ray: a comparison of viewing techniques
 JEFFREY W. HUTTER, DMD; AUGUSTYNE V. HILL, DDS, National Naval Dental Center
- Clinical assessment of occlusal adjustment during endodontic therapy JAMES L. JOSTES, DDS, University of Iowa
- Scanning electron microscope analysis of CaP04 precipitate in root canals KEITH V. KRELL, DDS, MA, University of Iowa
- Corrosion and torsional strength properties of Gates Glidden drills
 WILLIAM LINEBARGER, DDS; JERALD W. SMITH, DDS, University of North Carolina

NON-GRADUATE SECTION

- Cortical trephination RONALD S. BOURGEOIS, DDS; HAL E. BAILEY, DDS, Ocean Springs, MS
- 12. Pulp capping: past, present and future AIDA A. CHOHAYEB, DDS, MSD; KHODABAKHSH SALAMAT, DDS, DMD, Washington, DC
- Restoration and re-use of endodontically treated teeth
 DAVID COHEN, BAS, LDSRCS, Manchester, England
- Repair of furcation perforations MAHMOUD E. EL DEEB, BDS, MS, Minneapolis, MN
- A safe and rapid method of removing gutta percha WILLIAM F. FRECCIA, DDS, MS; DAVID L. KELLER, DMD, MS, Fort Bragg, NC
- Treatment of the most frequent unusual endometaendodontic cases YURY KUTTLER, DDS, BBSc, MD, Mexico City, Mexico



- 17. Measuring the root canal—ELECTRONICALLY MICHAEL A. MARKSON, DMD, Scottsdale, AZ
- Problem solving through extrusion of endodontically treated teeth MICHAEL V. PICCININO, DDS, Washington, DC
- Restoration of endodontically treated teeth: the amalgam alternative WILLIAM J. ROME, DMD, San Antonio, TX
- Replantation of maxillary incisor avulsed three days preoperative IRVIN A. ROSEMAN, DDS, Wilmington, NC
- Orthodontic extrusion of endodontically treated teeth GEORGE J.R. SAUER, DMD; PHILIP DELIVANIS, DDS, MS, Louisville, KY
- 22. Engineering a better endodontic cast post/ core—the 1/3 rule LEWIS SPECKER, JR., DDS, MA, San Francisco, CA
- Intraligamentory anesthesia–state of the art in selective anesthesia for diagnosis DENIS E. SIMON, DDS, MS, O'Fallon, IL
- New materials and clinical techniques to prevent vertical fracture ROBERT V. WEISSMAN, DDS, Fairlawn, NJ
- Retrieval of foreign objects from root canals: a simple aid JOSE L. ROIG-GREENE, DMD, Ponce, Puerto Rico
- 26. Cell kinetics of pulpal wound healing CHARLES F. COX, MSC, PhD, Ann Arbor, MI

DENTAL STUDENTS

- 27. An SEM analysis of dentin and calcium hydroxide apical plugs MICHAEL FULLER, BS; Sponsor: KENNETH L. ZAKARIASEN, DDS, PhD, University of Iowa
- 28. Thermomechanical condensation of gutta percha with and without apical plugging BRIAN L. SECRIST, BS; Sponsor: KENNETH L. ZAKARIASEN, DDS, PhD, University of Iowa

SATURDAY AFTERNOON, APRIL 24

- 12:45 pm COOLIDGE MEMORIAL LUNCHEON Phoenix Hilton Hotel–Grand Ballroom
- 2:30 pm GENERAL ASSEMBLY MEETING Phoenix Hilton Hotel—Apache Room
- 6:30 pm PAST PRESIDENTS' RECEPTION
 Hyatt Regency Hotel–Regency Ballroom Foyer
- 7:30 pm DINNER DANCE Hyatt Regency Hotel–Regency Ballroom

SUNDAY MORNING, APRIL 25

- 8:00 am AAE BOARD OF DIRECTORS' MEETING Hyatt Regency Hotel–Remington A-B
- 8:00 am CONTINENTAL BREAKFAST Hyatt Regency Hotel–Phoenix Ballroom

BUILDING ENDODONTIC PRACTICE SKILLS Hyatt Regency Hotel-Phoenix Ballroom

Moderator: BARRY H. KORZEN, DDS

9:00 am Development and implementation of Participation Courses

FRANKLIN S. WEINE, DDS, MSD, Professor of Endodontics and Director of Graduate Endodontics, Loyola University, Chicago; Professor of Endodontics, Indiana University; lecturer of Endodontics and Periodontics at Northwestern University; conducted participation courses for over 12 years in the U.S., Canada, and abroad.

Endodontics is one area of dentistry where there always is a convenient and accurate model for a laboratory course that involves no patients-the extracted tooth. Application of new and innovative techniques on an extracted tooth with complete radiographic controls is an obvious initial step prior to attempting the procedures on a patient. These courses have introduced general dentists and specialists to correct access cavity preparations, newer techniques of canal preparation and wider contact with canal filling methods. The courses are especially useful for the development of improved treatment methods in molar teeth. where procedures acceptable in single-rooted teeth are not applicable. This presentation will list the materials needed, facilities required and course content of the two most common participation courses.



AAE Committee Meetings

Thursday, April 22, 7:30 a.m.

9:45 am

Let's get organized

JEFFREY GOODMAN, EdD, Director of Professional Development with the Ontario Dental Association and has developed many education programs for nonprofit organizations.

BERNARD H. DOLANSKY, DDS, MSc, Chairman of the Continuing Education Committee of the Ontario Dental Association; private practice in Endodontics in Ottawa, Canada.

The Ontario Dental Association (ODA) is becoming one of the major facilitators of continuing dental education (CDE) for its members.

In 1980, the Association hired a full-time Director of Professional Development and embarked on the path of facilitating the development of a full curriculum of CDE courses, both in the clinical and practice management areas and based upon sound educational principles.

Drs. Dolansky and Goodman, as key players in this development, will describe the ODA approved program in endodontics which acts as a model for the future.

PART II—Communicating With Patients and Referring Dentists

Moderator: RICHARD E. SCHMIDT, DDS, San Diego

10:30 am

Developing positive reactions with the generalist

JOHN E. REGAN, DDS, Private practice in general dentistry; immediate past president of the Academy of General Dentistry.

A short presentation and discussion of what the specialist and the generalist should expect from each other.

11:15 am-12: N What was that about my apical abscess?

S. WILLIAM OBERG, BA, Materials Development Manager, Bureau of Health Education and Audiovisual Services, American Dental Association.

A short seminar on patient education and how to keep patients in your practice by evaluating and improving your communications skills with generalists, your own staff and your patients.

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Career Counseling	Russell C
Continuing Education	Russell B
Membership	Remington C
Public Affairs	Russell A
Friday, April 23, 7:30 a.m.	Hyatt Regency
Honors and Awards	Remington B
Research Committee	
Study Club	
Saturday, April 24, 7:30 a.m.	Hyatt Regency
1983 Annual Session	Remington B
Editorial Board	
Ethics	

Hyatt Regency

Hyatt Regency

Study Clubs, Alumni and Other Groups

mulsuay, April 22 Hyatt negency
Army Endodontic Breakfast (7:30 a.m.) Borein A-B
AADS-Endodontic Section Meeting (5-6 p.m.) Curtis A
Harvard Forsyth Endodontic Alumni Dinner
(8:30 p.m.) Hilton Hotel (Hopi B)
Boston Univ. Endodontic Alumni Reception
(7:30 p.m.) Dr. Leibow's home
Friday, April 23 Hyatt Regency
Boston Univ. Endodontic Alumni meeting
(9 a.m.–12 N)
Harry Healey Endodontic Study Club Reception
(5–6:30 p.m.)
Univ. of Pennsylvania Cocktail Party (6-8 p.m.) Garden Court
Univ. of Washington Graduate Endodontics
Alumni Cocktail Party (6:30–8:30 p.m.) Russell
Saturday, April 24
Navy Endodontic Breakfast (7:30 a.m.) Russell A-B

Join us Next Year April 20-24, 1983 40th Annual Session Diplomat Hotel Hollywood, Florida

Thursday April 22

American Board of Endodontics

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George G. Stewart	'58
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*Paul P. Sherwood	'60
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Vincent B. Milas	'62
James H. Sherard, Jr.	63
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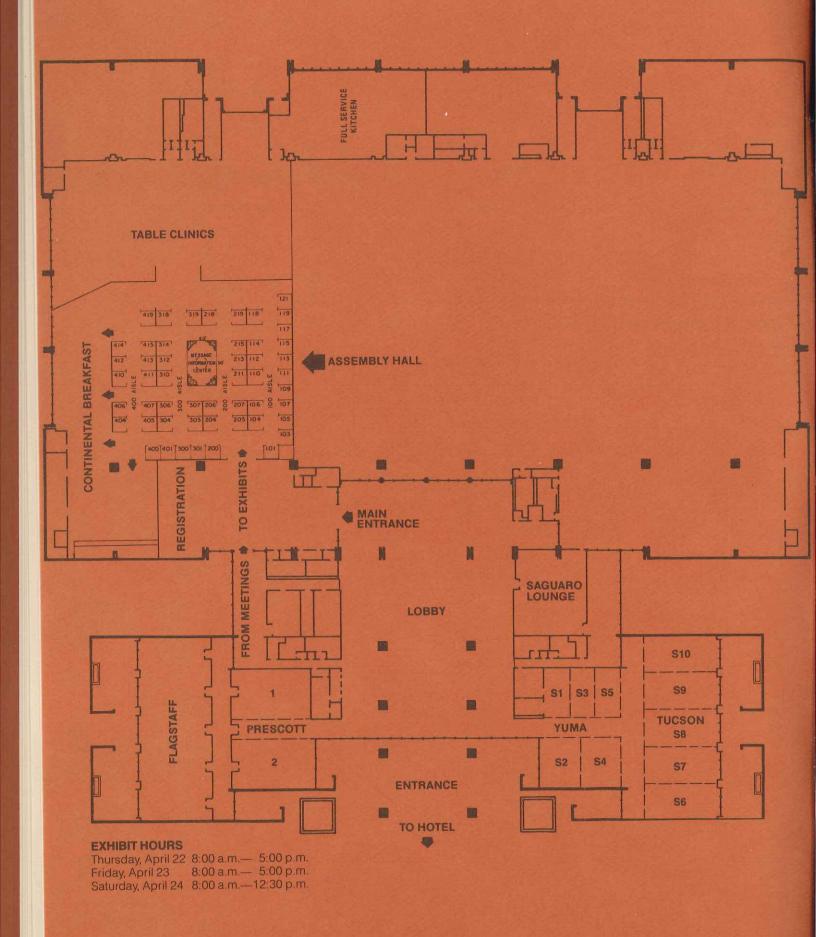
*Deceased

Mary C. Crowley Louis I. Grossman Maynard K. Hine Oscar Maisto Maury Massler Harold R. Stanley

Award Recipients

Edgar D. Coolidge Award	
Bertram L. Wolfsohn	'74
Vincent B. Milas	'75
Worth B. Gregory	'78
Jacob B. Freedland	'80
Alfred L. Frank	'81
George G. Stewart	'82
Louis I. Grossman Award	
Louis I. Grossman	'73
Louis I. Grossman Birger Nygarrd-Ostby	'76
Louis I. Grossman Birger Nygarrd-Ostby I. B. Bender	'76 '78
Louis I. Grossman Birger Nygarrd-Ostby I. B. Bender Samuel Seltzer	'76 '78 '80
Louis I. Grossman Birger Nygarrd-Ostby I. B. Bender Samuel Seltzer Harold R. Stanley	'76 '78 '80 '81
Louis I. Grossman Birger Nygarrd-Ostby I. B. Bender Samuel Seltzer	'76 '78 '80 '81

Phoenix Convention Center



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Premier Dental Products Co. (Booth #310) 1710 Romano Drive, Box 111 Norristown, Pennsylvania 19404

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925 East Rand Road Arlington Heights, Illinois 60004

Non-Technical Exhibits

Eastern Audio Associates, Inc. (Booth #113) Oakland Center, 8980 Route 108 Columbia, Maryland 21045

AAE Endowment & Memorial Foundation (Booth #117)

AAE Career Counseling Committee (Booth #119/121)

Australian Society of Endodontology, Inc. (Booth #115) 60 Park Street Sydney, Australia 2000

1983 Annual Session Information (Booth #111)

Participants' Index

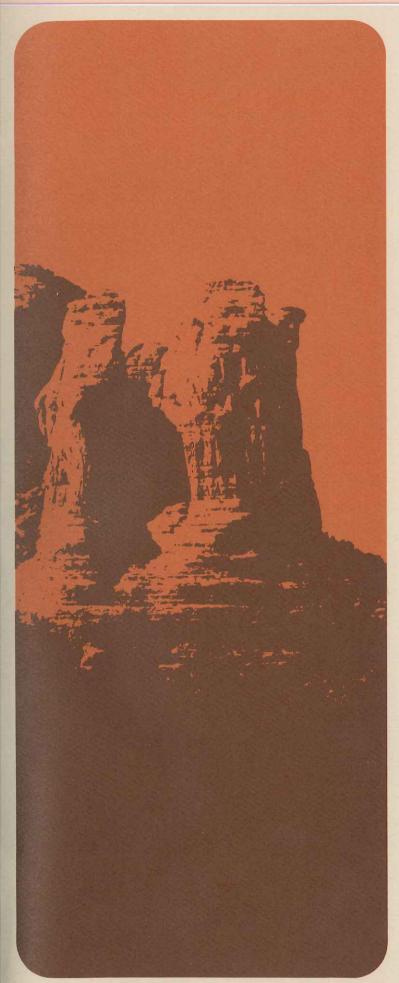
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AAE Women's Auxiliary



OFFICERS	
Paula Cassidy (Mrs. Robert)	President
Dana Mullaney (Mrs. Robert)	President-Elect and
	Acting Treasurer
Helen Mills (Mrs. John)	Vice-President
Candy Hancock (Mrs. John, Jr.)	Secretary
Sharlene Yamanaca (Mrs. Richard)	Parliamentarian

The Women's Auxiliary will maintain a hospitality suite at the

Hyatt Regend Vomen's Aux	by Hotel for all registered spouses. All activities of the ciliary will be held at the Hyatt Regency Hotel. How-tration will be conducted at the Phoenix Conventio
	Wednesday, April 21 ROOM 327
3–5 pm	WAAAE President's Welcome Tea
7:30–9 am	Thursday, April 22 ROOM 326 WAAAE Board meeting/continental breakfast
3 am-4 pm	ROOM 327 Hospitality suite open
3 am-4 pm	Friday, April 23 ROOM 327 Hospitality suite open

	Friday, April 23 ROOM 327
8 am-4 pm	Hospitality suite open

8 am-

	Saturday, April 24
	ROOM 327
-4 pm	Hospitality suite open

PHOENIX ROOM
WAAAE Brunch/business meeting
(all spouses welcome)
(WAAAE Member-\$15.00; Non-member-\$20.00

9:00 am	Brunch and introductions (informal modeling of designs by Alfredo's Wife of Jerome, AZ, during brunch)
9:45 am	Speaker: FRED MILLS "How to get out of your own way"

	. Total to got out of your own that
10:30 am	WAAAE Business meeting/election of officers

11:30 am	REMINGTON ROOM A WAAAE Board meeting

Condensed Program

MONDAY, APRIL 19 9 am-5 pm ABE Directors' Meeting Hyatt (Russell C) TUESDAY APRIL 20 AAE Committee Breekfeets	Street) Hyatt
THESDAY APPH 20	Hyatt
TUESDAY, APRIL 20 7:30 am AAE Committee Breakfasts I	
9 am-5 pm ABE oral examinations Hyatt (Russell & 7:30 am New Members' Breakfast Borein A)	Hyatt (Phoenix Ballroom)
9 am-5 pm E&M Foundation Trustees' 8:00 am Buses depart for Sedona	
B-C) 8:00 am Continental Breakfast	Convention Center
8:00 am Registration and Exhibits 0	
WEDNESDAY, APRIL 21 9:15 am Clinical Essays	Convention Center (Flagstaff)
Street) 9:15 am Endodontic Research	(Hagstall)
8:15 am Buses depart for tennis Hyatt (Monroe Seminars	Convention Center (Prescott 1)
8:00 am Registration opens Convention Center 9:15 am & Endodontic Roundtable	
9 am-5 pm ABE oral examinations Hyatt (Russell & 11:00 am Seminars	Convention Center
Borein A) 12:45 pm Financial Management Luncheons	Hyatt
Meeting	riyati
B-C) the Future	
	Street)
Ballroom) ((Flagstaff)
6 pm-8 pm Welcome Reception	0
Atrium) Seminars	(Prescott 1)
THURSDAY, APRIL 22 6:30 pm Buses depart for RAWHIDE	
7:30 am ABE Past Directors'	Street)
breakfast	
7:30 am AAE Committee Breakfasts Hyatt 7:30 am AAE Past Presidents'	
8:00 am Continental Breakfast Convention Center Breakfast	Hyatt (Dr. Van
8:00 am Registration and Exhibits Convention Center	Hassel's suite)
9:00 am Buses depart for Heard 7:30 am AAE Committee Breakfasts	
Street) 8:00 am Registration and Exhibits (
9:15 am Opening Session Convention Center 9:15 am Endodontic Research	
(Tucson) Seminars	
10:00 am Clinical Essays	(Prescott 1)
12:15 pm Luncheon with Culture Hilton (Grand 11:00 am Seminars	Convention Center
	Convention Center
1:00 pm Buses depart for Scottsdale Hyatt (Monroe 12:45 pm Coolidge Memorial Luncheon	Hilton (Crond
	Ballroom)
Gardens Hyatt (Monroe 2:30 pm General Assembly Meeting	
	Room)
2:30 pm Clinical Essays Convention Center 6:30 pm Past Presidents' Reception F	Hyatt (Regency Foyer)
2:30 pm Endodontic Research 7:30 pm Dinner Dance	
Seminars	Ballroom)
2:30 pm Endodontic Research SUNDAY, APRIL 25	
Seminars	
(Prescott 2) Meeting	
6:30–8:30 Fellowship Fiesta	A-B) Hyatt (Phoeniy
	Ballroom)
9:00 am Educational Resources H	