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American Association of Endodontists
48th Annual Session, April 17-21, 1991
Washington, D.C.
President's Message

It is a special privilege for me to welcome each of you to our Nation's Capital, Washington, DC, for the 48th Annual Scientific Session of the American Association of Endodontists. Cherry blossoms of spring, national cultural events, historical monuments and governmental institutions beckon us all to a city recognized for setting the standards for freedom and democracy throughout the world. It is only appropriate that we meet here in the city of standards, under the theme banner: "Standard Bearers for Endodontics."

A special welcome to our international members and guests who came to share their knowledge with us and to participate in our program and activities.

Preparations for this important meeting have gone on for over two years under the guidance of General Chairman Ed Osetek. His passion for both this city and our organization is reflected in the quality and diversity of the program. Program Chairman Chuck Cunningham along with his talented committee composed of Bob Rosenberg, Sandy Madison, Bob Steiman and Fred Barnett are to be commended for securing the best presenters available around the world, that program space and logistics would allow at the Ramada Renaissance Techworld.

Local Committee Chairman Lamar Hicks and Auxiliary Liaison Chairperson Lisa Hicks have worked tirelessly for our Association's benefit. This in spite of compelling distractions related to issues of riveting world interest. Neil Small, Walter Cunningham, John Olmsted, John Bramwell, Cindy Rauschenberger, Greg Isermann and Bob Flath composed the nucleus of our local action team.

The program format is a class act with something for everyone. There are likely to be overflow crowds at many of the sessions. Our AAE staff has worked in overdrive to finalize this session. Our Executive Director, Irma Kudo has kept her fingers on the pulse of our organization and this meeting while herself on chemotherapy. We welcome her back as she regains her strength. The individual help of Laura Galusha, Letty Catrambone, and Christine Bowden at the Headquarters Office provided the support necessary to stage this assembly of common purpose. I would also want to thank the other staff members Monica Taylor, Donna Gomez, Nora Jimenea and new staff members, Tim McCann and Dawn Kappel.

I encourage everyone to take advantage of the myriad opportunities for learning, rekindling old friendships and developing new ones, and enjoying the wonderful sights of our Nation's Capital.

On behalf of the Board of Directors, I wish you all a wonderful educational and cultural experience at this meeting, the largest gathering of endodontists from throughout the world.

James C. McGraw, DDS
President
American Association of Endodontists

BOARD OF DIRECTORS

1991
- Philip W. Cohen
  District IV

1992
- Ronald I. Deblinger
  District II

1993
- Howard B. Fine
  District II

James C. McGraw
President

Joseph I. Tenca
President-elect

Stuart B. Fountain
Vice President

Eric J. Hovland
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Alan G. Selbst
Treasurer

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District III

James L. Gutmann
District V

Steven G. Morrow
District VI

Henry J. Van Hassel
Editor

Gerald C. Dietz, Sr.
Immed., Past President

Irma S. Kudo
Executive Director

Edwin S. Mehiman
District I

Donald D. Peters
District III

John F. Patterson
District I

Bill R. Scharwatt
District VI

Jerome V. Pisano
District IV

Denis E. Simon, III
District V

3
Annual Session Committee

Edward M. Osetek
General Chairman

Charles J. Cunningham
Program Chairman

M. Lamar Hicks
Local Committee Chairman

PROGRAM
Continuing Education .................... Robert J. Rosenberg
Limited Attendance Seminars ............ Sandra Madison
Research Seminars &
Poster Presentations ..................... H. Robert Steiman
Table Clinics ............................ Frederic Barnett
Technical Exhibits ....................... Letty Catrambone

GENERAL ARRANGEMENTS
Audiovisual .................................. Bill Masheter
Banquets & Meals .......................... John Olmsted
Dinner Dance Seating ... Pam Dietz & Carolyn Jennings
Hospitality ................................. Neil J. Small
Hosts ........................................ Walter T. Cunningham
Luncheon with Learning ................. Gregory T. Isermann
Monitors ................................. John D. Bramwell
Signs ...................................... Cindy R. Rauschenberger
Sports .................................... Robert K. Flath
AAE Auxiliary Chairperson ................ Lisa Hicks

The statements and opinions expressed at the annual session are solely those of the individual speaker. Those statements and opinions do not reflect any endorsement by the American Association of Endodontists.
General Information

The Grand Hyatt, Holiday Inn Crowne Plaza and Ramada Renaissance Techworld Hotel (headquarters hotel) will be the official hotels for the 48th Annual Session.

AAE Headquarters - Room 19
AAE Headquarters office will be staffed by Letty Catrambone, Laura Galusha, Monica Taylor, Dawn Kappel, Tim McCann and members of the Annual Session Committee. Office hours are 8 am-5 pm Tuesday through Sunday.

Exhibits - Exhibit Hall
Because exhibitors help to defray some of the cost of the annual session, we encourage you to stop by the exhibits and place your order.

Complimentary coffee service will be provided on Thursday and Friday in the exhibit area, 10:30 am and 2:30 pm.

Exhibit hours are:

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Cassette Tape Recordings
Teach'em Inc. will record many of the sessions presented. The cassette tapes are available for purchase in the Ballroom Foyer.

Continuing Education Credit
California Board of Dental Examiners, Florida and Academy of General Dentistry Certificates - forms to be picked up and/or validated at the AAE Headquarters office.

Registration - Ballroom Foyer
Registration fees include the following:
AAE members (excluding student members) - all sessions, Welcome/Fellowship Reception, one full breakfast (Thursday), two continental breakfasts, one breakfast brunch (Sunday), two lunches (Friday & Saturday) and one ticket to the Dinner Dance (Saturday).
AAE student members - all sessions, Welcome/Fellowship Reception.
Non-member professionals, student and dental auxiliaries - all sessions.
Spouses - Welcome/Fellowship Reception and use of the Auxiliary hospitality suite.
Registration hours are:

<table>
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<td>Friday, April 19</td>
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Saturday Dinner Dance
Your table selection for the Dinner Dance must be made as soon as possible before 5 pm on Thursday by exchanging your voucher for a banquet ticket at the AAE registration desk. If you wish to have a group seating, you must present a voucher for each person in your group in order to reserve the space. All vouchers must be presented at the same time. No exceptions will be made.

Speaker AV Ready Room - Room 18
Program participants are urged to review their audioslumal material in the speaker ready room prior to their presentation to avoid problems that may occur.

Video Taping is not allowed.

Smoking
For the comfort of others, no smoking is permitted in any of the meeting rooms.

Badges must be worn at all official AAE functions.
**Program**

**WEDNESDAY, APRIL 17**

**CONTINUING EDUCATION COURSE**
Renaissance Ballroom (by ticket only)

Management of procedural errors in endodontics
Moderator: ROBERT J. ROSENBERG, DDS, DScD, Greenbrae, CA

8:30 am Welcome

8:45 am Guided tissue regeneration: applications in endodontic treatment
ANDREW BROWER, DDS, Hinsdale, IL
A periodontist will discuss the possible applications of periodontal barrier membranes in the management of endodontic lesions including perforations. Case histories and a discussion of the biologic principles involved with the use of this material will be presented.

10:15 am Management of furcation perforations: classic and new methods
RONALD R. LEMON, DMD, New Orleans, LA
One of the most devastating injuries affecting the long-term prognosis of a posterior tooth is the perforation of the furcation. Traditionally, the treatment of this type of defect has required surgical intervention or an extended treatment period attempting to recalcify the defect with calcium hydroxide. By using hydroxyapatite as a biocompatible internal matrix most of these defects can now be repaired nonsurgically. The technique offers a greatly improved long-term prognosis. This method of repair has been researched at LSU School of Dentistry over 10 years.

11:45 am Lunch

12:45 pm Non-surgical management of procedural errors
MICHAEL J. SCIAMAMBLO, DDS, San Rafael, CA
Procedural errors are complex aspects of endodontic retreatment which occupies an ever increasing part of contemporary endodontic practices. This presentation will discuss crown and post removal, negotiation and retrieval of fractured instruments, negotiation of obstructed and ledged canals, non-surgical treatment of perforations and ultimate obturation of the root canal system in three dimensions.

2:45 pm Surgical management of procedural errors
(This portion will not be taped)
CLIFFORD J. RUDDLE, DDS, Santa Barbara, CA
Endodontists frequently encounter cases that pose an ever-increasing challenge in diagnosis and treatment. Of great interest to clinicians is the selection of materials, armamentarium, and techniques that can be successfully employed during endodontic surgery. An overview of surgical endodontic procedures will emphasize the significant advancements in techniques, lighting, visibility, and hemostasis dramatically enhancing the abilities of the surgical team.

4:30 pm Discussion

11:00 am REGISTRATION
8:00 pm Ballroom Foyer

7:00 pm WELCOME/FELLOWSHIP RECEPTION
9:00 pm The Mall (by ticket only)

All Aboard! Next stop: The Mall!

Don’t miss the bus for this traditional kick-off to the AAE Annual Session. Several food stations and open bars will be scattered under the gigantic tent, awaiting for AAE guests to partake of the sumptuous feast. Casual dress is appropriate; however, April evenings in the Nation’s capital may still have a chill, so be sure to bring a sweater or jacket as this is an outdoor gala. Because the beautiful surroundings will surely be an open invitation for an evening stroll, comfortable walking shoes are recommended.

Continuous bus service will run every ten minutes from the Ramada Renaissance Techworld K Street entrance and from the Holiday Inn Crowne Plaza 12th Street entrance beginning at 6:30 pm. Return transportation will also be provided to the Ramada Renaissance Techworld, Holiday Inn Crowne Plaza and Grand Hyatt Washington with the last shuttle leaving the Mall at 9:30 pm.
THURSDAY MORNING, APRIL 18

OPENING SESSION BREAKFAST
8:00 am  Grand Ballroom (by ticket only)
10:00 am  Keynote: JAMES C. MCGRAW, DDS,
          AAE President
          Guest:  EUGENE J. TRUONO, DDS,
                  ADA President

8:00 am  REGISTRATION
5:00 pm  Ballroom Foyer

10:00 am  EXHIBITS
6:00 pm  Exhibit Hall

GENERAL INTEREST SESSION I
10:30 am  Renaissance East
12:00 n  Moderator: PATRICK J. FERRILLO, Jr, DDS,
          St Louis, MO

        The endodontist as a witness
        JACK A. WEICHMAN, DDS, JD,
        Pacific Palisades, CA

        Endodontists are frequently called as witnesses
        in accident and dental malpractice cases. This
        presentation will discuss your rights, depositions,
        writing reports, testimony at trial, getting along with
        the attorneys and what's expected of you. There
        will also be a discussion on the value of your time
        and getting paid for your efforts and knowledge.

SCIENTIFIC SESSION I
10:30 am  Renaissance - West A
12:00 n  Moderator: JAMES L. FRAZIER, DDS, MS,
          San Diego, CA

        Clinical treatment of traumatic injuries — chipped to
        avulsed teeth
        DONALD D. ANTRIM, DDS, MA, MS, Encinitas, CA

        This clinical presentation will review the endo-
       dontic considerations of the treatment of traumatic
        injuries from the chipped tooth through the avulsed
        tooth. Clinical cases will be shown and used to
        discuss pertinent treatment modalities which are
        based on sound biological principles and the latest
        research information.

SCIENTIFIC SESSION II
10:30 am  Renaissance - West B
12:00 n  Moderator: CINDY R. RAUSCHENBERGER, DDS,
          MS, Baltimore, MD

        Alternatives to radiographs
        NEVILLE J. McDONALD, BSc, BDS, MS,
        Baltimore, MD

        Radiographs play an integral role in endodontic
        therapy, but recent advances in the technology of
        electronic apex locators and digital image processing
        techniques provide the clinician with alternative
        methods to conventional radiography. The role these
        devices can play in clinical practice will be presented
        along with guidelines for their use.

LIMITED ATTENDANCE SEMINARS
Limited seating. NO standing permitted

LAS 1 - Room 2
Problem-solving in nonsurgical root canal retreatment
GERALD N. GLICKMAN, DDS, MS, MBA, Dallas, TX

Cases requiring nonsurgical endodontic retreatment
have infiltrated the practice of endodontics and
due to their increasing complexity, have become
more difficult to treat. Problems encountered with
removal of gutta-percha, pastes, instruments, and
silver cones will be addressed along with techniques
for managing these situations. Clinical cases will be
presented to highlight treatment planning considera-
tions and various methodologies used to achieve
successful results.

LAS 2 - Room 16
Warm lateral condensation and new instrumentation
HOWARD MARTIN, DMD, Silver Spring, MD
GARY L. La BUNCY, DDS, MS, APO New York, NY

Enhanced lateral condensation technique using a
warm lateral condenser requiring no alteration of
canal preparation and armamentarium. New
spreader/pluggers, orifice openers and files will be
discussed. Repeated as LAS 24.

LAS 3 - Room 5
Achieving diplomate status: a new diplomate's per-
spective
DENNIS L. TORNEY, DDS, Greensboro, NC
MARY T. PETTETTE, DDS, Chapel Hill, NC
JOHN D. BRAMWELL, DDS, Chantilly, VA
JOHN R. LUDINGTON, DDS, MSD, Houston, TX
DOUGLAS J. McKENDRY, DDS, MSD, Buffalo, NY

With the recent recognition of endodontics as a
dental specialty, a renewed interest in Board Certifi-
cation has arisen. Currently, 27 percent of the AAE
members are Diplomates of the American Board of
Endodontics. The members of this panel have
recently completed the Board Certification process
and represent various tracts in endodontics. They
will share their impressions and experiences relative
to this process. Preparation for the Boards and
impact of certification both personally and profession-
ally will be discussed.
THURSDAY MORNING (continued)

LAS 4 - Room 3
State of the art in laser therapy: new developments in clinical and surgical endodontics
GUY C. LEVY**, DDS, PhD, Tustin, CA
MARWAN ABOU-RASS, DDS, MDS, PhD, Los Angeles, CA
Heat control during laser exposure have unveiled new improvements in clinical and surgical endodontics which will be presented during this seminar. Other applications of laser use related to hydroxyapatite fusion will be presented, i.e. retrofit with hydroxyapatite, repair of cracks, bone or tooth reconstruction. Repeated as LAS 23.

LAS 5 - Room 4
Restoring endodontically treated teeth: a prosthodontic view
RICHARD D. JORDAN, DDS, MS, Chapel Hill, NC
This presentation will discuss different clinical techniques available to restore teeth following endodontic treatment. The indications/prognosis of these techniques based on recent experimental data will be presented.

LAS 6 - Room 15
Root amputation in hemisections: "a cut above the endodontist"
PATRICE D. PRIMACK, DMD, MS, Martinez, GA
This presentation will discuss how to get to the root of the problem and remove it successfully. Includes surgical cases presented from an endodontist's unique point of view. Repeated as LAS 18.

** Speaker serves as a consultant and/or has a commercial interest in subject matter

RESEARCH SEMINARS I
Auditorium
Moderators: CALVIN D. TORNECK, DDS, MS,
Toronto, Canada
H. ROBERT STEIMAN, DDS,
Detroit, MI
10:30 am The cutting efficiency of endosonic K-files
A. DAMIEN WALMSLEY *, A. THOMAS &
P.J. LUMLEY, Univ of Birmingham
10:45 am SEM comparative study of four irrigating solutions used with sonic instruments
CATHERINE R. RICCI * & J.M. LAURICHESSE,
Univ of Paris
11:00 am Investigation into acoustic streaming field in simulated root canals
MAJINAH AHMAD * & A.G. KAMARUDIN,
Univ of Malaya
11:15 am Cleaning ability of straight and precurved endosonic files
PHILIP J. LUMLEY *, A.D. WALMSLEY,
J.W. RIPPIN, Univ of Birmingham & R. WALTON,
Univ of Iowa
11:30 am Canal master files: wear patterns with usage
CARLOS A. F. MURGEL *, M. ZUOLO,
Univ of Sao Paulo & R. WALTON, Univ of Iowa
11:45 am Histologic evaluation of 3 instrument/preparation techniques
MARIO ZUOLO *, Univ of Sao Paulo, &
R. WALTON, Univ of Iowa

* Presenter

NEED A BREAK?
Visit the Technical Exhibits. Complimentary coffee service will be provided in the Exhibit Area on Thursday and Friday at 10:30 am and 2:30 pm.

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To reserve seats for the Dinner Dance on Saturday, vouchers must be exchanged for tickets no later than 5:00 pm Thursday. Parties wishing to sit together should return all vouchers at the same time. Your cooperation is greatly appreciated, as we cannot extend this deadline.
THURSDAY AFTERNOON, APRIL 18

A.B.E. GROSSMAN MEMORIAL LUNCHEON
12:00 n-
North Salon (by ticket only)
1:45 pm
Moderator: EDWARD M. OSETEK, DDS,
Chicago, IL

Leadership in a changing world
GENERAL P.X. KELLEY, USMC (Retired),
Arlington, VA

GENERAL INTEREST SESSION II
2:00 pm-
Renaissance East
3:30 pm
Moderator: DARRELL W. ZENK, DDS, MSD
Inver Grove Heights, MN

What the endodontist needs to know about the new
ADA insurance codes
PHILIP W. COHEN, DDS, MS, Livonia, MI
The ADA insurance codes for endodontics have
undergone a major revision. Also, a new ADA
Users Guide has now been published. This will be
a question and answer opportunity to review utilization
of these new codes and guides in the private
practice environment of endodontics.

RESEARCH SEMINARS II
Auditorium
Moderators: MAHMOUD TORABINEJAD, DDS,
MSD, Loma Linda, CA
SANDRA MADISON, DDS, MS
Chapel Hill, NC

Graduate Student Section
2:00 pm
Further investigation of the apical microleakage
patterns of a new endodontic filling technique
DOUGLAS MOLL *, M. LIN, N. PAPAPETROS,
M. GOLDMAN & R. WHITE, Tufts Univ

2:15 pm
Concentration of leukotriene B4 in symptomatic
human periradicular lesions
ELISABETTA COTTI *, T. JUNG &
M. TORABINEJAD, Loma Linda Univ

2:30 pm
A quantitative evaluation of debridement comparing
two instrumentation techniques
KIRK A. COURY *, J.G. CAILLETTEAU,
M.R. RIEGER & J.R. LUDINGTON,
Univ of Texas at Houston

2:45 pm
Response of pulpal blood flow to infusion of
endothelin-1
THOMAS M. GILBERT *, D.H. PASHLEY &
R.W. ANDERSON, Medical College of Georgia

3:00 pm
Effect of pulpal injury on levels of immunoreactive
substance p.
ERIC H. GRUTZNER *, M.G. GARRY &
K.M. HARGREAVES, Univ of Minnesota

3:15 pm
Evaluation of mechanical properties of machined
versus twisted endodontic instruments
DONALD B. DAVIES *, J.F. CORCORAN &
R.G. CRAIG, Univ of Michigan

3:30 pm The effect of pulpal disease on la expression
CAROLYN SHULMAN KERR *, W.D. BERRY &
G. SONNENFELD, Univ of Louisville

3:45 pm
Assessment of external root resorption using digital
subtraction radiology
LES H. KRAVITZ *, D. TYNDALL & S. MADISON,
Univ of North Carolina

4:00 pm
In vivo efficacy of ultrasound after step-back
instrumentation
RICHARD D. ARCHER *, A. READER, M. BECK &
W. MEYERS, Ohio State Univ

4:15 pm
Histological evaluation of the periradicular tissues
from Nd:YAG laser endodontic treatment in dogs
JAMES K. BAHCALL *, P. HOWARD,
L. MISERENDINO & H. WALIA, Marquette Univ

4:30 pm
Prophylactic dilutional to minimize post-operative pain
following endodontic treatment
ILDIO E. BAKOS *, J.A. WALLACE, &
G.T. TEREZHALMY, Case Western Reserve Univ

4:45 pm
Sealing ability of metal versus plastic carrier thermafil
obturators
DONALD SCOTT CLARK * & M.E. ELDEEB,
Univ of Minnesota

'Presenter

SCIENTIFIC SESSION III
2:00 pm-
Renaissance - West A
5:00 pm
Moderator: H. ROBERT STEIMAN, DDS, Detroit, MI

Management of color by splint bleaching of vital teeth
with carbamide peroxide
RONALD R. LEVON, DMD, New Orleans, LA

The splint method of vital bleaching of stained
teeth has become immensely popular within the last
two years. Is this method a valid addition to the
scope of dental practice or just another gimmick?
Are there valid scientific concerns about the long-
term safety of this procedure? Controlled research
projects at LSU School of Dentistry offer the initial
scientific information about this technique. Treatment
planning, case selection and presentation,
technical instruction, and medical-legal aspects of
this technique will be present.
THURSDAY AFTERNOON (continued)

Enamel microabrasion: old problems, new solutions
(This portion will not be taped)
THEODORE P. CROLL, DDS, Doylestown, PA

This presentation will also introduce the concept of enamel microabrasion for correction of superficial enamel “dysmineralization” and decalcification discoloration defects. History of the procedure will be reviewed and extensive case history documentation will be presented. A number of cases in which visible light polymerized composite resin restorations were used in conjunction with enamel microabrasion will also be described.

"* Speaker serves as a consultant and/or has commercial interest in subject matter

SCIENTIFIC SESSION IV
2:00 pm - Renaissance - West B
3:30 pm - Moderator: THOM C. DUMSHA, DDS, MS, Baltimore, MD

Neurogenic inflammation
SYNGCUK KIM, DDS, PhD, New York, NY

In general, inflammation involves the alteration in microcirculatory and sensory functions of the pulp. Recent experimental evidence suggests that the vascular events are caused by various neuropeptides, notably substance P, which are released from the sensory nerve endings. The pathophysiological process of pulpal inflammation seems to depend on two factors: the neurovascular interaction and the low compliance system. Many clinical problems involving dental pain caused by inflammation can be explained by these physiological processes.

SCIENTIFIC SESSION V
3:30 pm - Renaissance - West B
5:00 pm - Moderator: GERALD W. HARRINGTON, DDS, MSD, Seattle, WA

Lasers, electro-optics and endodontics
ROBERT R. WHITE, DMD, Boston, MA

From supermarket lasers to Star Wars defense, electro-optic technology is rapidly changing our lives. This presentation will examine how these new manipulations of light have and will affect the way we practice dentistry and endodontics. What is possible now and what is still potential? What should we look for and when can we expect it?

DISTRICT CAUCUSES
2:00 pm - District I ......................................... Room 3
3:00 pm - District II ......................................... Room 4
District III .................................................. Room 5
District IV .................................................. Room 6
District V .................................................... Room 15
District VI .................................................. Room 16

REFERENCE COMMITTEE HEARINGS
3:30 pm - 4:30 pm
Reference Committee Hearings provide an open forum for the membership to voice opinions on specific issues up for consideration by the Association.

Association Affairs ........................................ Room 4
Member Services .......................................... Room 4
Membership ............................................... Room 5
Education and Development ......................... Room 5
Communications/Publications ....................... Room 15

AADS SECTION MEETING
4:30 pm - 5:30 pm
Room 16

RESERVE EARLY!
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FRIDAY MORNING, APRIL 19

7:00 am
STUDENT/NEW MEMBER BREAKFAST
Renaissance - West A (by ticket only)

7:30 am
CONTINENTAL BREAKFAST
Central Ballroom (by ticket only)

8:00 am
EXHIBITS
5:00 pm
Exhibit Hall

8:00 am
REGISTRATION
11:00 am
Ballroom Foyer

LIMITED ATTENDANCE SEMINARS
8:45 am - 10:15 am
Limited seating. NO standing permitted.

LAS 7 - Room 2
OSHA guidelines: how they apply to dentistry
CAROLE L. FRINGS, JD, Washington, DC
This seminar will focus on the current and proposed OSHA Infection Control requirements for dental offices, as well as the application of OSHA's Hazard Communication rule to the dental office. Repeated as LAS 13.

LAS 8 - Room 5
Success and failure in endodontics
ADAM STABHOLZ, DMD, Redlands, CA
What is the success rate when performing a root canal treatment, or, what is the extent of endodontic failure? The operator must try to establish the possible cause of the problem, so that he/she may treat it successfully. Repeated as LAS 28.

LAS 9 - Room 3
Women in endodontics
EVA C. DAHL, DDS, MA, MS, La Crosse, WI
INA L. GRIFFIN, DMD, Hattiesburg, MS
LISA R. WILCOX, DDS, MS, Coralville, IA
CAROLYN M. BROWN, DDS, MS, Ft Jackson, SC
As the number of women seeking careers in dentistry has increased dramatically in recent years, women endodontists are no longer a rarity. Women now constitute nearly 22 percent of the endodontic graduate student enrollment. A panel discussion will explore the career options in endodontics including solo and group private practices, academics, and the armed services.

LAS 10 - Room 16
Clinical use of sonics and ultrasonics in endodontics
JOE H. CAMP, DDS, MSD, Charlotte, NC
Much confusion exists regarding the effectiveness of sonics and ultrasonics. This discussion will concentrate on the clinical results attained with many of the various devices while showing the pitfalls and precautions necessary with their use. Repeated as LAS 29.

LAS 11 - Room 4
Endodontic emergencies
R. SCOTT GATEWOOD, DMD, Jackson, MS
VAN T. HIMEL, DDS, Memphis, TN
SAMUEL O. DORN, DDS, Ft Lauderdale, FL
A questionnaire was sent to diplomats of the American Board of Endodontics to determine changing trends in the treatment of endodontic emergencies since Dorn's survey ten years ago. The results of this questionnaire will be presented. Trends in treatment approaches to various endodontic emergencies will be discussed.

LAS 12 - Room 15
50 endodontic practice enhancements
MARTIN D. LEVIN, DMD, Chevy Chase, MD
These 50 practice enhancements identify some of the main goals of today's endodontic practice. Specific suggestions in dealing with forms, personnel, office design, computers, accounts receivable and patient communications will be discussed.

SCIENTIFIC SESSION VI
9:00 am - 12:00 pm
Moderator: HERBERT SCHILDER, DDS, Boston, MA
The challenge of selecting an obturation method
(GS lesson will not be taped)
GERALD N. GICKMAN, DDS, MS, Dallas, TX
JAMES L. GUTMANN, DDS, Dallas, TX
WILLIAM BEN JOHNSON*, DDS, Tulsa, OK
HOWARD MARTIN**, DMD, Silver Spring, MD
ANDREW E. MICHANOVICE*, DDS, Pittsburgh, PA
FRANKLIN S. WEINE, DDS, MSD, Chicago, IL
JOHN D. WEST, DDS, MSD, Tacoma, WA
Do you favor one obturation method? Do you believe your technique is the most appropriate? Can you "justify your selection"? Could there be a better method? Is there a "standard" obturation method?
A panel of experts will stimulate a variety of opinions and controversy when probing the above queries. Each has shown a personal commitment to excellence with innovations and advancements in our discipline. The panelists will identify those specific factors that justify their "preferred" obturation technique. A provocative scenario for an audience "looking for answers" or debate!

*Speaker serves as a consultant and/or has commercial interest in subject matter

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FRIDAY MORNING (continued)

RESEARCH SEMINARS III
Auditorium
Moderators: FREDERIC BARNETT, DMD, Penn Valley, PA
SAMUEL W. OGLESBY, DDS, MA, San Clemente, CA

Graduate Student Section

9:00 am Pulse oximetry as a definitive diagnostic tool
JENIFER M. SCHNETTLER* & J.A. WALLACE, Case Western Reserve Univ

9:15 am Reliability of electric pulp testing after pulpal testing with dichlorodifluoromethane
CAROLE T. PANTERA*, E.A. PANTERA, Jr, & R.W. ANDERSON, Medical College of Georgia

9:30 am Comparison of apically extruded debris using 3 instrumentation techniques
GARRY L. MYERS*, Wilford Hall Medical Ctr & S. MONTGOMERY, Univ of Texas at San Antonio

9:45 am Cytotoxicity and dentin permeability of "nightguard" vital bleaching material in vitro
JOHN C. FAT*, J.F. CORCORAN & C.T. HANKS, Univ of Michigan

10:00 am An evaluation of the canal master, balanced force and step-back techniques
PHILIP J. HANKINS* & M.E. ELDEEB, Univ of Minnesota

10:15 am The effect of storage media of human PDL cells in extracted teeth
SUDHA PATIL*, T. DUMSHA & R. SYDISKIS, Univ of Maryland

10:30 am Effects of pulp exposure on periapical tissues of athymic rats
JOHN B. WALLSTROM* & M. TORABINEJAD, Loma Linda Univ

10:45 am Quantitative histometric analysis of development and healing of periapical lesions in cats
WILLIAM J. PALANK*, H.E. GRUBER & M. TORABINEJAD, Loma Linda Univ

11:00 am The effect of endodontic procedures on root dentin permeability
LIWEN TAO*, R.W. ANDERSON & D.H. PASHLEY, Medical College of Georgia

11:15 am Evaluation of myohyoid and myohyoid/IAN blocks in human mandibular anesthesia
STEPHEN J. CLARK*, A. READER, M. BECK & W. MEYERS, Ohio State Univ

11:30 am Evaluation of second division nerve blocks in human maxillary anesthesia
RICHARD P. BROERING*, A. READER, M. BECK & W. MEYERS, Ohio State Univ

11:45 am Effects of moisture content and endodontic treatment on some mechanical properties of human dentin
TZYY-JOU G. HUANG*, H. SCHILDER & D. NATHANSON, Boston Univ

*Presenter

GENERAL INTEREST SESSION III

9:00 am Renaissance East
12:00 n Moderator: KATHRYN A. JUROSKY, DDS, MS Manhattan Beach, CA

Building the specialty practice through increased referrals
(This session will not be taped)
ROGER P. LEVIN, DDS, MBA, Baltimore, MD

Referrals are the most significant key to the successful development and growth of specialty practices. In this highly motivating seminar, Dr. Levin presents numerous suggestions for establishing and maintaining intensive referral relationships. Using his advanced techniques, many practices have increased their referral rate by 30 percent or more. Office staff is invited! Recommended by and for the young professional.

LIMITED ATTENDANCE SEMINARS

10:30 am Limited seating. NO standing permitted
12:00 n

LAS 13 - Room 2
OSHA guidelines: how they apply to dentistry
(Repeat of LAS 7)

LAS 14 - Room 5
Endo-perio: combined therapy
LOUIS E. ROSSMAN, DMD, Philadelphia, PA
KATSUEI MORI, DDS, Tokyo, Japan

The endodontist is part of a team rendering dental care to patients. Decisions concerning saving or extracting teeth are made daily. Sometimes these decisions are not routine and the entire treatment plan depends on the predictability of a procedure. This seminar will address those advanced clinical problems that involve endodontic and periodontal disciplines and principles. Special emphasis will be placed on diagnosis and treatment. Clinical solutions utilizing carefully documented step by step examples will be presented to help prognosticate successful results. Repeated as LAS 20.
FRIDAY MORNING (continued)

LAS 15 - Room 3
Hypnosis can help your endodontic practice
HOWARD L. PRANIKOFF, DDS, MScD,
Ormond Beach, FL
   Hypnosis techniques can help patients to over-
   come fears and apprehensions concerning endodon-
   tic treatment. A historical review and case studies
   will be discussed, followed by demonstrations and
   actual experience by the participants.

LAS 16 - Room 4
Nonsurgical retreatodontics: let’s take up the
challenge
PIERRE MACHTOU, DDS, CES, Paris, France
ANNAS. C. COHEN, BDS, MS, Paris, France
   Most of the teeth to be retreated have already
   been restored. In order to recover canal patency, all
   the different obstructions must be removed: coronal
   restorations, radicular posts, root canal filling
   materials. This initial step is very challenging but is
   essential for the successful completion of the
   treatment. A detailed clinical approach involving all
   the current armamentarium available will be dis-
   cussed.

LAS 17 - Room 16
Diagnosis and treatment of cracked teeth and vertical
root fractures
WILLIAM T. JOHNSON, DDS, MS, Lincoln, NE
   Cracked teeth and teeth exhibiting vertical root
   fractures are often difficult to diagnose and treat.
   This seminar will focus on the etiology of each clinical
   entity and discuss the diagnosis, treatment planning,
   and therapeutic procedures for managing these
   common clinical problems.

LAS 18 - Room 15
Root amps and hemisections: “a cut above for the
endodontist” (Repeat of LAS 6)

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FRIDAY AFTERNOON, APRIL 19

LUNCHEON WITH LEARNING
12:00 to 1:45 pm
Central Ballroom (by ticket only)
Moderator: GREGORY T. ISERMANN, DDS, MS,
Racine, WI

Calvin D. Torneck  Jens O. Andreasen

Calvin D. Torneck, recipient of the 1991 Louis I.
Grossman Award. The Grossman Award is given to
an AAE member for cumulative publication of
significant research studies which have made an
extraordinary contribution to endodontology.

Jens O. Andreasen, recipient of the 1991 Ralph F.
Sommer Award. The Sommer Award is awarded for
recognition to the principal author(s) of a publication
of specific significance to the science and art of
endodontology.

GENERAL INTEREST SESSION IV
Renaissance East
2:00 pm 5:00 pm
Moderator: CARL L. TINKELMAN, DMD,
Philadelphia, PA

Dental considerations for the female patient: from
puberty to menopause
BARBARA STEINBERG, DDS, Philadelphia, PA
   This course is designed to familiarize the dental
   team with various stages in women’s lives when
   there are fluctuations in sex hormones. Time will be
devoted to discussion of puberty, menses, preg-
nancy, menopause, oral contraceptives, hormonal
replacement therapy and their effect on the oral
vagina and dental therapy.

NEED A BREAK?
Visit the Technical Exhibits. Complimentary coffee
service will be provided in the Exhibit Area on Thursday
and Friday at 10:30 am and 2:30 pm.
**FRIDAY AFTERNOON (continued)**

**LIMITED ATTENDANCE SEMINARS**

2:00 pm - 3:30 pm

LAS 19 - Room 2
The making of an endodontist: the four “P’s”
TERRY A. PROPPER, DDS, MS, Nashville, TN
There is more to being a successful and complete endodontist than a gutta percha fill. This presentation will emphasize the four “P’s” necessary to “have it all.” This seminar is especially geared to graduate students and new practitioners. “The Making of an Endodontist” will discuss:
PERCEPTION: What you see is what you get!
PROMOTION: Creating a consistent image.
PROJECTION: Difficult questions, difficult answers.
PERFECTION: Doing the best job possible.

LAS 20 - Room 5
Endo-perio: combined therapy (Repeat of LAS 14)

LAS 21 - Room 4
Apical surgery: retrofilling? When and how
GABRIELE PECORA, MD, DDS, Rome, Italy
LUCIANO GIARDINO, MD, Rome, Italy
This presentation will focus on the situations in which it is necessary to perform a retrofilling. Also to be discussed is why, in many cases, it is better to carry out only the apical resection. The different stages of retrofilling as well as the alternative materials will be addressed and the opportunity of the use of a microscope will be evaluated in order to carry out the right choice of the filling material. Repeated as LAS 30.

LAS 22 - Room 15
Human performance in endodontics: searching for the best
MICHAEL M. BELENKY, DDS, MPH, Baltimore, MD
An occupational revolution that breaks the barriers to personal health and professional success. Leave back, neck, and shoulder pain to tradition. Reach your peak of perception, control, and achievement via proprioception and natural posture.

LAS 23 - Room 3
State of the art in laser therapy: new developments in clinical and surgical endodontics (Repeat of LAS 4)

LAS 24 - Room 16
Warm lateral condensation and new instrumentation (Repeat of LAS 2)

**SCIENTIFIC SESSION VII**

2:00 pm - 3:30 pm

Renaissance - West A
Moderator: ROBERT K. FLATH, DDS, Bluffton, SC
Treatment of infections and associated lesions of endodontic origin
J. CRAIG BALMGARTNER, DDS, MS, PhD, Columbia, MD
Microorganisms produce threatening infections and inflammatory reactions that include acute/chronic apical periodontitis, acute/chronic alveolar abscess, and cellulitis. Treatment regimens will be presented that include drainage of soft and hard tissues, trephination, and decompression. Methods for microbial sampling and a hierarchy of antibiotic therapy will also be presented.

**SCIENTIFIC SESSION VIII**

2:00 pm - 3:30 pm

Renaissance - West B
Moderator: GARY R. HARTWELL, DDS, Richmond, WA
A clinical approach to maxillary molar surgery
RALPH BELLIZZI, DDS, Ft Lewis, WA
ROBERT J. LOUSHINE, DDS, Ft Benning, GA
A clear and concise approach to maxillary molar surgery which utilizes the current state-of-the-art techniques and materials. Anatomical landmarks, flap design, root resection and retroobturation are illustrated by a step-by-step clinical outline and aided by detailed clinical photos during each phase of the surgical procedure.
FRIDAY AFTERNOON (continued)

RESEARCH SEMINARS IV
Auditorium
Moderators: DAVID L. PITTS, DDS, MSD, Seattle, WA
DAVID S. AUGUST, DDS, MS, York, PA

2:00 pm Pulpal cooling: the next generation device and coolant
HAROLD E. GOODIS, K. KOWALSKI, J. ROBINSON, J.M. WHITE & L.G. WATANABE,
Univ of California, San Francisco

2:15 pm Fluid flow of amalgam and cermet cement retrograde fillings
KATHLEEN STREIFF BOYD & K.J. BRUGGERS,
Univ of North Carolina

2:30 pm Comparison of coronal leakage in lateral condensation and thermafi obturations
JAY K. TAYLOR, K.R. BAUMGARDNER & R.E. WALTON, Univ of Iowa

2:45 pm Endodontic retreatment of thermafi versus laterally condensed gutta-percha
LISA R. WILCOX & J.J. JUHLIN, Univ of Iowa

3:00 pm Manipulative characteristics of core-filled gutta-percha cones
STEFFAN SCHERER & J. JENSEN,
Univ of Minnesota

3:15 pm Radicular penetration of 30% hydrogen peroxide during bleaching: in vitro
ILAN ROTSTEIN, Hebrew Univ

3:30 pm Histologic characterization of bleaching-induced external root resorption in dogs
CHAIM MOR, I. ROTSTEIN, S. FRIEDMAN, J. KATZENELSON, M. SOMMER & I. BAB,
Hebrew Univ

3:45 pm Effects of Nd:Yag laser on apical seal of teeth after apicoectomy and retrofill
ADAM STABHOLZ, A. KHAYAT, S.H. RAVANSHAD & M. TORABINEJAD,
Loma Linda Univ

4:00 pm Scanning electron microscopic study of resected teeth using Nd:Yag laser
AKBAR KHAYAT, A. STABHOLZ, D.A. WEEKS & M. TORABINEJAD, Loma Linda Univ

4:15 pm Human pulpal blood flow determination with laser doppler flowmetry
TSUNEYASU IZAWA, Tokyo Univ, M. MOYNIHAN, M. LIU & S. KIM, Columbia Univ

4:30 pm Effects of CO2 laser on pulpal blood flow
MIN-TSAI LIU, Columbia Univ, T. IZAWA, Tokyo Univ, S. FRIEDMAN, Hebrew Univ,
M. MOYNIHAN, J. DORSCHER-KIM & S. KIM, Columbia Univ

4:45 pm Histological study of the use of CO2 laser in apical surgery
SHIMON FRIEDMAN, I. ROTSTEIN, I. BAB,
Hebrew Univ

SCIENTIFIC SESSION IX

Renaissance - West A
3:30 pm Moderator: WALTER T. CUNNINGHAM, DDS,
Silver Spring, MD

Complex endodontic lesions and defects implanted with plaster composites reinforced by a biodegradable polyester mesh
R. DENBY LEWIS, DDS, Danville, VA

Malleable composite hydroxyapatite/plaster of Paris or polymer/plaster of Paris mixtures were implanted in complex endodontic surgical defects after nonsurgical endodontic treatment had failed. In 141 surgery cases, 85% success rate was observed over healing periods of six months to four years.

SCIENTIFIC SESSION X

Renaissance - West B
3:30 pm Moderator: ALBERT C. GOERIG, DDS, MS,
Monterey, CA

Surgical management of large anterior lesions
ROBERT A. AUGSBURGER, DDS, MS, MSD,
Pt Huachuca, AZ

Endodontists have become the standard bearers in the diagnosis of many dental problems. This presentation will focus on the diagnosis and comprehensive management of large anterior radiolucent lesions. The gamut of surgical options will be discussed, culminating with the "sharp dissection" technique of enucleation. These practice-building techniques will yield higher success rates and reduced morbidity.
SATURDAY MORNING, APRIL 20

7:30 am  CONTINENTAL BREAKFAST
8:30 am  Central Ballroom (by ticket only)

8:00 am  EXHIBITS
12:00 n  Exhibit Hall

8:30 am  POSTER CLINICS
11:30 am  North Ballroom

PC 1  Evaluation of the endex apex locator with different foramen sizes
      ASHRAF F. FOUAD, BDS, MS, Iowa City, IA

PC 2  Cross sectional configuration of files compared with manufacturers' design
      JOSEPH E. D'SOUZA, DDS, Iowa City, IA

PC 3  Sealing ability of some canal obturating techniques
      GIN-ICHIRO HATA, DDS, Osaka, Japan

PC 4  Accuracy of placement of conductive gutta percha master cones
      ERIC M. RIVERA, DDS, MS, Iowa City, IA

Graduate Student Section

PC 5  The histologic study of vertical root fractures using freeze dried bone and hydroxyapatite
      JENNY G. BAJALCALIEV, DDS, Northwestern Univ

PC 6  Root canal shape of the mandibular first premolar
      MICHAEL K. BAISDEN, DDS, US Army Ft Gordon

PC 7  Cytotoxicity of dentin bonding agents
      GREGORY S. BRUCE, DDS, BRENDAC K. RICHARDSON, DDS, Univ of Maryland

PC 8  An in vitro autoradiographic study of the sealing ability of lased hydroxyapatite plugs for the use as a retrofit fill material
      DAVID M. DOBIN, DDS, Northwestern Univ

PC 9  The distance between the maxillary sinus and the apexes of the maxillary posterior teeth
      JAMES A. EBERHARDT, DDS, Loma Linda Univ

PC 10  Removal of Ca(OH)2 from the root canal
       KEITH H. FOSTER, DMD, US Army Ft Gordon

PC 11  Techniques for gutta-percha removal from the root canal
       RANDALL S. HILTNER, DMD, US Army Ft Gordon

PC 12  A clinical evaluation of the endocateter-an electronic apex locator
       MICHAEL E. KELLER, DDS, MSD, Indiana Univ

PC 13  Osteogenic and antiresorptive effects of high calcium on mineralized tissues
       MARNA M. NII, DDS, Northwestern Univ

PC 14  Influence of instrument design on transportation of the root canal
       RUSSELL A. PAUL, DDS, Univ of Michigan

PC 15  Lateral condensation: an inside view
       SALAM SAKKAL, DMD, JEFFERY H. HEMBROUGH, DDDS, Loyola Univ

PC 16  Effect of aging on responses of nerve fibers to pulpal inflammation
       MAUREEN L. SWIFT, DDS, Univ of Washington

PC 17  An in vitro autoradiographic leakage study of retrofitting materials in wet and dry environments
       DAVID J. TOCA, DDS, Northwestern Univ

PC 18  A comparison of three obturation techniques: an autoradiographic study
       MARK W. TOOD, DMD, Northwestern Univ

PC 19  Effect of smear layer on in-vitro root canal bacterial colonization
       ALFRED II. WIEMANN, DDS, Univ of Iowa

8:30 am  TABLE CLINICS
11:30 am  North Ballroom

TC 1  The use of grafting materials in endodontic surgery
      JEAN-YVES COCHET, DDS, & ISABELLE C.CCHET, DDS, Paris, France

TC 2  Endo-perico: the diagnostic dilemma
      KENT G. KNLDSON, DDS, Norfolk, VA

TC 3  The technical progress of pulpotomia in the 1930's and 1990's
      NICOLA PERRINI, DDS, Pistoia, Italy

TC 4  Alternative methods for mandibular nerve block
      RAHELE F. REZAI, DMD, MA, Washington, DC

TC 5  Adequacy of radiographs in endodontic
      HASSAN A. SELIM, BDS, MS, Riyadh, Saudi Arabia

TC 6  Maximization of insurance reimbursements for endodontic procedures
      JERRY F. TAINTON, DDS, MS, Memphis, TN

TC 7  Clinical survey of vertical root fractures
      TIZIANO TESTORI, DDS, Como, Italy
SATURDAY MORNING (continued)

Graduate Student Section

TC 6 Decompression of a large periapical lesion
JOYCE L. AWRAMIK, DDS,
ROBERT E. BLUNDELL, DDS, Naval Dental School

TC 9 Nature's I and D: draining sinus tract
DEAN A. BURNETT, DDS, Northwestern Univ

TC 10 Irrigating characteristics of subsonic, and ultrasonic
hand pieces and irrigating needles
JOSE A. DuLUC, DDS, New York Univ

TC 11 Retreatment techniques for thermafill
EDWARD K. GAMSON, DDS,
BARTLEY T. QUILLIN, DDS, Univ of Maryland

TC 12 Apical barrier & perforation repair with calcium
hydroxide
CRAIG S. HAGA, DDS,
ROBERT J. CEISEL, DDS, Northwestern Univ

TC 13 S-shaped canal systems
SCOTT A. JOHNSON, DMD,
Baylor College of Dentistry

TC 14 Instrumentation of curved canals using four types of
endodontic files
MARTIN M. KATZMAN, DDS,
JAMES A. WALLACE, DDS, MS, MSD, MDS, PhD,
Case Western Reserve Univ

TC 15 Use of hydroxyapatite matrix when sealing furcation
perforations
SAMUEL KRAMER, DDS, New York Univ

TC 16 Using cyanoacrylate for endodontic isolation
CHRISTOPHER A. LENTO, DMD,
ROBERT K. FRISK, DDS, Naval Dental School

TC 17 Salvaging a tooth with a separated instrument or
silver cone
MARIA C. MARANGA, DDS,
CAROLINE NUP, DDS, New York Univ

TC 18 Retrofill material in apical surgery
BARZIN T. MASSARAT, DDS,
MICHAEL J. RIBERA, DMD, Northwestern Univ

TC 19 Laser dopplers and pulp vitality
JULIAN R. D. MOISEIWITSCH, BDS,
JAMES M. MUSSELWHITE, DDS,
Univ of North Carolina

TC 20 Lymphoma of the jaws: signs and symptoms in three
cases
RALPH W. NIEMANN, DDS,
JAMES G. KOTAPISH, Jr, DDS, West Virginia Univ

TC 21 Techniques for pcst removal
DON H. PRATTEN, DMD,
NEVILLE J. McDONALD, BDS, MS,
Univ of Maryland

TC 22 Decompression: reduction of large periradicular
lesions
STEPHANIE L. SNYDER, DMD,
Baylor College of Dentistry

TC 23 A comparison of 3 techniques for placement of
calcium hydroxide paste
ROBERT STANCIL, DDS
ASGEIR SIGURDSSON, DDS,
Univ of North Carolina

TC 24 Simple controlled root extrusion
JEFFREY R. THORPE, DDS,
JOHN C. CALHOUN, DMD, Naval Dental School

LIMITED ATTENDANCE SEMINARS

8:45 am - 10:15 am

LAS 25 - Room 2
Practice development: increasing patient load by
increasing referral base
MICHAEL E. KOSSAK, DDS, Washington, DC

This lecture will discuss how to develop a competitive
edge over your colleagues and how to create an
image with your patients and referring dentists that
makes them appreciate you more.

LAS 26 - Room 3
Endodontics and third parties: insanity or reality
MANUEL I. WEISMAN, DDS, Augusta, GA

Are you an endodontist or insurance agent? This
seminar will help solve problems between the
endodontist, patient and insurance company. Topics
include: accident insurance dilemmas, attending
endodontist's statements, insurance consultant
relationships and office procedures to reduce
insurance headaches in endodontic practice.

LAS 27 - Room 15
Dental components of aging: how to outline your pulp
DONALD R. MORSE, DDS, PhD, Philadelphia, PA

This presentation will discuss the use of dental
components as an aging barometer in the practice of
dentistry. In addition, application of this information
to forensics and anthropology and methods to outline
the pulp will be presented.
SATURDAY MORNING (continued)

LAS 28 - Room 5
Success and failure in endodontics
(Repeat of LAS 8)

LAS 29 - Room 16
Clinical use of sonics and ultrasonics in endodontics
(Repeat of LAS 10)

LAS 30 - Room 4
Apical surgery: retrofilling? When and how
(Repeat of LAS 21)

RESEARCH SEMINARS V
Auditorium
Moderators: ROBERT L. ELLISON, DDS, Detroit, MI
          HAROLD E. GOODIS, DDS, San Francisco, CA

9:00 am  In vivo and in vitro glycosaminoglycans from human
dental pulp
     CHUTIMA MANGKORNKARN * & J.C. STEINER,
          Univ of California, Los Angeles

9:15 am  Posttreatment endodontic symptoms: effect of
         administration of prophylactic penicillin
     JANE CHIAPPINELLI*, R. WALTON & H. LOGAN,
          Univ of Iowa

9:30 am  Intracanal pH changes of Ca(OH)₂ pastes exposed to
         CO₂, in vitro
     ZVI FUSS*, R. RAFAELOFF, M. TAGGER &
          S. SZAJKIS, Tel Aviv Univ

9:45 am  Radicular and periradicular wound healing following
         demineralization of resected root ends
     KATHLEEN R. CRAIG & J.W. HARRISON,
          Baylor College of Dentistry

10:00 am Simultaneous recording of pulpal blood flow and
        sensory nerve activities in the same tooth
     MICHAEL MOYNIHAN*, K. MARKOWITZ, M. LIU &
          S. KIM, Columbia Univ

10:15 am Non-pathological periapical radiolucencies in
        mandibular molars with fused roots
     GUNNAR HASSELGREW* & N. SERMAN,
          Columbia Univ

10:30 am Serum IgG reactive with oral anaerobic
        microorganisms
     J. CRAIG BAUMGARTNER*, Walter Reed
     Medical Ctr, W.A. FALKNER, R.D. BERNIE &
     J.B. SUZUKI, Univ of Maryland

10:45 am  A two year evaluation of the seal of endodontic
         retrofillings
     EUGENE A. PANTERA, Jr.*, R.W. ANDERSON &
     D.H. PASHLEY, Medical College of Georgia

11:00 am Microleakage of amalgambond in endodontic
        retrofillings
     RONALD W. ANDERSON*, D.H. PASHLEY &
     E.A. PANTERA, Medical College of Georgia

11:15 am Retreatment of root canals obturated in conjunction
        with difference sealers
     JOSHUA MOSHONOVO*, S. FRIEDMAN &
     M. TROPE, Hebrew Univ & Temple Univ

11:30 am Fracture resistant of bonded root segments
        CEMIL YESILSOY*, S FRIEDMAN, J. MOSHONOVO
        & M. TROPE, Hebrew Univ & Temple Univ

11:45 am Fracture resistance of endodontically treated roots
        HERBERT L. RAY, Jr.*, & M. TROPE, Temple Univ

          Presenter

GENERAL INTEREST SESSION V
Renaissance East

9:00 am-  Moderator: GERALD C. DIETZ, Sr, DDS,
10:30 am  Birmingham, MI

Financial death can be catastrophic
DONALD E. ARENS, DDS, MSD, Indianapolis, IN

Whether it is caused by accident, illness or other
means, financial death can in many cases be more of
a problem than physical death. The experience can
be devastating to everyone unless you are prepared.

This lecture will explain the need for financial
gains and the protection of income. It is important to
recognize those goals change with age and need, but
it all begins with recognizing what life would be for
you and your family if the ability to earn ended.

SCIENTIFIC SESSION XI
Renaissance - West A

9:00 am-  Moderator: ROLAND C. DUELL, DDS, MS,
10:30 am  Lexington, KY

Endosseous implants in endodontic practice
W. PAUL RADMAN, DDS, Dallas, TX

The success of properly placed endosseous
implants and the restorations they carry has gained
respectability in dentistry. They are the treatment of
choice today and in the future for many teeth that are
endodontic failures or poor candidates for endodontic
therapy. We will explore if they are for you.
SATURDAY MORNING (continued)

SCIENTIFIC SESSION XII
9:00 am
Renaissance - West B
10:30 am
Moderator: LAWRENCE S. VAZZANA, DDS, Clinton, MD

Retrograde filling materials: the changing standard
SAMUEL O. DORN, DDS, Ft. Lauderdale, FL
ARNOLD H. GARTNER, DDS, Southfield, MI

For many decades, amalgam has been accepted as the standard material for retrograde fillings. During the past decade, the properties of many materials have been investigated in a search for a more ideal retroseal. The speakers will present a synopsis of the literature, and will discuss the rationale for use of reinforced modified zinc oxide-eugenol compositions or modified zinc oxide-eugenol compositions containing ortho-ethoxy benzoic acid and eugenol in the liquid in retrograde situations. The handling properties and techniques for clinical usage of these materials will be discussed in detail.

SCIENTIFIC SESSION XIII
10:30 am
Renaissance - West A
12:00 noon
Moderator: LISA R. WILCOX, DDS, MS, Coralville, IA

The biophysical aspects in clinical endosonics
A. DAMIEN WALMSLEY, BDS, MSc, PhD, Birmingham, England

It is important to understand the biophysical mechanisms involved with endosonic equipment so that clinical users are able to employ them safely and effectively. This symposium will cover the current instruments that are available together with an assessment of how well these instruments perform and how endodontic techniques need to be amended in respect to their biophysical operation.

SCIENTIFIC SESSION XIV
10:30 am
Renaissance - West B
12:00 noon
Moderator: JEAN-MARIE LAURICHESSE, DDS, Paris, France

Endodontic surgery: a specific approach for each part of the mouth
BERTRAND G. KHAYAT, DDS, MSD, Paris, France

Endodontic surgery is now expected to be performed on almost any tooth. This presentation will address the specific aspects of the surgical approach for each part of the mouth and will focus on the different parameters which determine the flap design. Comprehensive techniques will be examined for each clinical situation.

SATURDAY AFTERNOON, APRIL 20

COOLIDGE LUNCHEON
12:00 noon
Central Ballroom (by ticket only)
2:00 pm
Moderator: CHARLES J. CUNNINGHAM, DDS, Lexington, KY

The war in the Gulf with CNN
BOBBI BATTISTA, Anchorwoman, CNN AM News

Michael A. Heuer

Michael A. Heuer, recipient of the 1991 Edgar D. Coolidge Award. The Coolidge Award is presented annually to an AAE member who has had active participation in the AAE during the individual's professional lifetime and who has displayed leadership and exemplary dedication to dentistry and to endodontics.

GENERAL ASSEMBLY
2:30 pm
Renaissance - West A
5:00 pm
PAST PRESIDENTS' RECEPTION
6:30 pm
Ballroom Foyer
7:30 pm
PRESIDENT'S DINNER DANCE
Midnight
Grand Ballroom (by ticket only)

As all good things must come to an end, so too must the 1991 AAE Annual Session. Bring out your finest evening attire (black tie optional) and join friends and colleagues as we trip the light fantastic! Live music and gourmet dining set the high standards for this evening of food and merriment. A cash bar will precede the dinner.
SUNDAY, APRIL 21

8:00 am  FAREWELL BREAKFAST BUFFET  
8:45 am  Central Ballroom (by ticket only)

SCIENTIFIC SESSION XV
9:00 am  Renaissance - West A
10:30 am  Moderator: JEFFREY R. THORPE, DDS, Bethesda, MD

What's new in endodontics
JAMES O. ROAHEN, DDS, MS, Bethesda, MD

This will present an overview of many of the various devices and techniques which have been added to the armamentarium of the endodontist in recent years. These devices will be briefly described and analyzed for pros and cons based upon current literature and their use at the Naval Dental School Endodontic Graduate Program.

SCIENTIFIC SESSION XVI
9:00 am  Renaissance - West B
10:30 am  Moderator: JOYCE L. AWRAMIK, DDS, Bethesda, MD

Fascial space infections of odontogenic origin
JEFFREY W. HUTTER, DMD, Bethesda, MD

Possessing the ability to diagnose and subsequently provide therapy to patients who present with a fascial space infection of dental origin is of paramount importance to the practicing endodontist. This very beneficial presentation will describe the location and anatomy of the clinically significant fascial spaces, and discuss the anatomical considerations inherent in the spread of odontogenic infections. In addition, the principles involved in examining and treating a patient with a dentoalveolar infection will be presented.

AAE Auxiliary

OFFICERS
Mrs. Linda Powell (William) ......................... President
Mrs. Cheryl Pranikoff (Howard) .................... President-Elect
Mrs. Elizabeth Collins (Joe) ......................... Vice President
Mrs. Chiizuko Shibuya (Arnold) .................... Secretary
Mrs. Carol Belanger (Laurent) ...................... Treasurer
Mrs. Sue Zenk (Darrell) ............................... Parliamentarian
Mrs. Lisa Hicks (Lamar) ............................... Local Arrangements

WEDNESDAY, APRIL 17
3:00 pm  Welcome tea - Room 2
4:30 pm

THURSDAY, APRIL 18
3:45 pm  Board Meeting - Mrs. Powell's Suite
5:00 pm

FRIDAY, APRIL 19
2:00 pm  Renaissance East
5:00 pm  Dental considerations for the female patient: from puberty to menopause,
BARBARA STEINBERG, DDS

SATURDAY, APRIL 20
8:30 am  Auxiliary Breakfast - Rooms 12-14
10:30 am  Speaker to be announced
11:00 am  Board Meeting - Mrs. Powell's Suite
12:00 n

TOURS
Welcome to Washington, $20/person - Wed, 12:30-3:30 pm and Thu, 9-12 n & 12:30-3:30 pm
Arlington Cemetery, Iwo Jima & Vietnam Veterans Memorial, $24/person - Thu, 1-4 pm and Fri, 8:30-11:30 am
Dumbarton Oaks, the Gardens of Tudor Place, Hillwood, and the Old Stone House, $25/person - Fri & Sat, 12:30-4:30 pm
Embassy Row, Washington Cathedral & Woodrow Wilson House for Tea, $23/person - Thu, 12:30-4:30 pm and Fri, 12:30-4:30 pm
Mt. Vernon & drive by Old Town Alexandria, $26.50/person - Wed, 12:30-4:30 pm and Sat, 1:30-5:30 pm
Mt. Vernon with a stop in Old Town Alexandria, $28.50/person - Thu, 8:30-2:30 pm
State Dept Diplomatic Reception Rooms, $20/person - (On-site registration only) Fri, 9-12 n
VIP Capitol Hill, $27/person - Thu, 1-4 pm and Fri, 9-12 n
Washington after dark, $20/person - Thu & Fri, 7:30-10 pm

Pre-registration tickets are to be picked up at the tour desk in the AAE registration area. If seats are available, tickets will be sold on-site. All tour buses depart from the K Street entrance of the Ramada Hotel.
Board & Committee Meetings

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Public & Professional Affairs 2 pm-5 pm .................................... 7

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Dental Care & Clinical Practice ................................................ 9
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Educational Affairs ................................................................. 6
Federal Dental Health Services .................................................. Board Room D
International Relations ............................................................ 7
Student/New Member Breakfast 7:30-8:45 am ................................ Renaissance West A
Professional Standards, Peer Review & Ethics ............................. 14
Research & Scientific Affairs .................................................... Board Room B

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North Carolina Assn of Endo 5-7 pm .......................................... 6
Northwestern Assn of Endo 6:30-8:30 pm ..................................... Chinese Gardens
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Univ of North Carolina Alumni 6-7:30 pm ..................................... 9
Univ of Southern California Alumni 7-9 pm ................................... 8
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USAF Assn of Endo 7-8:45 am ...................................................... 6
US Navy Assn of Endo 7-8:45 am ............................................... Floreale Restaurant

American Board of Endodontics

1991
M. Lamar Hicks, Secy/Treasurer
F. James Marshall
Edward M. Osetek, President

1992
Leif K. Bakland
Louis E. Rossman
Robert Zelikow

1993
William E. Bernier
Robert L. Ellison
Arthur E. Skidmore

Research & Education Foundation of the AAE

1991
Gary R. Hartwell
Sandra Madison, President
John W. Myers, Secy/Treasurer

1992
Harold E. Goodis, Pres-elect
Peter A. Paesani
Carl L. Tinkelman

1993
Harmon R. Katz
Robert J. Rosenberg
Bruce H. Seidberg
Joel C. Small

Ex officio: Eric J. Hovland

1994
Donald D. Antrim
Wallace B. Brown
Carl W. Newton
Principal Speakers

Donald D. Antrim, DDS, MA, MS
Encinitas, CA
Force Dental Officer, Naval Surface Force Pacific, US Navy

Philip W. Cohen, DDS, MS
Livonia, MI
Private practice

James L. Gutmann, DDS
Dallas, TX
Professor & Chairman, Department of Endodontics, Baylor College of Dentistry; also in private practice

Donald E. Arens, DDS, MSD
Indianapolis, IN
Associate Professor, Department of Endodontics, Indiana Univ; also in private practice

Theodore P. Croll, DDS
Doylestown, PA
Clinical Associate Professor, Univ of Pennsylvania; Adjunct Clinical Professor, Univ of Texas-Houston; also in private practice

Jeffrey W. Hutter, DMD
Rockville, MD
Department of Endodontics, Naval Dental School

Robert A. Augsburger, DDS, MS, Ft Huachuca, AZ
Commander, US Army Dental Activity

Samuel O. Dorn, DDS
FL Lauderdale, FL
Chairman of Advanced Endodontics, Dade County Dental Research Clinic; also in private practice

William Ben Johnson, DDS
Tulsa, OK
Private practice

J. Craig Baumgartner, DDS, PhD
Columbia, MD
US Army Institute of Dental Research, Walter Reed Army Medical Center

Arnold H. Gartner, DDS
Southfield, MI
Assistant Clinical Professor, Department of Endodontics, Univ of Detroit; also in private practice

Bertrand G. Khayat, DDS, MSD
Paris, France
Private practice

Ralph Bellizzi, DDS
FL Lewis, WA
Chief of Endodontics, US Army DENTAC

Gerald N. Glickman, DDS, MS
Dallas, TX
Associate Professor, Department of Endodontics, Baylor College of Dentistry; also in private practice

Syngcuk Kim, DDS, PhD
New York, NY
Professor & Chairman, Department of Endodontics, Columbia Univ; also in private practice
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### Non-Technical Exhibits

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- Teach'em Inc.
- 160 E. Illinois St
- Chicago, IL 60611
Ramada Renaissance Techworld

Meeting Room Level
One flight down to Ballroom Level

Ballroom Level
One flight up to Meeting Room Level

Exhibits
AAE Information
EXHIBIT HALL
Speaker Ready Room
AAE Office
GRAND BALLROOM
AAE Registration
South Salon
Central Salon
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East Salon
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A
RENAISSANCE BALLROOM

2nd Floor Board Room
Club Tower
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Important Notes

Thank you for attending the AAE’s 48th Annual Session. We hope you found the meeting to be both rewarding and enjoyable. See you next year in San Francisco, May 6 - 10, 1992!