

**Editor:** George D. Lundberg, MD  
**Deputy Editor:** M. Therese Southgate, MD  
**Senior Editors:** John D. Archer, MD, Helene M. Cole, MD, Bruce B. Dan, MD  
**Senior Contributing Editor:** Drummond Rennie, MD  
**Contributing Editors:** Charles B. Clayman, MD, Lawrence D. Grouse, MD, PhD, Lester S. King, MD, Harriet S. Meyer, MD, Carlotta M. Rinke, MD  
**Statistical Editor:** Naomi Vaisrub, PhD  
**Morris Fishbein Fellow:** Don Riesenberger, MD  
**Medical News—Editor:** Phil Gunby; **Associate Editors:** Kimberly Glasbrenner, Marsha F. Goldsmith, Charles Marwick (Washington, DC), Beverly Merz; **Assistant Editor:** Chris Anne Raymond, PhD  
**Associate Editor:** Roxanne K. Young  
**Assistant Editors:** Charlene Breedlove, Sharon Iverson (Letters to the Editor), Elizabeth Knoll  
**Editorial Services Manager:** Martha Carney  
**Production Manager:** Marlene M. Hirsch  
**Assistant Production Manager:** John R. Sayban  
**Editorial Processing Manager:** Cheryl Iverson  
**Assistant Editorial Processing Manager:** Paula Giltman  
**Permissions and Graphic Design:** Dennis J. Shipley  
**Manuscript Records:** Ethel Pinkston  
**Production Supervisors:** Lori A. Barba (Copy Editing), Thomas J. Handrigan (Illustrations), Elizabeth Petrikenas (Proofreading), John R. Sayban (Advertising), Mary C. Steermann (Editorial), Jo Anne Weiskopf (Layout)  
**Copy Editing:** Vicky Golden (Free-lance Coordinator), Daniel Halibey, Patricia A. Predey, James Zrimsek  
**Proofreading:** Patricia Coyne, Lisette Sabbach, Barbara Wojtowicz  
**Senior Production Assistants:** Karen Branham, Diane Darnell, Jerri Hall-Gortowski, Debra Lucas, Terese Noto, Susan Price, Ellen Yoshihara  
**Production Assistant:** Darlene E. Filips  
**Illustrations and Layout:** Donna Hagler, Mary Planek-Vanco, Janice Techter, Sandra Williams  
**Cover Editor:** M. Therese Southgate, MD  
**Editorial Coordinator:** Cathy Watkins  
**Editorial Supervisor:** Cassandra Johnson  
**Editorial Assistants:** Mary Cannon, Michele Knutsen, Mary Ann Lilly, Rosemary Navarro, Annette Nunnally, Elsa Rigoni, Lucille Souci  
**Indexing:** Norman Frankel (Supervisor), Mary Kay Tinerella, Pam Wood  
 All articles published, including editorials, letters, and book reviews, represent the opinions of the authors and do not reflect the official policy of the American Medical Association or the institution with which the author is affiliated, unless this is clearly specified.

**JAMA, THE JOURNAL of the American Medical Association** (ISSN 0098-7484), is published four issues per month by the American Medical Association, 535 N Dearborn St, Chicago, IL 60610. Phone (312) 645-5000. Cable address "Medic" Chicago.

**SUBSCRIPTION RATES**—The subscription rate per year for members of the AMA is \$2 included in the annual membership dues. The subscription rate per year for nonmembers is \$52 for one year, \$90 for two years in the United States and US possessions; in all other countries, one year, \$68; two years, \$110 (add \$30 surcharge to each one-year subscription and \$60 surcharge to each two-year subscription for air delivery to the United Kingdom and Europe only). Rates to medical students and residents, \$26 for one year, \$45 for two years in the United States and US possessions. Rates for subscriptions for delivery to Australia, Bangladesh, India, Japan, Nepal, New Zealand, South Korea, and Sri Lanka are available through respective exclusive agents. Address all subscription communications to American Medical Association, Circulation and Fulfillment Division, 535 N Dearborn St, Chicago, IL 60610. Phone: (312) 280-7154.

**CHANGE OF ADDRESS**—POSTMASTER, send all address changes to Caryl L. Wertheimer, Director of Fulfillment, 535 N Dearborn St, Chicago, IL 60610. Notification of address change must be made at least six weeks in advance; include both old and new addresses, a recent mailing label, and your new zip code.

Second-class postage paid at Chicago and additional mailing office.

JAMA<sup>®</sup> Registered in the US Patent and Trademark Office.

Copyright © 1986 by the American Medical Association



## THE COVER

### John Singer Sargent (1856-1925), *Rehearsal of the Padeloup Orchestra at the Cirque d'Hiver.*

American. Oil on canvas (1876). 55.2X46.4 cm.  
 Courtesy of the Museum of Fine Arts, Boston; Charles Henry Hayden Fund.

## A PIECE OF MY MIND

**A Book Tumor** ..... 703  
 CDR M. L. Dembert, MD, MPH, MC, USN, Norfolk, Va

**MEDICAL NEWS** ..... 709

**Malignant Hyperthermia: Nightmare for Anesthesiologists—and Patients . . . Defect in Intracellular Calcium Channels Is Culprit in Malignant Hyperthermia**

**FROM THE FDA** ..... 716

**LEADS FROM THE MMWR** ..... 717

**INSTRUCTIONS FOR AUTHORS** ..... 733

## REFERENCE DIRECTORIES

**US Meetings, Feb 7; Foreign Meetings, Jan 10; Organizations of Medical Interest, Jan 24/31; State Associations and Exams and Licensure, Jan 17; AMA Officials, Oct 4**

**LETTERS** ..... 743

**AIDS and Testing for AIDS** D. E. Dassey, MD, Riverside, Calif, M. Kanter, MD, Los Angeles, R. S. Klein, MD, Bronx, NY, N. P. Rapoza, PhD, Chicago . . . **Screening and Accountability** H. D. Cross, MD, Hampden, Me, B. Woo, MD, Bev. Woo, MD, E. F. Cook, ScD, M. Weisberg, RN, L. Goldman, MD, Boston . . . **Physicians' Accuracy for Diagnosing Sore Throats** R. A. Forsyth, MD, Pasadena, Calif, R. M. Poses, MD, Camden, NJ, R. D. Cebul, MD, Philadelphia, S. H. Lamm, MD, DTPH, S. A. Linn, MD, PhD, Washington, DC . . . **Comparing Health Care Options Using the Cost-Benefit Utility Ratio** J. H. Steinbach, PhD, W. G. M. Hardison, MD, San Diego . . . **The Influence of CT Scanning on the Cost of Workup for Subdural Hematoma** M. J. Shapiro, MD, Los Angeles . . . **The Name of the Red-Eared Slider: Herpetologists in Slow Ferment** K. J. Banquer, MD, Jackson, Miss, R. V. Tauxe, MD, MPH, J. G. Wells, MS, P. A. Blake, MD, MPH, Atlanta, J. G. Rigau-Pérez, MD, San Juan, Puerto Rico . . . **Methylxanthines and Breast Cancer** J. Pozner, MS, A. E. Papatestas, MD, New York

## ORIGINAL CONTRIBUTIONS

**Comparison of Loperamide With Bismuth Subsalicylate for the Treatment of Acute Travelers' Diarrhea** ..... 757

P. C. Johnson, MD; C. D. Ericsson, MD; H. L. DuPont, MD;  
 D. R. Morgan, PhD; J. A. M. Bitsura, MPH; L. V. Wood, PhD, Houston

**Blunt Cardiac Trauma Resulting in Right Atrial Rupture** ..... 761

B. S. Getz, MD; E. Davies, MD; S. M. Steinberg, MD;  
 B. L. Beaver, MD; F. A. Koenig, MD, Columbus, Ohio

**Is Serum Creatine Kinase—MB in Electrically Injured Patients Predictive of Myocardial Injury?** ..... 764

J. W. McBride, MD; K. R. Labrosse, PhD; H. G. McCoy, PharmD;  
 D. H. Ahrenholz, MD; L. D. Solem, MD; I. F. Goldenberg, MD, Minneapolis

## CLINICAL INVESTIGATION

**Serum Creatine Kinase Level as a Screening Test for Susceptibility to Malignant Hyperthermia** ..... 769

R. T. Paasuke, MDCM, FRCP(C), A. K. W. Brownell, MD, FRCP(C), Calgary, Alberta

## BRIEF REPORT

**Hyponatremia and Ultramarathon Running** ..... 772

R. T. Frizzell, Nashville, Tenn; G. H. Lang, MD; D. C. Lowance, MD;  
 S. R. Lathan, MD, Atlanta

**CONTENTS—Continued**

**TOWARD OPTIMAL LABORATORY USE**

**Laboratory Test Analysis Near the Patient** ..... 775  
 R. Belsey, MD; D. Baer, MD; D. Sewell, PhD, Portland, Ore

**SPECIAL COMMUNICATION**

**Self-Funded Health Benefit Plans** ..... 787  
 D. A. Rublee, PhD, MPH, Chicago

**COUNCIL REPORT**

**Closing the Gaps in Health Insurance Coverage** ..... 790  
 Council on Medical Service, Chicago

**COMMENTARY**

**Policy Space Areas and Properties of Benefit-Cost/Utility Analysis** ..... 794  
 J. P. Anderson, PhD, J. W. Bush, MD, MPH, La Jolla, Calif;  
 M. Chen, PhD, San Diego; D. Dolenc, La Jolla, Calif

**EDITORIAL**

**Uncompensated Care** ..... 796  
 L. R. Bristow, MD, Chicago

**INTERNATIONAL ABSTRACTS** ..... 800

**QUESTIONS AND ANSWERS** ..... 819

**Vitreotomy Surgery for Diabetic Retinopathy** R. N. Frank, MD, Detroit . . . **Stress and Diverticular Disease** K. B. Klein, MD, Chapel Hill, NC . . . **Late Spontaneous Reversal of Vasectomy** I. D. Sharlip, MD, San Francisco . . . **Should Children Run in Distance Events?** N. Smith, MD, Seattle

**BOOKS** ..... 825

**Prevention of Head Injuries in Skiing** (Oh) Reviewed by B. Balke, MD, PhD, Basalt, Colo . . . **Organized for Prohibition** (Kerr) Reviewed by N. Gevitz, PhD, Chicago . . . **Contributions of Modern Biology to Medicine** (Bertazzoni, Bollum, Ghione, eds) Reviewed by F. Quagliata, MD, Valhalla, NY . . . **Cell Surface Science in Medicine and Pathology** (Wardle) Reviewed by F. Quagliata, MD, Valhalla, NY . . . **Genetics and Neurology** (Bunday) Reviewed by F. A. Ziter, MD, Salt Lake City . . . **Current Emergency Therapy '85** (Edlich, Spyker, eds) Reviewed by J. E. Tintinalli, MD, Royal Oak, Mich . . . **Endocrinology** (Jubiz) Reviewed by S. S. Stoffer, MD, Southfield, Mich . . . **SOFTWARE—Hypertension Management** (Hoffer, Barnett) Reviewed by P. Rudd, MD, Stanford, Calif . . . **Brief Review** . . . **Sherlock Holmes and the Case of Dr Freud** (Shepherd) . . . **Books Received**

**OBITUARIES** ..... 833

**CLASSIFIED ADVERTISING** ..... 843

**CME Corner** ..... 856

**INDEX TO ADVERTISERS** ..... 856

**CORRECTION** ..... 748

**The Effects of Aerobic Exercise on Plasma Catecholamines and Blood Pressure in Patients With Mild Essential Hypertension**

J. J. Duncan, MEd; J. E. Farr, MD; S. J. Upton, PhD; R. D. Hagan, PhD;  
 M. E. Oglesby, PhD; S. N. Blair, PED, Dallas

**AMA Officers**

**President:** Harrison L. Rogers, Jr, MD\*; **President-Elect:** John J. Coury, Jr, MD\*; **Immediate Past President:** Joseph F. Boyle, MD; **Secretary-Treasurer:** George L. Collins, Jr, MD\*; **Speaker, House of Delegates:** James E. Davis, MD; **Vice-Speaker, House of Delegates:** John L. Clowe, MD

**AMA Trustees**

David J. Brailer (student); Lonnie R. Bristow, MD; Rufus K. Broadaway, MD; George L. Collins, Jr, MD\* (Secretary); Ronald M. Davis, MD (resident); John H. Dawson, MD; William S. Hotchkiss, MD\* (Chairman); Robert E. McAfee, MD; Alan R. Nelson, MD\* (Vice-Chairman); Joseph T. Painter, MD\*; John J. Ring, MD\*; Raymond Scaletta, MD; Jerald R. Schenken, MD; John Tupper, MD

\*Executive Committee

**EDITORIAL BOARD**

- Kenneth A. Arndt, MD**  
Boston
- Byron J. Bailey, MD**  
Galveston, Tex
- Arthur E. Baue, MD**  
St Louis
- Donald J. Dalessio, MD**  
La Jolla, Calif
- Cecilia M. Fenoglio, MD**  
Albuquerque
- William H. Foegel, MD**  
Atlanta
- Renee C. Fox, PhD**  
Philadelphia
- Daniel X. Freedman, MD**  
Los Angeles
- Vincent A. Fulginiti, MD**  
Tucson
- Morton F. Goldberg, MD**  
Chicago
- Marilyn Heins, MD**  
Tucson
- Edward C. Hill, MD**  
San Francisco
- James F. Holland, MD**  
New York
- King K. Holmes, MD, PhD**  
Seattle
- Harold G. Jacobson, MD**  
Bronx, NY
- Robert J. Joynt, MD**  
Rochester, NY
- Carol Kasper, MD**  
Los Angeles
- Richard L. Landau, MD**  
Chicago
- Daniel J. McCarty, MD**  
Milwaukee
- William W. McLendon, MD**  
Chapel Hill, NC
- Arno G. Motulsky, MD**  
Seattle
- Robert E. Rakel, MD**  
Houston
- Domeena C. Renshaw, MD**  
Chicago
- Martha M. Sarasua, MD, PhD**  
Charleston, SC
- Alfred Soffer, MD**  
Park Ridge, Ill
- Robert M. Veatch, PhD**  
Washington, DC

**Executive Vice-President:** James H. Sammons, MD  
**Senior Deputy Executive Vice-President:** James S. Todd, MD  
**Assistant Executive Vice-President for Business:** Richard A. Noffke  
**Vice-President, Scientific Information:** George D. Lundberg, MD  
**Vice-President, Publishing and Marketing:** John T. Baker  
**Director, Publication Production and Printing Division:** Norman D. Richey  
**General Sales Manager; Director, Advertising Sales and Promotion Services Division:** D. Joseph Dennehy  
**Director, Circulation-Fulfillment Division:** Lee A. Parent  
**Director, Promotion and Western Sales:** Thomas J. Carroll  
**Director, Advertising Services:** Raymond Christian  
**ADVERTISING OFFICES:** Eastern: 600 Third Ave, Suite 700, New York, NY 10016 (**Manager:** Robert C. Corcoran [212-867-6640]; **Representatives:** Bill Tice, Cliff Vanderhoof); Midwest/Farwest: 535 N Dearborn St, Chicago, IL 60610 (**Manager:** Thomas J. Carroll [312-280-7182]; **Representative:** Daniel T. Mjolsness); **Classified Advertising:** Delores Boudentt (312-280-7190)

**ADVERTISING PRINCIPLES**—Advertisements in this issue have been reviewed to comply with the principles governing advertising in AMA publications. A copy of these principles is available on request. The appearance of advertising in AMA publications is not an AMA guarantee or endorsement of the product or the claims made for the product by the manufacturer.