

The ARCHIVES OF GENERAL PSYCHIATRY is a member of the consortium of AMA journals listed below. The complete text of all AMA journals is available online directly from AMA as well as the following aggregators: Dialog Information Services, Proquest, Ovid Technologies, Inc, Gale Research, and EBSCO.

The Journal of the American Medical Association (JAMA)

- Archives of Dermatology
- Archives of Facial Plastic Surgery
- Archives of General Psychiatry
- Archives of Internal Medicine
- Archives of Neurology
- Archives of Ophthalmology
- Archives of Otolaryngology—Head & Neck Surgery
- Archives of Pediatrics & Adolescent Medicine
- Archives of Surgery

The ARCHIVES OF GENERAL PSYCHIATRY (ISSN 0003-990x) is published monthly by the American Medical Association, 515 N State St, Chicago, IL 60610-0946, and is an official publication of the Association. The ARCHIVES OF GENERAL PSYCHIATRY reaches more than 31 000 readers in over 79 countries each month. Periodicals postage paid at Chicago, IL, and at additional mailing offices. GST registration number 12622 5556 RT. Canada Post International Publications Mail (Canadian Distribution) Sales Agreement No. 318633. Printed in the USA.

SUBSCRIPTION RATES—

	Individual Print & Online	Individual Online Only
US	\$195	\$150
Americas	\$250	\$150
Rest of World	£175	£105
	Institution Print & Online	Institution Online Only
US	\$365	\$275
Americas	\$475	\$275
Rest of World	£310	£195

Rates for residents and medical students available.

CHANGE OF ADDRESS—POSTMASTER, send all address changes to ARCHIVES OF GENERAL PSYCHIATRY, c/o Subscriber Services, American Medical Association, 515 N State St, Chicago, IL 60610. Please notify us of address change at least 6 weeks in advance to ensure uninterrupted service. Include both old and new addresses, a recent mailing label, and new ZIP code. For mailing addresses outside the United States and the Americas, see below.

SUBSCRIPTION INFORMATION—Subscription inquiries for mailing addresses in the US and the Americas: For fastest service, direct inquiries regarding missing issues, address changes, subscription billing, subscription renewal, or back issue purchases as shown below: **AMA members:** Phone: 800-262-3211 between 8:30 AM-4:45 PM CST; Fax: 800-262-3221; E-mail: masc@ama-assn.org. **Other physicians and nonphysician customers:** Phone: 800-262-2350 or 312-670-7827 (same hours as above); Fax: 312-464-5831; E-mail: ama-subs@ama-assn.org. Mail inquiries should be directed to the Unified Service Center, American Medical Association, PO Box 10946, Chicago, IL 60610-0946. For mailing addresses outside the US and the Americas: Contact JAMA and Archives Journals, American Medical Association, Tower House, Sovereign Park, Market Harborough, Leicestershire LE15 9EF, UK. Phone: +44 (0) 1858-438880; Fax: +44 (0) 1858-434958; E-mail: ama@subscription.co.uk.

REPRINTS—Authors place their reprint order at the time the edited typescript is reviewed and should allow 4 to 6 weeks for delivery following publication. Requests for individual reprints should be sent directly to the author at the address shown in the article.

For bulk reprint orders for distribution by commercial organizations, please contact Wanda Bartolotta, 2441 84th St, Brooklyn, NY 11214. Phone: (718) 946-7424. Fax: (718) 946-7372. E-mail: wanda_bartolotta@ama-assn.org. For reprint orders in limited quantities for distribution by educational organizations and for author reprints, please contact Reprints Coordinator, 515 N State St, Chicago, IL 60610. Phone: (312) 464-4594. Fax: (312) 464-4849.

PERMISSIONS—Contact Rhonda Bailey, Permissions Assistant, 515 N State St, Chicago, IL 60610. Phone: (312) 464-2513.

ADVERTISING PRINCIPLES—Each advertisement in this issue has been reviewed and complies with the principles governing advertising in AMA scientific 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.

WORLD WIDE WEB ADDRESS—<http://www.ama-assn.org>

GENERAL PSYCHIATRY HOME PAGE—<http://www.archgenpsychiatry.com>

Publication Staff
Offices: 515 N State St, Chicago, IL 60610

Editorial Processing Department

- Department Director:** Paula Glitman
- Copyediting Manager:** Brenda Gregoline
- Freelance Copyediting Manager:** Diane L. Cannon
- Freelance Copyediting Coordinators:** Lauren B. Fischer, Connie Manno
- Editorial Systems Managers:** Paul Frank, Monica Mungle
- Systems Programmer/Internet Specialist:** J. D. Neff
- Senior Copy Editor:** Vickey Golden
- Copy Editors:** Juana N. Llorens, Rachel Novickas, Cheryl L. Tobey, Rachel Bodzin Young
- Editorial Assistant:** Wanda Hill

Scientific Publications & Multimedia Applications

Assistant to the Editor: Helga Fritz

Scientific Online Resources

- Director:** Margaret Winker, MD
- Electronic Media Department Director:** Michelle Kurzynski
- Associate Web Editors:** Katherine Behar, Erin M. Giannini
- Web Office Manager:** Marla A. Hall

Publishing Operations Division

- Division Director:** Vanessa Hayden
- Directors:** Karen Adams-Taylor, Paul Gasiecki
- Managers:** David Antos, Debbie Camp, Karl Elvin, Betty Frigerio, Mary Ellen Johnston, Mark Matura, Susan Price, Charl Richey, Carmela Ware

Advertising and Production Services

- LaWanda Brown, Susan Chiara, Mary Anne Donley, Euwanaha Joiner-Smith, Brian McCartney, Noemi Olmo, Sarah Powell, Denise Steinhauer, Ellen Yoshihara
- Composition:** Rebecca Aiken, Brenda Chandler-Grayer, Amy Evers, Fred Furtner, Mary Ann Kuranda, Sandra Lopez
- Database & New Media:** Bruce McGregor (indexer), Clifford O. Barrett, Gail Barrett, Regina Brownlee, Rowena F. Dagang, John Marcinek, La'son Diggs Sledge, Angela Smits
- Distribution:** Linda Alexander
- Graphics:** Joe Amft, Carolyn Hall, Maria Kowalkowski, Chris Meyer, JoAnne Weiskopf
- Proofreading:** Carol Joy Farrell, Daniel James, Teresa H. Omiotek, Mary Kay Tmerella, Barbara Wojtowicz, Agnes A. Zarkadas

Circulation & Classified Advertising Division

- Division Director:** Curt Reilly
- Administrative Assistant:** Christine Hearn
- Circulation Services Director:** Sue Sherrill
- Administrative Secretary:** Bernadette Bauer
- Systems Manager:** Alfred Tomaselli
- Assistant Applications Administrator:** Julie Burton
- Specialist:** Kathryn Osten
- Circulation Sales & Marketing Managers:** Vida Damijonaitis, Michael McGraw
- Sales Representatives:** Sandra Garzon, Donna Goldman
- Classified Advertising Manager:** Thalia Moss
- Sales Representatives:** Ana Dirksen, Jessica Hauser, Trina Rizzo, Barbara Van Wagner

Physician Marketplace—

Classified Advertising: (800) 262-2260

Publishing Sales & Marketing

- Division Director:** Peter J. Murphy
- Publishing Manager:** Geoffrey A. Flick

Advertising Sales & Marketing

- Account Manager:** John P. Cahill (Nationally) (708) 352-0322
- Manager, Marketing Services:** Nancy Bell (973) 263-9191 ext 216
- Advertising Office:** J. P. Cahill & Associates 341 S Waiola Avenue La Grange, IL 60525 (708) 352-0322

International Licensing & Publishing Affairs

Director: William Fox

Online Business & CME

- Publisher:** Bonnie Chi-Lum, MD, MPH
- Director:** Norman Frankel, PhD
- Permissions:** Rhonda Bailey

JAMA/Archives Media Relations

- Director:** Jann Ingmire (312) 464-JAMA(5262) jamaarchmedia@ama-assn.org



ARCHIVES

OF

GENERAL PSYCHIATRY

NOVEMBER 2002 VOLUME 59, NUMBER 11 PAGES 965-1072

EDITORIAL

- A Continuing Commitment to Excellence** 977
Joseph T. Coyle, MD

ART AND IMAGES IN PSYCHIATRY

- The Starry Night (La Nuit Etoilée)** 978
James C. Harris, MD

PERSPECTIVES

- Forty Years of Neurotransmitters:
A Personal Account** 983
Solomon H. Snyder, MD

SPECIAL ARTICLE

- The Interplay of Nature, Nurture,
and Developmental Influences:
The Challenge Ahead for Mental Health** 996
Michael Rutter, MD, FRS

ORIGINAL ARTICLES

- Brain Volume Changes in First-Episode
Schizophrenia: A 1-Year Follow-up Study** 1002
Wiepke Cahn, MD;
Hilleke E. Hulshoff Pol, PhD;
Elleke B. T. E. Lems, MS;
Neeltje E. M. van Haren, MS;
Hugo G. Schnack, PhD;
Jeroen A. van der Linden, MD;
Patricia F. Schothorst, MD, PhD;
Herman van Engeland, MD, PhD;
René S. Kahn, MD, PhD

- Impaired Visual Object Recognition
and Dorsal/Ventral Stream Interaction
in Schizophrenia** 1011

Glen M. Doniger, PhD;
John J. Foxe, PhD;
Micah M. Murray, PhD;
Beth A. Higgins, BSc;
Daniel C. Javitt, PhD

- An Assessment of the Independent
Effects of Olanzapine and Risperidone
Exposure on the Risk of Hyperlipidemia
in Schizophrenic Patients** 1021

Carol E. Koro, PhD;
Donald O. Fedder, DrPH;
Gilbert J. L'Italien, PhD;
Sheila Weiss, PhD;
Laurence S. Magder, PhD;
Julie Kreyenbuhl, PhD;
Dennis Revicki, PhD;
Robert W. Buchanan, MD

- Increased Amygdala Activation
to Angry and Contemptuous Faces
in Generalized Social Phobia** 1027

Murray B. Stein, MD;
Philippe R. Goldin, MS;
Jitender Sareen, MD;
Lisa T. Eyler Zorrilla, PhD;
Gregory G. Brown, PhD

JAMA
&
ARCHIVES
JOURNALS
American Medical Association

All articles published, including editorials, letters, and book reviews, represent the opinions of the authors and do not reflect the policy of the American Medical Association, the Editorial Board, or the institution with which the author is affiliated, unless this is clearly specified.

Catherine D. DeAngelis, MD, MPH
Editor in Chief, Scientific Publications
& Multimedia Applications

Nawin Gupta, PhD
Group Publisher

Cheryl Iverson
Managing Editor

Michael D. Maves, MD, MBA
Executive Vice President,
Chief Executive Officer

Robert A. Musacchio, PhD
Senior Vice President,
Publishing & Business Services

Copyright 2002 by the American Medical Association. All rights reserved.
Reproduction without permission is prohibited.

Drug Use and the Risk of Major Depressive Disorder, Alcohol Dependence, and Substance Use Disorders 1039
David W. Brook, MD;
Judith S. Brook, EdD;
Chenshu Zhang, MA;
Patricia Cohen, PhD;
Martin Whiteman, PhD

Rates and Predictors of Mortality in an Aging, Rural, Community-Based Cohort: The Role of Depression 1046
Mary Ganguli, MD, MPH; Hiroko H. Dodge, PhD;
Benoit H. Mulsant, MD

Neurocognitive Impairments in Nonpsychotic Parents of Children With Schizophrenia and Attention-Deficit/Hyperactivity Disorder: The University of California, Los Angeles Family Study 1053
Robert F. Asarnow, PhD; Keith H. Nuechterlein, PhD;
Kenneth L. Subotnik, PhD; David L. Fogelson, MD;
Richard D. Torquato, MA; Diana L. Payne, PhD;
Joy Asamen, PhD; Jim Mintz, PhD;
Donald Guthrie, PhD

A Cohort Study of Behavioral Problems and Intelligence in Children With High Prenatal Polychlorinated Biphenyl Exposure 1061
Te-Jen Lai, MD;
Xianchen Liu, MD, PhD;
Yueliang Leon Guo, MD, PhD;
Nai-Wen Guo, MS;
Mei-Lin Yu, MD, DrPH;
Chen-Chin Hsu, MD, PhD;
Walter J. Rogan, MD

REGULAR DEPARTMENTS

This Month in Archives of General Psychiatry 975

Physician Marketplace 1068

Index to Advertisers 1072

Instructions for Authors—
See January 2002 issue, page 94, or visit the Web
site at <http://www.archgenpsychiatry.com>

ARCHIVES

OF

GENERAL PSYCHIATRY

Editor:

Joseph T. Coyle, MD
McLean Hospital
115 Mill St
Belmont, MA 02478
Phone: (617) 855-2170
Fax: (617) 855-2579

Editorial Assistant:

Frances MacNeil
Belmont, Mass

Editorial Board:

Huda Akil, PhD
Ann Arbor, Mich
Ross J. Baldessarini, MD
Belmont, Mass
Floyd E. Bloom, MD
La Jolla, Calif
Malcolm B. Bowers, Jr, MD
New Haven, Conn
David L. Braff, MD
San Diego, Calif
William T. Carpenter, Jr, MD
Baltimore, Md
Raymond J. Dolan, MD
London, England
Felton Earls, MD
Cambridge, Mass
Ellen Frank, PhD
Pittsburgh, Pa
Richard M. Glass, MD
Chicago, Ill

Frederick K. Goodwin, MD
Bethesda, Md
James C. Harris, MD
Baltimore, Md
Fritz A. Henn, PhD, MD
Mannheim, Germany
Steven E. Hyman, MD
Bethesda, Md
Kenneth S. Kendler, MD
Richmond, Va
Kenneth K. Kidd, PhD
New Haven, Conn
Donald F. Klein, MD
New York, NY
Helena Chmura Kraemer, PhD
Stanford, Calif
David J. Kupfer, MD
Pittsburgh, Pa
Herbert Y. Meltzer, MD
Nashville, Tenn
Grayson S. Norquist, MD
Bethesda, Md
Charles P. O'Brien, MD, PhD
Philadelphia, Pa

Michael Posner, MD
New York, NY
Judith L. Rapoport, MD
Bethesda, Md
Alan F. Schatzberg, MD
Stanford, Calif
Goran Sedvall, MD
Stockholm, Sweden
Ronald J. Steingard, MD
Worcester, Mass
Gary L. Tischler, MD
New York, NY
Ming T. Tsuang, MD, PhD
Boston, Mass
Stanley J. Watson, Jr, PhD, MD
Ann Arbor, Mich
Myrna M. Weissman, PhD
New York, NY
Kenneth B. Wells, MD, MPH
Los Angeles, Calif