



# MAYO CLINIC PROCEEDINGS

[www.mayoclinicproceedings.org](http://www.mayoclinicproceedings.org)



## Table of Contents

July 2016 Volume 91 Number 7

The August online issue of *Proceedings* will be available by Monday, August 1.  
Sign up for an alert to the online Table of Contents at [www.mayoclinicproceedings.org](http://www.mayoclinicproceedings.org)

## Editorial

### 827 Personalized Medicine in Psychiatry: Concepts for Bringing Associated Testing Into Clinical Practice

*Sheldon H. Preskom*

## Commentaries

### 830 Medical Marijuana in Patients Prescribed Opioids: A Cloud of Uncertainty

*William C. Becker and Jeanette M. Tetrault*

### 833 Dumped: How a Quest for Administrative Efficiency Lost a Doctor His Doctor

*J. Michael Bostwick*


## Original Articles

### 836 Relationship Between Clerical Burden and Characteristics of the Electronic Environment With Physician Burnout and Professional Satisfaction

*Tait D. Shanafelt, Lotte N. Dyrbye, Christine Sinsky, Omar Hasan, Daniel Satele, Jeff Sloan, and Colin P. West*  


Physicians who used electronic health records and computerized physician order entry were less satisfied with time spent on clerical tasks and were at higher risk for professional burnout.

### 849 Cardiorespiratory Fitness and Risk of Sudden Cardiac Death in Men and Women in the United States: A Prospective Evaluation From the Aerobics Center Longitudinal Study

*David Jiménez-Pavón, Enrique G. Artero, Duck-chul Lee, Vanesa España-Romero, Xuemei Sui, Russell R. Pate, Timothy S. Church, Luis A. Moreno, Carl J. Lavie, and Steven N. Blair* 

Low cardiorespiratory fitness level is a major risk factor for sudden cardiac death.

### 858 Prognostic Value of Adipokines in Predicting Cardiovascular Outcome: Explaining the Obesity Paradox

*Robert Wolk, Mamie Bertolet, Prachi Singh, Maria M. Brooks, Richard E. Pratley, Robert L. Frye, Arshag D. Mooradian, Martin K. Rutter, Andrew D. Calvin, Bernard R. Chaitman, Virend K. Somers; for the BARI 2D Study Group* 

The association between specific adipokines and cardiovascular outcome varies depending on body mass index, which may help explain the "obesity paradox."




Continued

- 867** Association Between Use of Dipeptidyl Peptidase-4 Inhibitors and the Risk of Acute Kidney Injury: A Nested Case-Control Study  
*Chia-Jen Shih, Yi-Jung Lee, Yuan-Hao Lo, Shu-Chen Kuo, Shuo-Ming Ou, and Yung-Tai Chen*  
Patients with type 2 diabetes who used dipeptidyl peptidase-4 inhibitors had an increased risk of acute kidney injury.
- 873** Use of Glucocorticoids and Risk of Community-Acquired *Staphylococcus aureus* Bacteremia: A Population-Based Case-Control Study  
*Jesper Smit, Achim J. Kaasch, Mette Sogaard, Reimar W. Thomsen, Henrik Nielsen, Trine Frøslev, and Henrik C. Schönheyder*   
Clinicians considering glucocorticoid therapy in their patients should carefully weigh the elevated risk of community-acquired *Staphylococcus aureus* bacteremia against the potential beneficial effect.

## Diagnosis and Treatment Guidelines

- 881** Fundamental Concepts Regarding Testosterone Deficiency and Treatment: International Expert Consensus Resolutions  
*Abraham Morgentaler, Michael Zitzmann, Abdulmaged M. Traish, Anthony W. Fox, T. Hugh Jones, Mario Maggi, Stefan Arver, Antonio Aversa, Juliana C.N. Chan, Adrian S. Dobs, Geoffrey I. Hackett, Wayne J. Hellstrom, Peter Lim, Bruno Lunenfeld, George Mskhalaya, Claude C. Schulman, and Luiz O. Torres* 

## Special Articles


- 897** Pharmacokinetic Pharmacogenetic Prescribing Guidelines for Antidepressants: A Template for Psychiatric Precision Medicine  
*Malik Nassan, Wayne T. Nicholson, Michelle A. Elliott, Carolyn R. Rohrer Vitek, John L. Black, and Mark A. Frye*   
- 908** Adult-Onset Hypogonadism  
*Mohit Khera, Gregory A. Broderick, Culley C. Carson III, Adrian S. Dobs, Martha M. Faraday, Irwin Goldstein, Lawrence S. Hakim, Wayne J.G. Hellstrom, Ravi Kacker, Tobias S. Köhler, Jesse N. Mills, Martin Miner, Hossein Sadeghi-Nejad, Allen D. Seftel, Ira D. Sharlip, Stephen J. Winters, and Arthur L. Burnett* 

## Review

- 927** Current Status of Left Ventricular Assist Device Therapy  
*Pavol Sajgalik, Avishay Grupper, Brook S. Edwards, Sudhir S. Kushwaha, John M. Stulak, David L. Joyce, Lyle D. Joyce, Richard C. Daly, Tomas Kara, and John A. Schirger*

Please note that articles with an "e" page designation are available only in the online version of the Journal at [www.mayoclinicproceedings.org](http://www.mayoclinicproceedings.org)


## Residents' Clinic

- 941** 68-Year-Old Woman With Fever, Headache, Bicytopenia, and Transaminitis  
*Allison H. Scotch and Adriane I. Budavari*
- e87** 39-Year-Old Woman With Dyspnea and Chest Pain  
*Scott A. Helgeson, Asha U. Nookala, and Joseph L. Blackshear* 

---

**Concise Review for Clinicians—CME Credit Offered**


---

- 946** Pulmonary Sarcoidosis: Diagnosis and Treatment  
*Eva M. Carmona, Sanjay Kalra, and Jay H. Ryu* 

---

**Symposium on Pain Medicine—CME Credit Offered**

---

- 955** Chronic Pain and Mental Health Disorders: Shared Neural Mechanisms, Epidemiology, and Treatment  
*W. Michael Hooten* 

---

**Letters to the Editor**


---

- 971** Risk of Disseminated Disease in Immunosuppressed Patients Receiving Live Zoster Vaccine  
*Edward J. Young*
- 971** In Reply I—Risk of Disseminated Disease in Immunosuppressed Patients Receiving Live Zoster Vaccine  
*Michael R. Bubb*
- 971** In Reply II—Risk of Disseminated Disease in Immunocompromised Patients Receiving Live Zoster Vaccine  
*T. Craig Cheetham*
- 972** The Different Effects of Angiotensin-Converting Enzyme Inhibitors and Angiotensin Receptor Blockers on Mortality  
*Jean-Jacques Mourad*
- 972** In Reply—The Different Effects of Angiotensin-Converting Enzyme Inhibitors and Angiotensin Receptor Blockers on Mortality  
*Sripal Bangalore, Robert Fakheri, Bora Toklu, and Franz H. Messerli*
- 975** Decisive Bearing of Organizational Dynamics on the Application and Success of Hospital-Based Cardiac Rehabilitation  
*Daniel E. Forman, Gemmae M. Fix, Sarah McDannold, Nathalie McIntosh, Martin P. Charns, David W. Schopfer, and Mary A. Whooley*
- 977** Induction of Atrial Fibrillation by Topical Use of Nasal Decongestants  
*Heinrich Wieneke*

---

**Medical Images**

---

- 978** Multifocal Thoracic Tuberculosis  
*Maher Abouda and Ferdaous Yangui* 

---

**Historical Vignette**

---

- e93** Early Computerization of Patient Care at Mayo Clinic  
*Marc A. Ellsworth, Christopher A. Aakre, Mikhail Dziadzko, Steve G. Peters, Brian W. Pickering, and Vitaly Herasevich* 

## Path to Patient Image Quiz

### e103 Malignant Pleural Mesothelioma

Melanie C. Bois, Hee Eun Lee, and Lori A. Erickson 

## Stamp Vignette on Medical Science

### e105 Elizabeth Blackburn and Maintenance of Telomeres

David P. Steensma, Robert A. Kyle, and Marc A. Shampo 

## Art at Mayo Clinic

### e107 Moss Glenn Falls by Mariella Bisson

Margaret R. Wentz 

## Other Features

### 977 Correction

### 25A Professional Opportunities

## Coming Soon...

Sedentary Behavior Effects on Depression and Mood

Daily Physical Activity Protection Against Alzheimer Disease

Management of Hormone Deprivation Symptoms After Cancer





Diverticulosis and Diverticulitis

Gastroenterologic Disorders Associated With Abdominal Pain

Potentially Curable Cancers of the Esophagus and Stomach

Gas and Bloating - Controlling Emissions

## Icon Key

-  This article has been given "Editor's Choice" distinction.
-  An author interview accompanies this article.
-  This article is online only at [www.mayoclinicproceedings.org](http://www.mayoclinicproceedings.org).
-  Supplemental material accompanies this article at [www.mayoclinicproceedings.org](http://www.mayoclinicproceedings.org).



"Mayo Clinic Proceedings," "Mayo," "Mayo Clinic," and the triple-shield Mayo Clinic logo are all registered marks of Mayo Foundation for Medical Education and Research.

MAYO CLINIC PROCEEDINGS (ISSN 0025-6196) is published monthly by Elsevier on behalf of Mayo Foundation for Medical Education and Research. Periodicals postage paid at New York, NY, and additional mailing offices. POST MASTER: Send address changes to Mayo Clinic Proceedings Customer Service, 3251 Riverport Lane, Maryland Heights, MO 63043.

