



# MAYO CLINIC PROCEEDINGS

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



Table of Contents

January 2015 Volume 90 Number 1

The February online issue of *Proceedings* will be available by Monday, February 2.  
Sign up for an alert to the online Table of Contents at [www.mayoclinicproceedings.org](http://www.mayoclinicproceedings.org)

## Editorials

**1 E-Cigarettes: An Asset or Liability in Efforts to Lessen Tobacco Smoking and Its Consequences**

*Susan Galandiuk*

**4 Introduction to the Symposium on Pain Medicine**

*W. Michael Hooten, Steven P. Cohen, and James P. Rathmell*

**6 Mayo Clinic Proceedings 2015: As We Move Forward**

*William L. Lanier*

## Original Articles

**12 The Safety of Intravenous Iron Preparations: Systematic Review and Meta-analysis**

*Tomer Avni, Amir Bieber, Alon Grossman, Hefziba Green, Leonard Leibovici, and Anat Gafter-Gvili*

Intravenous iron formulations are safe and may be given to iron-deficient individuals without fear of infection or cardiovascular events.

**24 Effects of Coenzyme Q10 on Statin-Induced Myopathy: A Meta-analysis of Randomized Controlled Trials**

*Maciej Banach, Corina Serban, Amirhossein Sahebkar, Sorin Ursoniu, Jacek Rysz, Paul Muntner, Peter P. Toth, Steven R. Jones, Manfredi Rizzo, Stephen P. Glasser, Gregory Y.H. Lip, Simona Dragan, and Dimitri P. Mikhailidis, Lipid and Blood Pressure Meta-analysis Collaboration Group*

The results of this meta-analysis do not suggest any significant benefit of coenzyme Q10 supplementation in improving statin-induced myopathy.

**35 Urine Aquaporin 1 and Perilipin 2 Differentiate Renal Carcinomas From Other Imaged Renal Masses and Bladder and Prostate Cancer**

*Jeremiah J. Morrissey, Jonathan Mobley, R. Sherburne Figenshau, Joel Vetter, Sam Bhayani, and Evan D. Kharasch*

These novel tumor-specific proteins may have the potential to avoid partially or fully removing a normal kidney.

**43 Secular Change in Cardiorespiratory Fitness and Body Composition of Women: The Aerobics Center Longitudinal Study**

Haiwei Li, Xuemei Sui, Shouqing Huang, Carl J. Lavie, Zhengzhen Wang, and Steven N. Blair  

In this large cohort, cardiorespiratory fitness improved during the past 35 years, and an increase in body weight was mainly attributable to an increase in fat-free mass.

**53 Burden of Illness for Osteoporotic Fractures Compared With Other Serious Diseases Among Postmenopausal Women in the United States**

Andrea Singer, Alex Exuzides, Leslie Spangler, Cynthia O'Malley, Chris Colby, Karissa Johnston, Irene Agodoa, Jessica Baker, and Risa Kagan


The hospitalization burden of osteoporotic fractures is greater than that of myocardial infarction, stroke, and breast cancer.

**63 Increased Risk of Osteoporosis in Patients With Depression: A Population-Based Retrospective Cohort Study**

Cynthia Wei-Sheng Lee, Chun-Hui Liao, Cheng-Li Lin, Ji-An Liang, Fung-Chang Sung, and Chia-Hung Kao

Compared with patients without depression, men and women with depression had a greater chance of developing osteoporosis.

**Brief Report****71 Attitudes, Beliefs, and Practices Regarding Electronic Nicotine Delivery Systems in Patients Scheduled for Elective Surgery**

Sandeep Kadimpati, Margaret Nolan, and David O. Warner 

**Special Article****77 The Childhood Obesity Epidemic as a Result of Nongenetic Evolution: The Maternal Resources Hypothesis**

Edward Archer 

**Reviews****93 Clinical Applications of Biomedical Microdevices for Controlled Drug Delivery**

Pablo Gurman, Oscar R. Miranda, Kevin Clayton, Yitzhak Rosen, and Noel M. Elman

**109 Non—anti-infective Effects of Antimicrobials and Their Clinical Applications: A Review**


Sapna P. Sadarangani, Lynn L. Estes, and James M. Steckelberg 

**Concise Review for Clinicians—CME Credit Offered****128 Counseling Patients on the Use of Electronic Cigarettes**


Jon O. Ebbert, Amenah A. Agunwamba, and Lila J. Rutten 

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

- 135**    **46-Year-Old Man With Abdominal Pain and Hypotension**  
*Oral A. Waldo, David F. Snipelisky, and Nancy L. Dawson*
- e1**     **60-Year-Old Man With Chronic Diarrhea and Peptic Ulcer Disease**  
*Daniel K. Chan, Douglas A. Simonetto, and Stephen C. Hauser* 

## Symposium on Pain Medicine—CME Credit Offered

- 139**    **The Epidemiology and Economic Consequences of Pain**  
*Nicholas Henschke, Steven J. Kamper, and Chris G. Maher* 
- The cumulative burden of chronic pain, including the cost to patients, those who care for them, the health care system, and the economy, is enormous.

## Symposium on Regenerative Medicine—CME Credit Offered

- 148**    **Regenerative Medicine and Nasal Surgery**  
*Ayushman Sharma, Jeffrey R. Janus, and Grant S. Hamilton*

## Letters to the Editor

- 159**    **Cardiovascular Disease Mortality and Excessive Exercise in Heart Attack Survivors**  
*Rupert K. Hung, David I. Feldman, and Michael J. Blaha*
- 159**    **In reply—Cardiovascular Disease Mortality and Excessive Exercise in Heart Attack Survivors**  
*Paul T. Williams and Paul D. Thompson*
- 160**    **Ethanol Should Be Subjected to a Randomized Controlled Trial**  
*David L. Keller*
- 161**    **In reply—Ethanol Should Be Subjected to a Randomized Controlled Trial**  
*Chao Huang and Qi-Qiang He*
- 161**    **US Ebola Case: An Example of the Misuse of Antibiotics and a Reminder for Better Stewardship**  
*Emil P. Lesho*

## Medical Images

- 162**    **Top of the Basilar Syndrome With Disturbed Consciousness**  
*Tsuneaki Kenzaka and Tsubasa Onishi*

## Art at Mayo Clinic

---

- e7** Weather Vanes  
Margaret R. Wentz 

## Other Features

---

- 161** Correction  
**29A** Professional Opportunities





## Coming Soon...

---

- |  |  |
|--|--|
| Testosterone Therapy and Cardiovascular Risk                           | Update on Hypertension                                   |
| Geomagnetic Activity and Implantable Cardioverter Defibrillator Shocks | Failure to Recognize and Treat Severe Sepsis             |
| Review: Transient Global Amnesia                                       | Television Watching, Car Riding, and Depressive Symptoms |

## 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.

