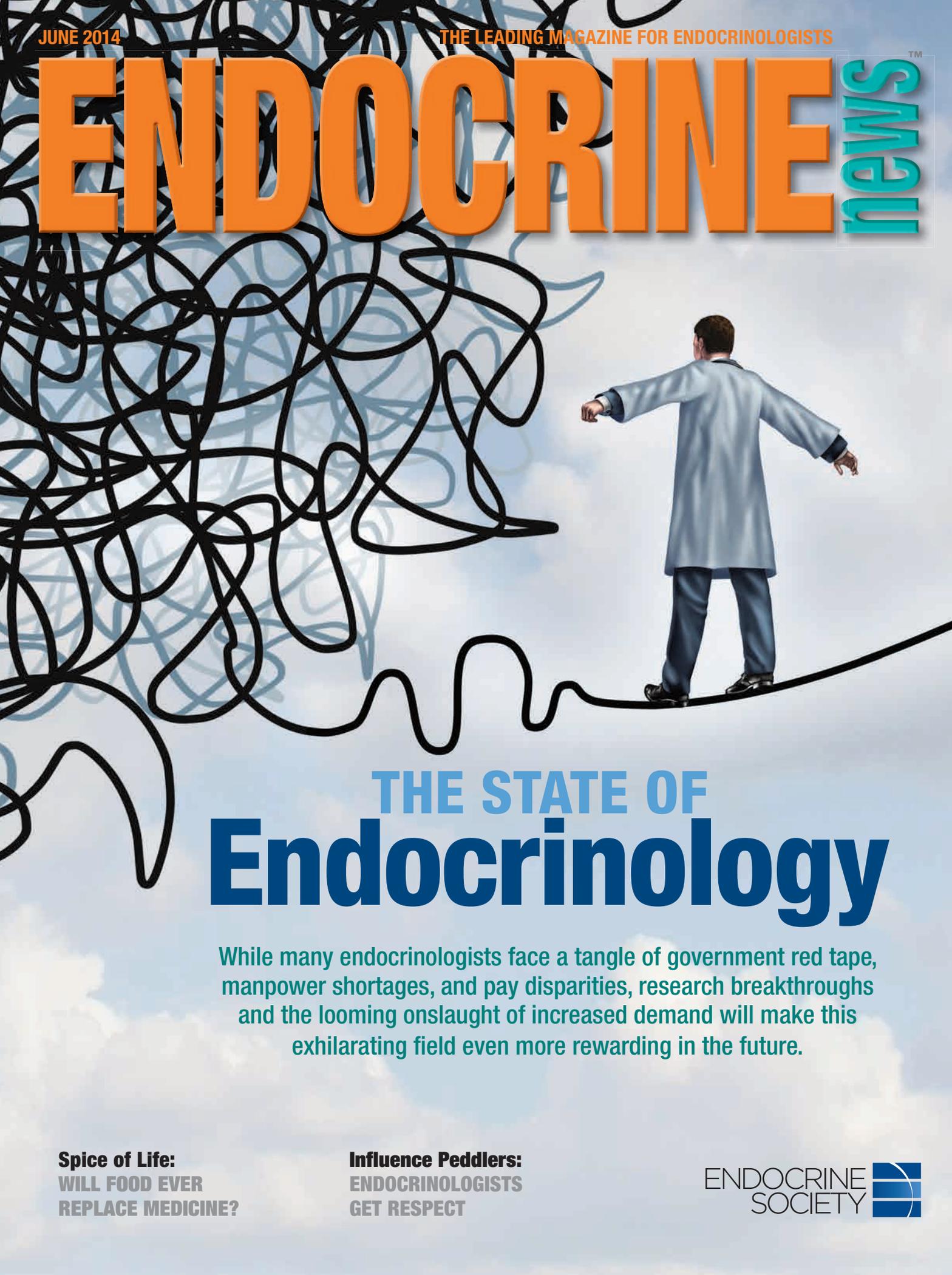


JUNE 2014

THE LEADING MAGAZINE FOR ENDOCRINOLOGISTS

ENDOCRINE news™



THE STATE OF **Endocrinology**

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*In order to receive continuing pharmacy education credit for this activity, all pharmacists must complete the required program elements and course evaluation form and enter their month/day of birth and NABP-ePID number on the evaluation form.



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Wrapping Up A Year Full of Milestones



Teresa K. Woodruff, PhD

One of the greatest privileges of my professional career has been serving as President of the Endocrine Society. As my term nears its end, I have the pleasure of looking back on a year of tremendous achievements, brought about through the support and tireless efforts of our members, volunteers, officers, Council, and staff.

Throughout the year, I spoke about my goals as president and my vision to make the Society more **visible** to the public and

policy makers, aid our members by providing **valuable** programs and resources and to make our field more **viable**, enabling our collective work to help the largest number of people. I am very pleased to say that we have met those objectives and continue moving forward with these goals in mind.

As a consequence of these goals, and in response to the environment, I have guided our Society through three major transitions this year – a new look, new leadership, and new location.

New Look

During the past year, the Society embarked on a branding initiative as we identified the need for an enhanced and cohesive Society brand. This exercise culminated with a new logo and tagline that were launched in January 2014. The goal was for the Society to tell its story in a meaningful, fresh, and cohesive way, making us more visible in an increasingly crowded professional world. Our logo is simple, modern, and vibrant and the new tagline, *'hormone science to health'* embraces the breadth of our Society's work in a simple and elegant statement of our mission. Our process was inclusive, involving input from Society members and staff, resulting in a new brand platform that creates momentum for our collective future.

New Leadership

In January 2014, our new Executive Director and CEO, Barbara Byrd Keenan, joined the Society. As you all know, Scott Hunt, the Society's Executive Director and CEO, retired at the end of 2013, after leading the Society for 25 years. With Barbara's leadership and energy, the Society will continue to lead the world of endocrinology ensuring that member value is always at the forefront of our work.

New Location

In February 2014, the Society headquarters moved from Chevy Chase, Maryland to downtown Washington, D.C. The move to the new location enables our Society to continue to be a vibrant leader, and allows us to better pursue our mission. Our membership is growing; our contributions to the scientific and policy conversations are significant. There is no better place to advance the Society's comprehensive advocacy agenda than Washington, D.C. This new physical space ensures we are viable into the future and was a bold move for a Society that is itself on the move!

In addition to these changes, we've created tremendous member value through program enhancements, which I'll briefly summarize now:

Advocacy and Outreach

Our Society continues to expand its efforts and increase its visibility and effectiveness in advocacy. We launched on-line grassroots advocacy campaigns and hosted Researcher and Clinician Hill Days focused on biomedical research funding and diabetes and obesity prevention legislation in addition to physician payment issues. I am very grateful to members who participated by writing to their congressional representatives or advocating in person on Capitol Hill. We've also been active abroad with

Endocrine Society members working in the EU on a comprehensive endocrine-disrupting compound policy. These efforts have increased the visibility of endocrinology as a field and made the case for endocrinologists as leaders in improving global health.

The Society's media outreach in 2013 garnered record-breaking coverage. Specifically, coverage of **ENDO 2013** was the highest ever with more than 2,490 independent news stories surpassing last year's record 2,232 stories; coverage of journal/research-related news resulted in more than 4,000 separate news stories; and coverage of the Society (overall) has once again surpassed previous years with 4,386 news stories. Earlier this year, we held the Science Writers Conference in New York. This is an exciting event just for reporters to communicate the frontier of endocrine research, clear up misconceptions about hormones and the endocrine system, and educate science and health writers on the fundamentals of endocrinology. Twenty reporters

"My vision was to make the Society more **VISIBLE** to the public and policy makers, aid our members by providing **VALUABLE** programs and resources and to make our field more **VIALE**, enabling our collective work to help the largest number of people."

attended this year's event representing outlets such as *The New York Times*, *Shape Magazine*, *Medscape*, *Med-Page Today*, and *Everyday Health*. The presentations were excellent and I was impressed by the reporters who asked insightful questions and as a consequence wrote good stories about hormone health. The press helps tell our story; ensuring that they understand our field and know the thought leaders in endocrine health is an important part of the Society's work.

Educational Programs and Trainee Activities

I would like to thank the Annual Meeting Steering Committee (AMSC), including the eight members of the Program Organizing Committee from the International Society of Endocrinology, for planning an exciting program for **ICE/ENDO 2014**. Under the excellent leadership of the AMSC chairs Derek Leroith, Kevin Grove, Matthew Ringel, and Carol Wysham, AMSC has created a scientific program that showcases the most cutting edge research and clinical practice and features international perspectives on the practice of endocrinology. The strength of the program resulted in our highest abstract submission numbers ever, ensuring that this meeting will provide the most cutting edge work in our field.

The Society's international outreach continues to grow. The second year of the Ambassador Exchange Program began this spring with U.S. participants visiting centers in Moscow, Russia and Addis Ababa in Ethiopia. The international participants will be visiting centers in Denver and Chicago in June, finalizing their visit by attending the **ICE/ENDO** meeting.

The Highlights of Endo programs, which are organized in conjunction with local endocrine organizations, were held in Russia, China, and Mexico in 2013 and South Korea, Brazil, and Argentina in 2014. Other very successful international collaborations include the Endo-Bridge program in Turkey, and the 1st International Clinical Update in Endocrinology in Hyderabad, India, which was a group effort with the Endocrine Society of India, International Society of Endocrinology, and Society for Endocrinology.

The Society's portfolio of educational products continues to grow with new modules for Maintenance of Certification and the ESAP In-Training Exam, which continue to set new attendance records each year. The Clinical Endocrinology Update (CEU) and the Board Review had record-breaking attendance in the past two years. Additionally, new regional programs were developed this year targeting endocrinologists and primary care physicians. Six programs were presented in six cities throughout the U.S.

Trainee activities are particularly important; they ensure the vitality of our discipline for the future and here we were very successful. In 2013 the Trainee and Career Development Committee launched the EndoCareers brand, integrating all trainee and early career programming under this umbrella. These highly successful

programs include the Early Career Forum and Career Development Workshops at **ENDO**, Early Investigators Workshop, Future Leaders Advancing Research in Endocrinology, the International Scholars Program, and the Minority Access Program, as well as multiple awards to meet the needs of both basic and clinical trainees and early career professionals at different stages of their training.

Publications

Along with the many changes the Endocrine Society has gone through recently, the Society's publications department has begun a massive retooling of its online presence. The Society has migrated its journals to a comprehensive e-Publishing platform specifically created for professional and scholarly publishers. The new platform allows easy access to content across all of the Society's journals and e-books, and more seamlessly to the Society's other web properties. Many more features will be available in the coming months.

Hormone Health Network

The Hormone Health Network held several new and unique events last year at **ENDO**: two Network-sponsored sessions featuring an expert in patient engagement and self-management support; several presentations for type 2 diabetes patients on lifestyle interventions such as nutrition and exercise, stress management, and patient-provider communication.

HHN's redesigned website has improved navigation for the Network's more than 100 patient resources, now allowing the content to be search-engine optimized to significantly increase traffic to the site.

A refreshed Menopause Map has been launched that improves the interactive experience for users of this tool. More patient and provider resources are on their way.

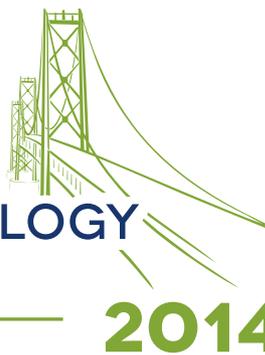
Visible, valuable, viable – words that have helped us achieve a great deal together.

I would like to recognize the outstanding leaders that I have had the honor to work with this past year, especially Immediate Past President Bill Young and Secretary-Treasurer Ken Hupart, as well as President-Elect Richard Santen, our officers and Council, and my colleagues serving on committees. Finally, I want to recognize the outstanding support from our entire staff. It has been a pleasure and a privilege to serve as your President and I look forward to helping our Society in other ways in the future. **EN**



Teresa K. Woodruff, PhD
President,
Endocrine Society

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JUNE 2014

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Endocrine News informs and engages the global endocrine community by delivering timely, accurate, and trusted content covering the practice, research, and profession of endocrinology.

The mission of the *Endocrine Society* is to advance excellence in endocrinology and promote its essential and integrative role in scientific discovery, medical practice, and human health.

President: **Teresa K. Woodruff, PhD**
tkw@northwestern.edu

President-Elect: **Richard J. Santen, MD**
rjs5y@virginia.edu

Past President: **William F. Young Jr., MD**
young.william@mayo.edu

Secretary-Treasurer: **Kenneth H. Hupart, MD**
hupart@numc.edu

Executive Director & CEO: **Barabara Byrd Keenan**
bbkeenan@endocrine.org

Senior Director of Publications: **Nancy Rodnan**
nrodnan@endocrine.org

Director of Publications: **Douglas Byrnes**
dbyrnes@endocrine.org

Managing Editor: **Mark A. Newman**
mnewman@endocrine.org

Production Manager/Art Director: **Cynthia Richardson**
crichardson@endocrine.org

Associate Editor: **Derek Bagley**
dbagley@endocrine.org

Prepress & Printing: **Cenveo Publishing Services**
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This will be the last June issue that heralds the Endocrine Society's annual conference because beginning in 2015, **ENDO** will start taking place in March. And if next winter is anything like this past winter, we'll ALL be ready to head to San Diego for a few days. However, **ICE/ENDO 2014** will be held at McCormick Place in Chicago June 21 – 24 and is on track to be one of the biggest annual conferences yet. So far there have been more than 3,100 abstracts submitted, a 14% jump from last year. Since this year's meeting is a joint conference of both the Endocrine Society and the International Society of Endocrinology, over 10,000 scientists and clinicians from around the world are expected to attend.

We also thought this issue would be the ideal place to take a pulse of the industry in this month's cover story, "The State of Endocrinology" (p. 16), by Melissa Mapes. This is by no means an in-depth analysis of where the industry is, but more of a snapshot of where it is perceived to be by some of the leaders in the field, including a couple of the Endocrine Society's past presidents. Despite the pay disparities and the manpower shortage, there is no shortage of passion that endocrinologists have for their chosen specialty.

A nice companion piece to the cover story confirms what everyone holding this issue of *Endocrine News* already knows: Endocrinologists wield an amazing amount of influence on their colleagues in various disciplines. In "Most Valuable Players" (p. 26), Eric Seaborg discovered that endocrinologists "are a highly trusted source of information about diabetes products that are new to primary care physicians. In most cases, endocrinologists are comparable to articles in peer-reviewed journals and lectures in terms of trust, accuracy, balance, and value." However, as trusted as endocrinologists are, fellow physicians are frustrated by a lack of accessibility. This, in turn, is related to the ongoing manpower shortage, which we plan to address in a future *Endocrine News*.

We also broach the subject of "food as medicine" in a very well researched article by Glenda Fauntleroy called "Food Fight" (p. 30). Despite the amount of research and the proven benefits of certain foods and spices, it appears that we're not to a point just yet where food can completely replace prescribed medicine. Nora Saul, manager of Nutrition Services at the Joslin Diabetes Center in Boston, says in the article that while food and exercise are a large component of treating patients with diabetes, it is a triad with medication as the third major component.

No doubt I will meet many of you in the throngs of attendees in the Windy City. However, if I don't run into you at **ICE/ENDO 2014**, drop me a line at mnewman@endocrine.org. **EN**



Mark A. Newman

Mark A. Newman
Managing Editor, Endocrine News

By Derek Bagley



LINK BETWEEN OSA AND OSTEOPOROSIS

Older individuals and women diagnosed with obstructive sleep apnea (OSA) may be at a higher risk for osteoporosis, according to a study recently published in the *Journal of Clinical Endocrinology & Metabolism*.

OSA is associated with metabolic, endocrine, and cardiovascular diseases because it causes ongoing sleep disruptions and periodically deprives the body of oxygen. The researchers, led by Kai-Jen Tien, MD, of Chi Mei Medical Center in Tainan, Taiwan, noted that population-based studies show that 4% of men and 2% of women over 50 suffer from OSA.

Tien and team studied a retrospective cohort of 1,377 people who had been diagnosed with OSA from 2000 to 2008, using records from Taiwan's single-payer National Health Insurance program. They then compared the rate of osteoporosis diagnosis in this group to a matched cohort of 20,655 without OSA. "All patients were tracked until an osteoporosis diagnosis, death, or the end of

2011," the authors wrote.

The scientists wrote that they wanted to investigate the "possible association between OSA and osteoporosis." What they found was a clear link. During the six-year follow-up period, "the incidence rates of osteoporosis in the OSA cohort and comparison group were 2.52 and 1.00 per 1,000 person-years, respectively. Patients with OSA were found to be at 2.74 times the risk of osteoporosis than patients without OSA (95% CI = 1.69 – 4.44, $p < 0.05$) after adjustment for age, gender, diabetes, hypertension, coronary artery disease, obesity, stroke, hyperlipidemia, chronic kidney disease, gout, monthly income, and geographical location."

"As more and more people are diagnosed with obstructive sleep apnea worldwide, both patients and health-care providers need to be aware of the heightened risk of developing other conditions," Tien said. "We need to pay more attention to the relationship between sleep apnea and bone health, so we can identify strategies to prevent osteoporosis."

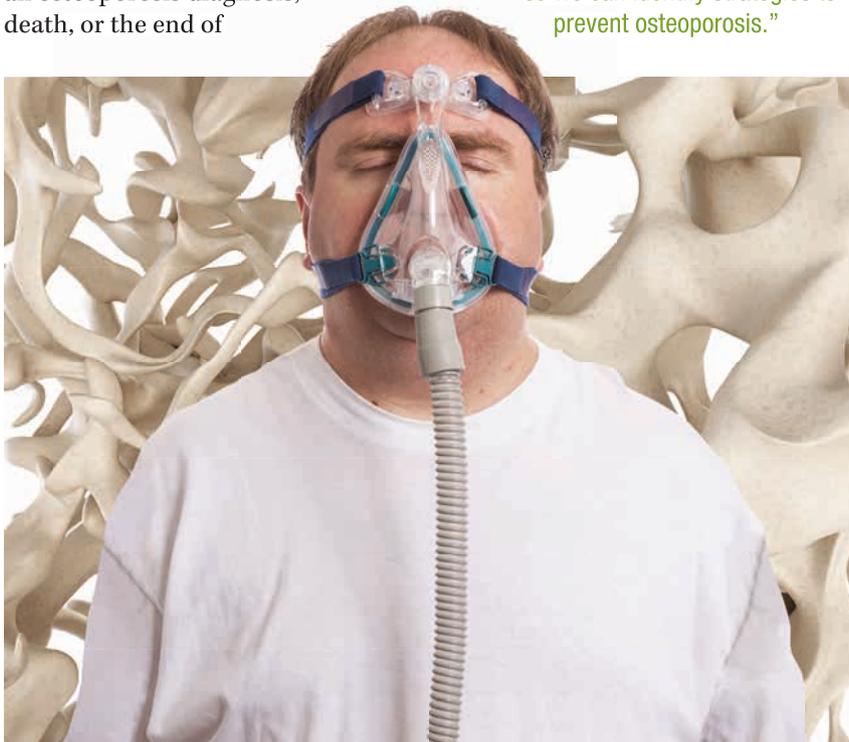
VITAMIN D MAY RAISE CANCER SURVIVAL RATES

Cancer patients with higher circulating 25(OH)D (vitamin D) levels at or near the time of their diagnosis have been shown to have better survival rates and remain in remission longer than their vitamin D-deficient counterparts, a study recently published in the *Journal of Clinical Endocrinology & Metabolism* showed.

According to the researchers, led by Hui Wang, MD, PhD, of the Institute for Nutritional Sciences at the Shanghai Institutes for Biological Sciences of the Chinese Academy of Sciences, vitamin D insufficiency is "prevalent all over the world," and epidemiologic studies "suggest that vitamin D deficiency leads to an increased risk of colorectal, breast, lung, pancreatic, bladder, kidney, ovarian, and thyroid cancers."

The scientists performed a meta-analysis of 25 studies comprising 17,332 cases, measuring vitamin D levels in cancer patients at the time of diagnosis and tracking survival rates. They found that "a 10 nmol/L increment in circulating 25(OH)D levels conferred an HR of 0.96 (95% CI = 0.95 – 0.97) for overall survival of the cancer patients," with the strongest link between vitamin D levels and survival in breast cancer, lymphoma, and colorectal cancer.

"Our analysis demonstrated that vitamin D levels are linked to better outcomes in several types of cancer," Wang said. "The results suggest vitamin D may influence the prognosis for people with breast cancer, colorectal cancer, and lymphoma, in particular. Considering that vitamin D deficiency is a widespread issue all over the world, it is important to ensure that everyone has sufficient levels of this important nutrient. Physicians need to pay close attention to vitamin D levels in people who have been diagnosed with cancer."



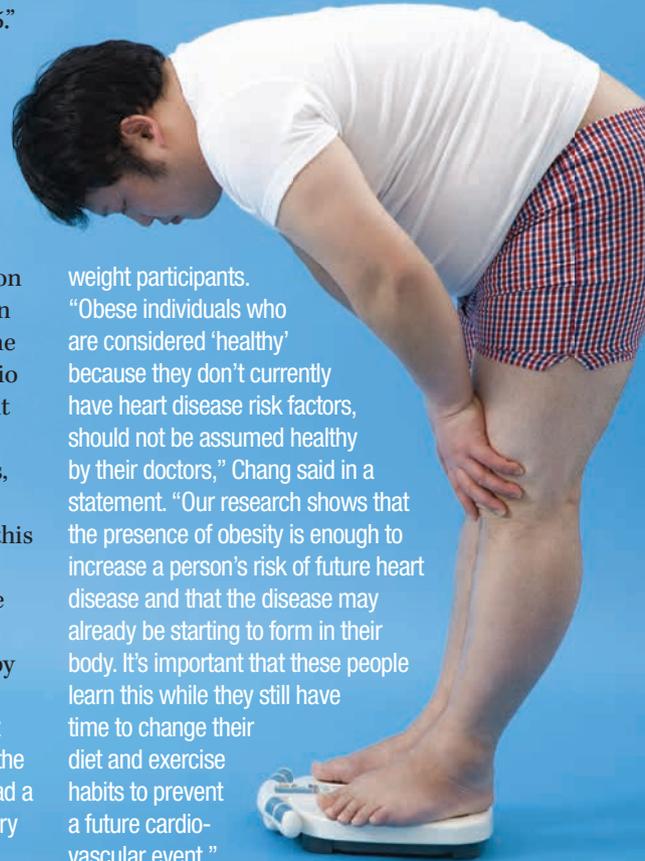
MHO INDIVIDUALS AT HIGHER RISK OF HEART DISEASE

A lot has been made recently of the phenomenon of metabolically healthy obese (MHO) people, but according to research recently published in the *Journal of the American College of Cardiology*, MHO individuals have a higher prevalence of early plaque buildup in their arteries than their normal-weight counterparts.

Yoosoo Chang, MD, of Kangbuk Samsung Hospital Total Healthcare Center, Center for Cohort Studies in Seoul, Korea, and colleagues set out to compare coronary artery calcium (CAC) scores of MHO and metabolically healthy normal-weight participants. They used a cross-sectional study to look at 14,828 metabolically healthy Korean adults ages 23 to 77 with no known cardiovascular disease and who underwent a checkup exam that included an estimation of CAC scores. The authors wrote, “Being metabolic healthy was defined as not having any metabolic syndrome component and having a homeostasis model assessment of

insulin resistance (HOMA-IR) <2.5.” The researchers also determined obesity or normal weight using a “standard Asian BMI index scale,” meaning obesity was defined as a BMI of 25.

The CAC scores showed that MHO individuals had a higher prevalence of coronary calcification than those with normal weight. “In multivariable adjusted models,” the authors wrote, “the CAC score ratio comparing MHO to normal weight participants was 2.26 (95% CI = 1.48 – 3.43). In mediation analyses, further adjustment for metabolic risk factors markedly attenuated this association, which was no longer statistically significant (CAC score ratio 1.24, 95% CI = 0.79 – 1.96). These associations did not differ by clinically relevant subgroups.” The scientists went on to conclude that MHO “is not a harmless condition,” as the study showed that MHO participants had a higher prevalence of subclinical coronary atherosclerosis compared to normal-



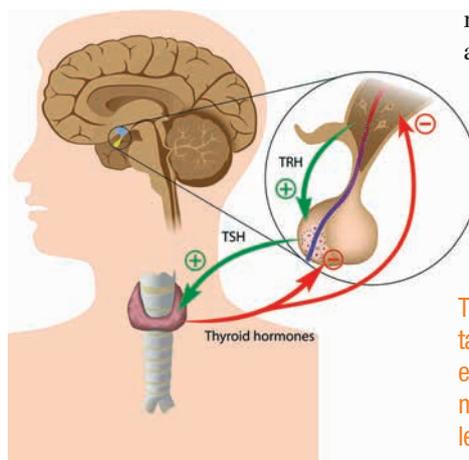
weight participants. “Obese individuals who are considered ‘healthy’ because they don’t currently have heart disease risk factors, should not be assumed healthy by their doctors,” Chang said in a statement. “Our research shows that the presence of obesity is enough to increase a person’s risk of future heart disease and that the disease may already be starting to form in their body. It’s important that these people learn this while they still have time to change their diet and exercise habits to prevent a future cardiovascular event.”

HYPOTHALAMIC *miRNAs* AND METABOLIC DISTRESS

Researchers in Spain have identified several sets of *microRNAs* (*miRNAs*) whose expressions are thought to have a direct impact on metabolic conditions, according to research recently published in *Endocrinology*.

Susana Sangiao-Alvarellos, PhD, of the University of A Coruna, and her team wrote that it is now clear that obesity is a “multifaceted condition in which genetic load, developmental programming, and environmental factors are major contributing factors,” rather than the old idea that obesity was triggered by “isolated metabolic insults” or simply eating too much.

The scientists went on to point out that *miRNAs* “have been recognized as key regulators in different biological processes, including insulin sensitivity and glucose metabolism.” However, the roles of *miRNA* pathways have been mostly relegated to “peripheral tissues” and “deregulation of *miRNA*



expression in the hypothalamus in conditions of metabolic distress remains so far unexplored.”

The researchers set out to explore just that, using high-throughput screening to define to what extent the hypothalamic profiles of *miRNA* expression are perturbed in two extreme conditions of nutritional stress in male rats,

namely chronic caloric restriction (CR) and HFD-induced obesity. The team found that their analyses “allowed the identification of sets of *miRNAs*, including let-7a, mir-9, mir-30e, mir-132, mir-145, mir-200a, and mir-218, whose expression patterns in the hypothalamus were jointly altered by CR and/or HFD.”

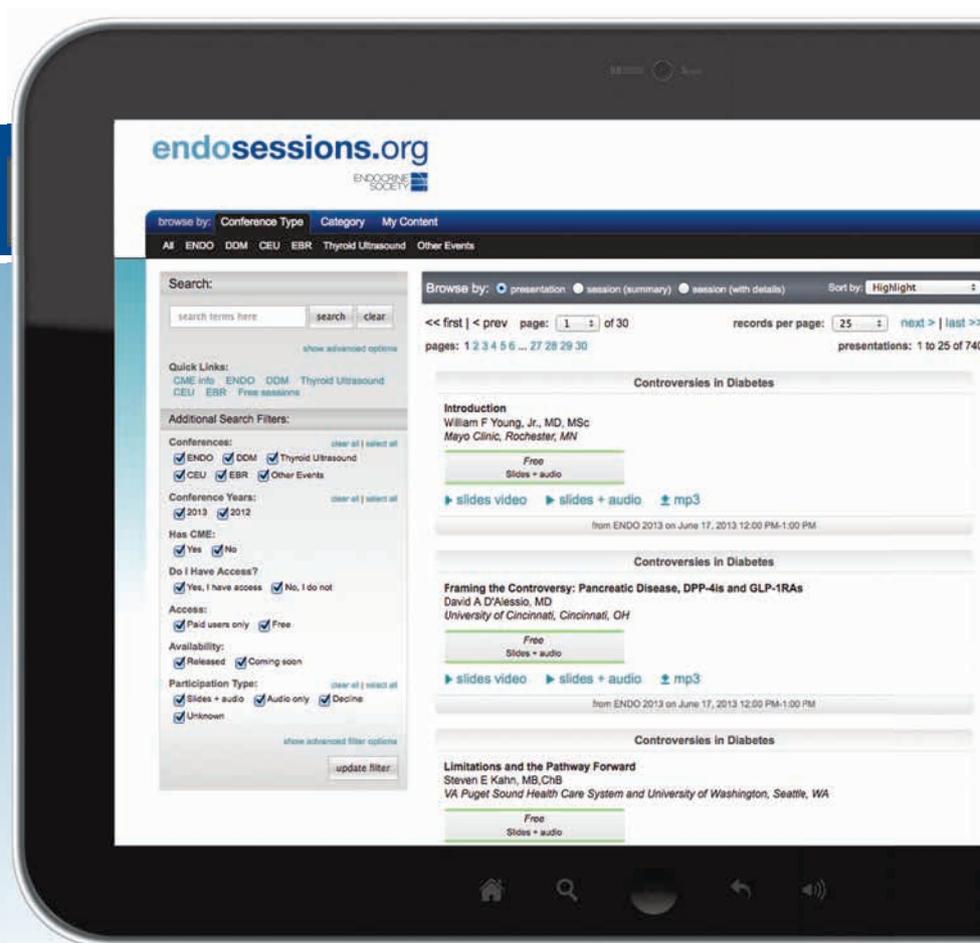
The authors concluded, “The predicted targets of these *miRNAs* include several elements of key inflammatory and metabolic pathways, including insulin and leptin.” They also determined that their study is the first to disclose the impact of nutritional challenges on the hypothalamic *miRNA* expression profiles. “These data will help to characterize the molecular *miRNA* signature of the hypothalamus in extreme metabolic conditions,” they wrote, “and pave the way for targeted mechanistic analyses on the involvement of deregulated central *miRNAs* pathways in the pathogenesis of obesity and related disorders.”

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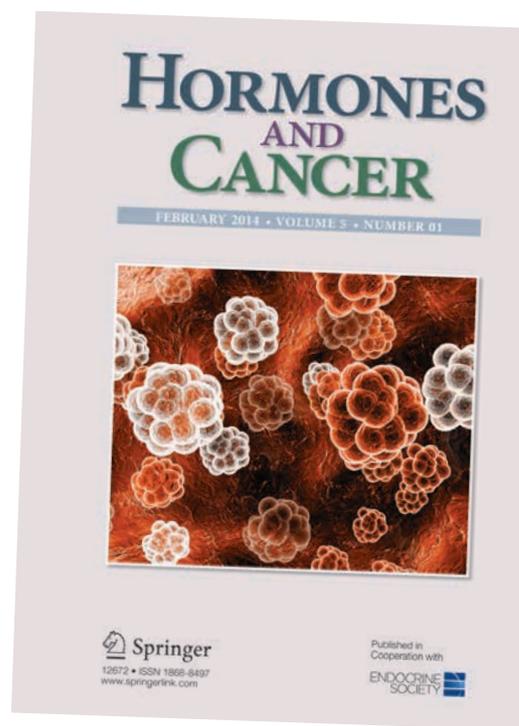
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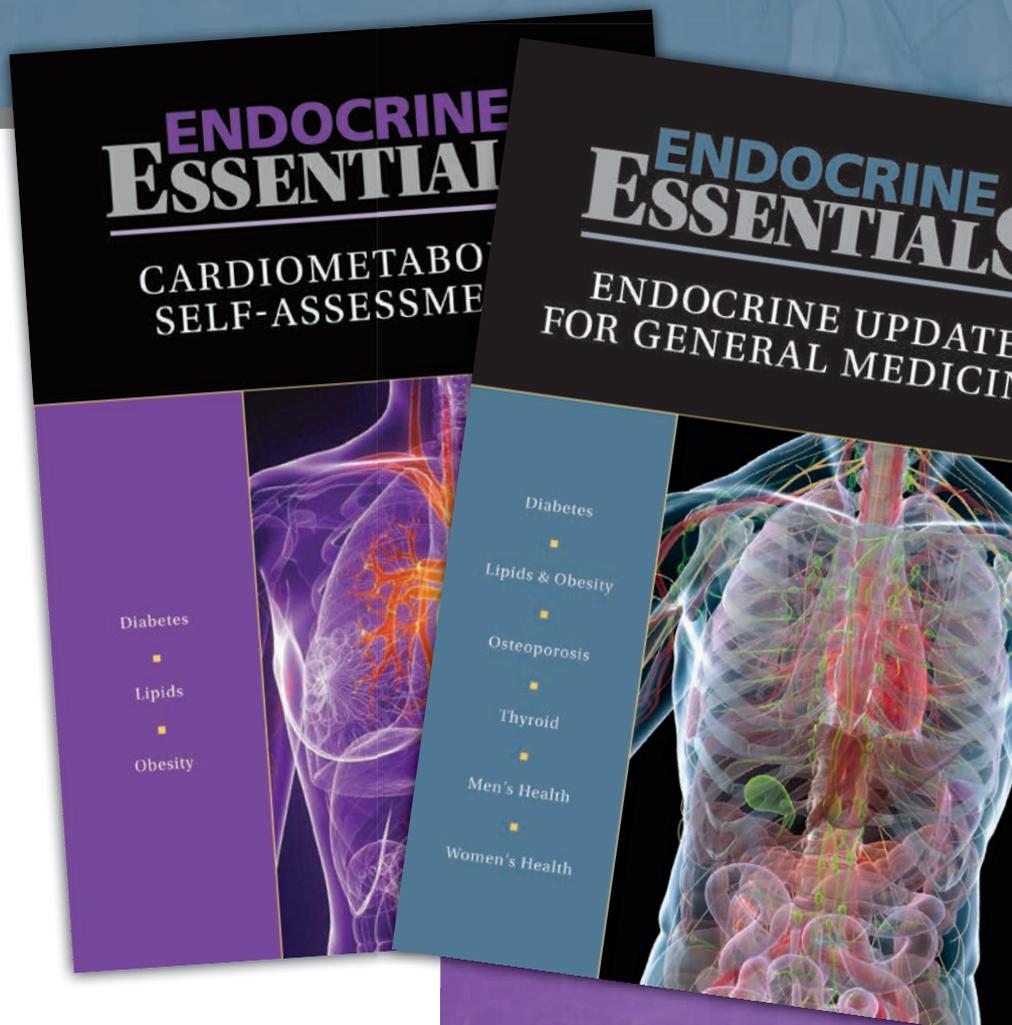
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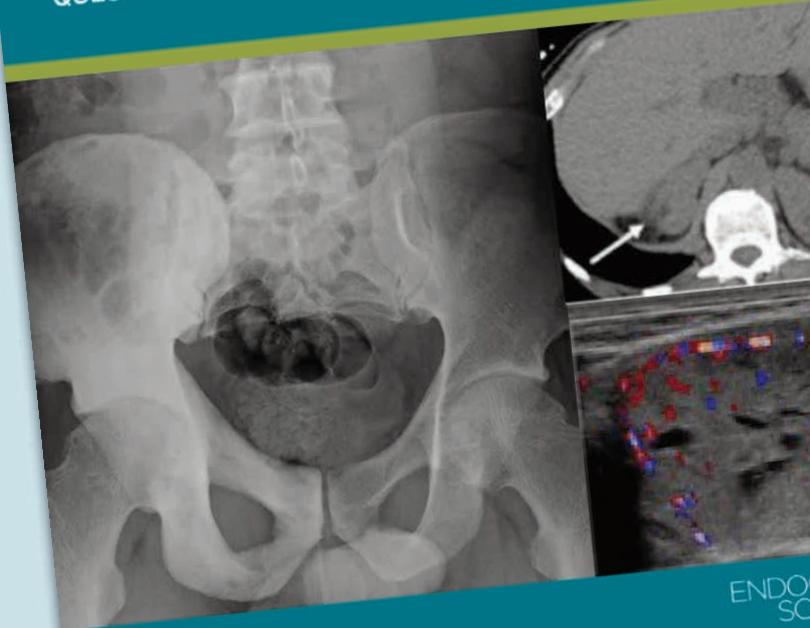
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THE STATE OF Endocrinology

While many endocrinologists face the challenges of government red tape and often less-than-desirable pay scales, research breakthroughs and their impact on costs and patient outcomes make endocrinology a rewarding field.

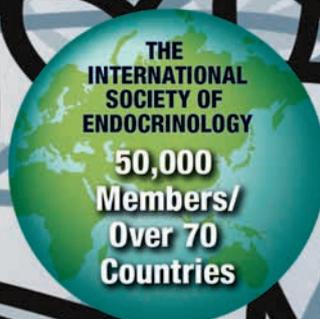
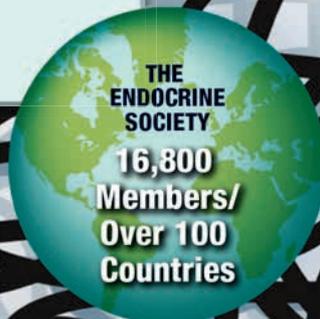
By **Melissa Mapes**

It is the best of times for endocrinology; it is the worst of times for endocrinology. The pace of discovery is accelerating at an unprecedented rate, with many game-changing genetic therapies visible on the horizon. New treatments appear to be surpassed in growth only by the incidence of diabetes and the price tag of medical school. While the field continues to increase in global importance and lead the way in medical technologies, endocrinology also faces a serious workforce shortage and other challenges, making it overdue for a check-up.

William F. Crowley, MD, director of Clinical Research for the Massachusetts General Hospital, in Boston, the NICHD-funded Harvard Reproductive Endocrine Sciences Center of Excellence, and former president of the Endocrine Society, likens the current paradox to Dickens' *A Tale of Two Cities*. He sees the best of our times as the historic levels of discovery and the ability to alleviate human suffering and reduce the impact of disease and its cost, and the worst as the lowering of National Institutes of Health (NIH) pay lines, dysfunction of the government surrounding healthcare matters like research

AT-A-GLANCE

- The growth rate of diabetes has outstripped the increase in experts available to treat it but has not surpassed the innovation of endocrinologists in creating better therapies, nor their ability to affect widespread improvements in millions of lives.
- Although there are more endocrinologists in numbers, there are also more working part time.
- Some of the most exciting developments are coming from multidisciplinary endeavors, as collaborative programs are taking off.



funding, and an “entanglement of clinical investigators by Lilliputian regulations.”

“We have rare and unparalleled opportunities and tools, and suddenly a manpower shortage in this country and a regulatory proliferation that’s fettering them,” Crowley explains.

Supply & Demand

The worldwide shortage of endocrinologists has been exacerbated by exploding rates of diabetes and obesity. Currently, endocrinologists number 6,869 in the U.S., according to listings by the *U.S. News & World Report* — more than past decades, but not nearly enough to serve demand. A waiting period of three to nine months to get an appointment with a clinical endocrinologist is considered standard.

“One of the problems is that there are not enough endocrinologists in the world, or in the U.S. for sure, to take care of all these patients with diabetes,” says Robert A. Vigersky, MD, director of the Diabetes Institute at Walter Reed National Military Medical Center and another past president of the Endocrine Society. As a result, endocrinologists tend only to see the most difficult cases and must rely on physician extenders like nurse practitioners and physician’s assistants to maximize their patient capacity.

Vigersky does not expect demand to slow anytime soon. The aging population and other factors in the U.S. are pushing the incidence of three major endocrine diseases higher and higher: diabetes, osteoporosis, and obesity.

Estimates from the American Diabetes Association claim that 25.8 million Americans, or 8.3% of the population, had diabetes as of 2013. When looking at people 65 years of age or older, the rate climbs to 26.9%. These numbers are, of course, tied closely to obesity, with 34.9% of American adults

**There are
6,935 endocrinologists
in the U.S.**

—*U.S. News & World Report*

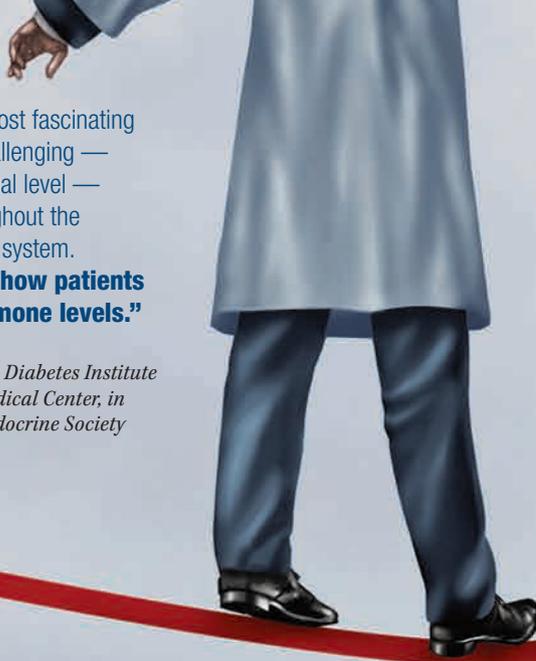
**As of 2008, there were
4,000 clinical
endocrinologists.**

—*Journal of Clinical Endocrinology & Metabolism*

"I still think endocrinology is the most fascinating specialty, and also the most challenging — on both a clinical and intellectual level — since hormones travel throughout the body and affect every organ system.

You have to really understand how patients feel and respond to these hormone levels."

— Robert A. Vigersky, MD, director of the Diabetes Institute at Walter Reed National Military Medical Center, in Washington, D.C.; past president, Endocrine Society



About 9% of endocrinologists earned above \$300,000, and 17% earned below \$100,000. — Medscape

considered obese by the U.S. Centers for Disease Control and Prevention. Another 10 million people suffer from osteoporosis in the U.S., and 18 million more are at risk for the disease, according to the American Academy of Orthopaedic Surgeons. The international incidence of all of these diseases has also grown at an alarming speed.

With such an enormous need for physicians with endocrine expertise, one might expect an influx of trainees. Unfortunately, several factors continue to impede potential endocrinologists.

"Number one is loan indebtedness," Crowley explains. "Young physicians tell me 'I have a mortgage on my career, I just don't have a house.'"

Vigersky seconded this theory. "Of all the medical specialties, we are with rheumatologists and infectious disease specialists as the lowest paid. That wouldn't be so important except for that trainees come out with just huge amounts of debt from medical school and even college. It exacerbates the discrepancy between what they owe and what the possibility of earnings are as a physician." If an endocrinologist is making \$200,000 a year and a cardiologist is making \$500,000 a year, that difference offers a powerful incentive to pick another specialty.

A 2013 survey by Medscape showed that the largest cohort of U.S. endocrinologists, 27%, make \$200,000 to \$250,000. But the second largest group, 17%, makes \$100,000 or less. The median annual income was \$178,000. The average cardiologist, on the other hand, made \$357,000, and 23% of cardiologists earned \$500,000 or more.

Meanwhile, the median U.S. medical student pays about \$287,000 over the course of four years and graduates with about \$174,500 in debt, according to 2013 numbers from the Association of American Medical Colleges.

Less Money, Better Work-Life Balance

When Vigersky and Crowley first selected their specialty, these issues held less influence. "In my era, there was very little awareness of the differential in pay, except that you kind of knew that the surgeons made more money than the internists," Vigersky explains. This allowed them to choose their professions without the same financial implications that prospective trainees face today.

The disparity is driven by the procedure-based payment system in the U.S. Rather than a salary or outcome-driven structure, the physicians who conduct the most procedures bring in the highest income. American medical students are thus leaning toward the highly procedural specialties that will allow them to pay off educational debt.

"As a result, there has been a huge shift of young researchers from America to trainees who come to the U.S. from overseas. The best and brightest come without any loans because everyone has nationalized their medical education around the world, except us," says Crowley.

Joanna Spencer-Segal, MD, PhD, fellow in metabolism, endocrinology and diabetes at the University of Michigan, in Ann Arbor, took an academic route to choosing endocrinology, but although she intends to focus the majority of her time on research, she feels strongly that the physician payment system needs reform.

Physicians Overall



Endocrinologists



Overall, male physicians earn about 30% more than their female counterparts. However, that gap is only 6% in endocrinology. — Medscape

2012
MEDIAN ANNUAL INCOME
\$178,000

In 2012, endocrinologists earned a median annual income of \$178,000. — Medscape

“More recognition of the importance of endocrine care is going to be really crucial,” she says. The current structure does not incentivize the creation of more endocrinologist positions, despite the large demand for care.

Vigersky claims, “We have a lot of people applying to be endocrinologists, but we do not have enough training slots to train them all.”

Another part of the endocrinologist shortage stems from a greater focus on work-life balance. Although there are more endocrinologists in numbers, there are also more working part time. “The number of full-time equivalents has decreased even though bodies are increasing,” says Vigersky.

Crowley describes this trend as one of the biggest shifts he has ever witnessed. “There is always a push and a pull to every career,” he says. Part of the reason many students choose endocrinology is for the more orderly lifestyle, with hours that do not bleed late into the evenings and weekends as often as some other specialties might.

However, even if all part-time clinicians were to take on a full-time load of patients, it would not be possible to see every patient with endocrine-related diseases.

“This raises a lot of interesting points about what an endocrinologist can and can’t do,” Vigersky says. “One of the things that they can’t do is take care of all the patients with diabetes. But, what they can do is try to educate primary care providers and also use physician extenders.”

Research and Technology

To help extend endocrine expertise further, Vigersky has been working on decision support technology that integrates with electronic health records (EHR). These systems aim to assist primary care providers in delivering better and more aggressive care, specifically to patients with diabetes. Physicians input data on the patient such as their blood glucose levels, their A1Cs, their current medications, other factors such as comorbidities, and then the program makes recommendations.

Such advances are bringing improved outcomes to patients with endocrine diseases and disorders, despite workforce shortages. Endocrinologists tend to lead the way for new medical technologies, and few have benefitted more than patients with diabetes.

“In the past, we had only a couple of medications, and now we have a dozen or more classes that can be used in various combinations to treat our patients,” Vigersky says.

Continuous glucose monitors and artificial pancreas systems have also improved considerably. Some artificial pancreases are in the final stages of clinical trials and should arrive on the market in a few short years.

“[T]here has been a huge shift of young researchers from America to trainees who come to the U.S. from overseas.

The best and brightest come without any loans because everyone has nationalized their medical education around the world, except us.”

— William F. Crowley, MD,
director, Clinical Research,
Massachusetts General
Hospital; past president,
Endocrine Society



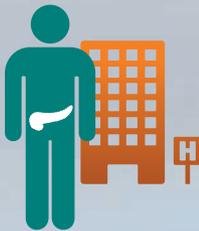
The annual cost of diabetes in the U.S. is estimated at \$245 million.

— American Diabetes Association



Patients may have to wait up to nine months to see an endocrinologist.

— *Journal of Clinical Endocrinology & Metabolism*



Each year, about 210,000 people in the U.S. are admitted to hospitals with acute pancreatitis.

— *Brigham and Women's Hospital*

As a reproductive endocrinologist, Crowley and his colleagues have directly contributed to a number of landmark discoveries, especially pertaining to precocious puberty. But, he has never been more excited about the prospects of new gene therapies.

“When I was president of the Endocrine Society in 2001, I chose as the theme of my year ‘the impact of the human genome on the practice of endocrinology.’ Now, a decade in, that’s becoming a part of our daily life,” he explains. “I think we are in an explosive phase of gene discovery, followed in five to 10 years by an explosion of therapies for complicated diseases.”

The ailments filling hospital beds — hypertension, diabetes, stroke, dementia, inflammatory bowel disease (IBD) — are all tied to complex trait genetics where it takes dozens of genes to cause a disease, but “when put together in sort of a daisy chain, concatenate to give you a complex disease trait.” Crowley expects IBD to be the first successful target of such therapies.

Yet, few discoveries arrive without encountering obstacles. He fears that the interference of excessive regulations and limited sources of research funding are stymying this important research. “It now costs us more money to regulate human research than it does to do it. Every time that you have a regulatory process exceeding in cost the production process, you have an over-regulated industry,” he says.

The NIH has relied on the same amount of funding, about \$30 billion, for several years, with no increase to account for inflation or burgeoning price of studies involving humans.

That is a frustration for incoming fellows like Spencer-Segal as well. She selected the specialty largely because of the strong research component. “Endocrinology is a really attractive specialty because it lends itself well to combining clinical care and research, partly because it is not entirely procedural. It is very intellectual,” she says.

Crowley was drawn to endocrinology for similar reasons. “From my point of view, it is like they pay me to come to work every day and play the parlor game *Clue*,” he says. “So we find Professor Plum in the library with the dagger all the time, we just have to figure out who did it, and that to me is discovering new genes. It is all one interesting intellectual problem and puzzle.”

The inquisitive nature of endocrinologists offers one possible explanation for continued publications in times of limited financial resources. Funding restrictions do not seem to be stifling the steady rise in endocrine-related research. Articles related to diabetes in PubMed increased by nearly 134% from 2002 to 2012. The number of articles containing the term “endocrine” in PubMed climbed by 46% over the same time period, with the only dip occurring in 2013. Although raw numbers of publications cannot provide comprehensive insight into the state of endocrine-related research, it does indicate sustained progress.

What’s Next for Endocrinology?

Crowley believes that better tools and other positives existent today far outweigh the challenges facing the field of endocrinology. In fact, he feels that now is a better era than ever to be an endocrinologist. “It’s a terrifically exciting time to be playing the game of *Clue*,” he says.

In order to free up more time for his research puzzles, he has decided to step down from his role as the director of Clinical Research at Massachusetts General Hospital after 17 years of service.

Crowley feels confident, though, in the next generation of endocrinology leaders. Much of his career has focused on teaching and mentoring young physician scientists, and he was the first male to win the Women in Endocrinology Mentor Award in 2001. “I recognized that the future of endocrinology relied on training women.” He has mentored approximately 85 fellows to date, 60% of whom are women.

The Federation of State Medical Boards (FSMB) took a census in 2012, which showed that



Indicators of the “HEALTH” OF ENDOCRINOLOGY

- Medscape 2013 Physician Compensation Report
<http://www.medscape.com/sites/public/physician-comp/2013>
- FSMB’s “A Census of Actively Licensed Physicians in the United States, 2012”
<http://www.fsmb.org/pdf/census.pdf>
- “A Model to Determine Workforce Needs for Endocrinologists in the United States Until 2020,” by R. A. Vigersky, et al. in *Diabetes Care*
<http://care.diabetesjournals.org/content/26/5/1545.long>
- “The Academic and Clinical Endocrinology Physician Workforce in the U.S.,” by F. Toledo and A. Stewart in *JCEM*
<http://press.endocrine.org/doi/full/10.1210/jc.2011-0516>



women now comprise over 30% of actively licensed physicians in the U.S. In medical schools, about 50% of students are female. This demographic shift is occurring across medicine, but in few specialties is the change as pronounced as endocrinology. Among active listings for U.S. endocrinologists, nearly 41% are female.

In addition to a greater percentage of women, international physicians have also become more commonplace. The same FSMB report found that 22% of physicians practicing in the U.S. attended medical school outside of the U.S. and Canada.

Diversity in the field has grown in tandem with a more global approach to research. The Endocrine Society instituted an Ambassador Exchange program last year to facilitate such projects, which sends two teams of American physicians and trainees to separate foreign locales with a high demand for endocrinologists, and later brings their hosts, two teams of international physicians and trainees, back to the U.S.

“A Fabulously Interesting Time”

The exchange is just one example of many partnerships developing across the endocrine community. Spencer-Segal claims that some of the most exciting developments are coming from multidisciplinary endeavors. “The collaborative programs are the ones that are really taking off,” she says.

“The specialties are distinctive in some ways,” Spencer-Segal says, “but it is a mistake to think of them as completely separate areas of medicine.”

She sees endocrinology as particularly well positioned for emerging collaborations because of its holistic nature. “Endocrinologists have to think about the whole body of the patient rather than a specific part,” she explains.

This fact underlies perhaps the greatest difficulty and the largest reward of becoming an endocrinologist, according to Vigersky. “I still think endocrinology is the most fascinating specialty, and also the most challenging — on both a clinical and intellectual level — since hormones travel throughout the body and affect every organ system,” he says. “You have to really understand how patients feel and respond to these hormone levels.”

No matter the advances and the obstacles that the field of endocrinology may experience, the exhilarating riddles that it offers as a profession remain. The growth rate of diabetes has outstripped the increase in experts available to treat it but has not surpassed the innovation of endocrinologists in creating better therapies, nor their ability to affect widespread improvements in millions of lives.

While reflecting upon his career and the leaps and bounds the specialty has made to reach its current state, Crowley summed up the refrain of many endocrinologists, past and present. “I have to say, it has been a fabulously interesting time.” **EN**

— Mapes is a Washington, D.C.-based freelance writer and a frequent contributor to *Endocrine News*. She wrote about how to choose the best EMR system in the May issue.



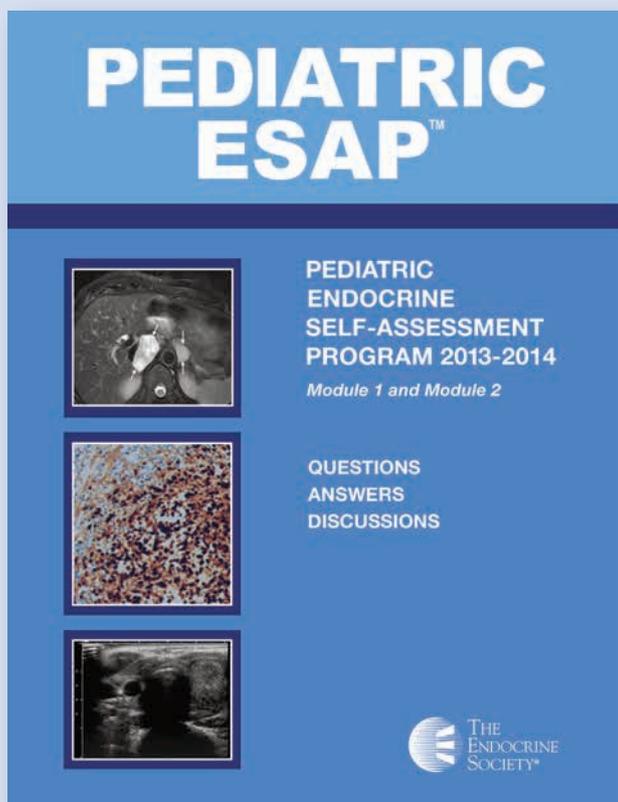
Nearly 382 million people worldwide have diabetes.
— International Diabetes Federation



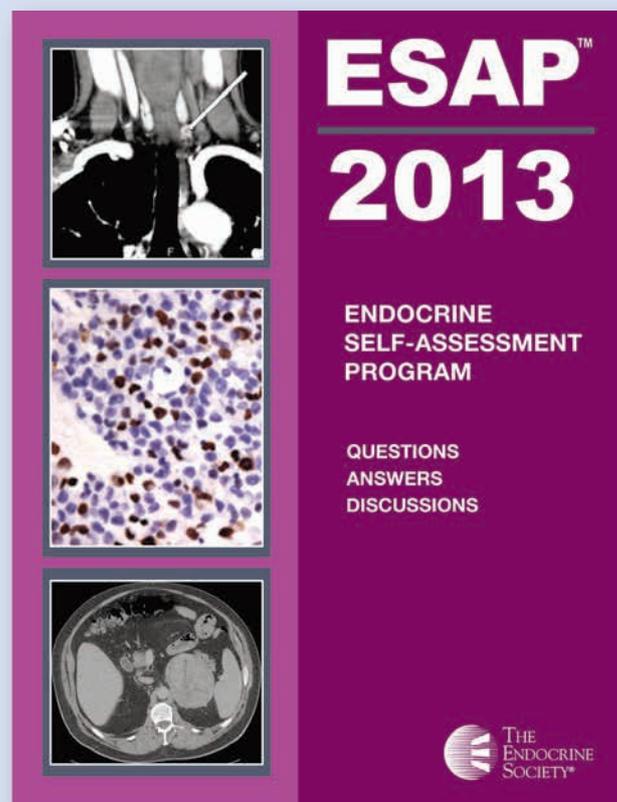
Hypothyroidism affects about 5% of Americans age 12 and over.
— Brigham and Women’s Hospital

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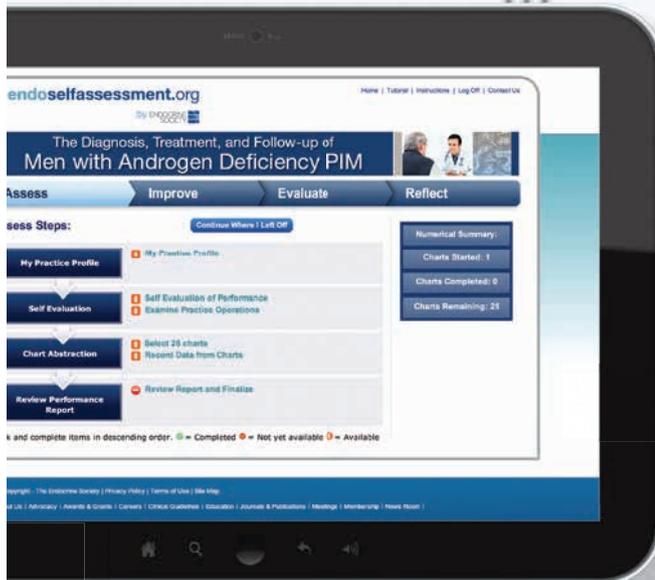
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— Andrea Coviello, MD *Boston University, Department of Medicine*

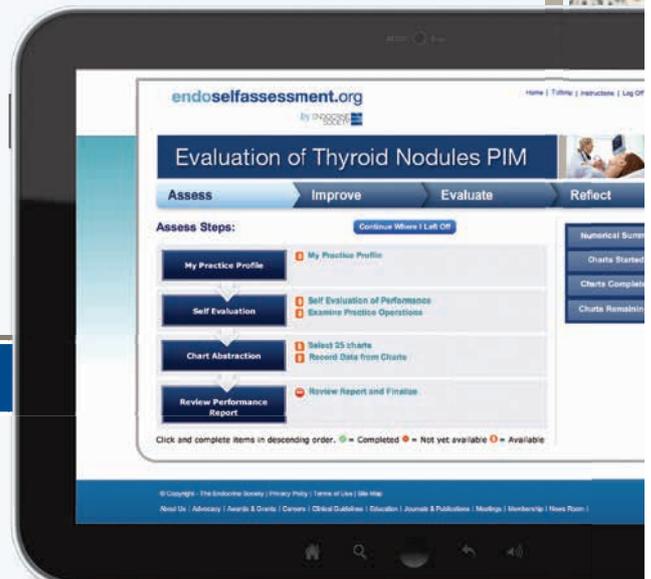
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MOST VALUABLE PLAYERS

New survey results show that endocrinologists are highly regarded by their colleagues. However, getting access to an endocrinologist can be the real challenge.

By Eric Seaborg

2

1

3

AT-A-GLANCE

- Primary care physicians rated endocrinologists as important and trusted sources of information and consultations.
- These physicians' most common needs for consults relate to diabetes and obesity, followed by thyroid.
- Although endocrinologists were rated high for the terms "accurate" and "valuable," they rated low when it came to "access."

Primary care physicians consider endocrinologists to be influential information sources and thought leaders, but rank them lower when it comes to accessibility, according to a pair of surveys commissioned by the Endocrine Society.

The two surveys were designed to gather data on the influence of endocrinologists on general practice decisions related to endocrine diseases and the adoption of new diabetes products by primary care physicians. "The results indicated that primary care physicians apply the recommendations of their endocrine consults with little to no modification," says report author Alison Kim, PhD, associate director of grant development and strategic research at the Endocrine Society. "Endocrinologists are a highly trusted source of information about diabetes products that are new to primary care physicians. In most cases, endocrinologists are comparable to articles in peer-reviewed journals and lectures in terms of trust, accuracy, balance, and value."

This finding of a very high level of trust did not surprise Robert L. Wergin, MD, president-elect of the American Academy of Family Physicians and a family physician in Milford, Neb., a town of about 2,000 residents some 30 miles from Lincoln.

The surveys found that the most common reasons primary care physicians seek endocrine consults and treatment discussions are related to diabetes and obesity cases, followed by thyroid disease. These were the conditions Wergin brought up first in an interview with *Endocrine News*, noting that "an important part of being a family doctor" is recognizing when a patient reaches a level requiring additional help and expertise.



The family physicians and internists also say that they tend to follow treatment plans as recommended by endocrinologists, with some three-quarters of them reporting that they change fewer than one in 10 treatment plans.

"There has been a lot of change in the management of diabetes. There has been such a proliferation of new types of drugs, new drugs in the same family, and new families of drugs.

Most primary care physicians are quite confused as to how to add some of the new drugs, when to start insulin, and how to best utilize these new drugs to optimize patient care."

— Lisa Fish, MD, head of the Diabetes and Endocrinology Clinic, Hennepin County Medical Center, Minneapolis

agement of diabetes," she says. "There has been such a proliferation of new types of drugs, new drugs in the same family, and new families of drugs. Most primary

Fast-Changing Treatments

care physicians are quite confused as to how to add some of the new drugs, when to start insulin, and how to best utilize these new drugs to optimize patient care."

The surveys reinforced the need for such information because the respondents reported that the second-most common category of prescriptions they write are for "diabetes and obesity," closely following those for cardiovascular conditions. The third and fourth most common categories are "women's health" and "thyroid," respectively.

Trusted Sources of Information

The surveyed physicians ranked endocrinologists among their top three most trusted sources of information on diabetes products. Endocrinologists scored above 8 on a scale of 1 to 10, similar to peer-reviewed journals and accredited lectures.

The physicians also said that endocrinologists were among their most often-used information sources about

The SURVEY Nitty Gritty

The Matalia Group, a medical research and marketing firm based in Pennsylvania, conducted a pair of direct-mail surveys on behalf of the Endocrine Society without identifying the Society as the sponsor. The first survey, aimed at the influence of endocrinologists on general practice decisions of primary care physicians, was sent to 1,000 family physicians, 1,000 internists, and 500 obstetrician-gynecologists selected on an “nth” name basis from an American Medical Association list vendor.

Almost 600 participants responded, for an overall response rate of 24%. Some 85% of respondents worked in solo and group private practice, with 10% in hospital or academic centers and the remainder in other settings, such as government facilities. The second survey explored the influence of endocrinologists on the adoption of new diabetes products by primary care physicians. It was mailed to 1,000 family physicians and 1,000 internists, with a response rate of 17%.



of patients with endocrine diseases in the United States,” Kim says.

Robert A. Vigersky, MD, director of the diabetes institute at Walter Reed National Military Medical Center Diabetes Institute in Washington, D.C., and professor of medicine at the Uniformed Services

University of the Health Sciences, and a former Endocrine Society president who has studied workforce issues, says it has been clear for years that there are not nearly enough endocrinologists to deal with all the people who need treatment for diabetes and many other conditions.

He says that endocrinologists who have the time can help spread endocrine knowledge by speaking in the community. Wergin finds these talks valuable, especially the opportunity for give and take with a local endocrinologist: “I’ll question him, ‘Why do you say that?’ What’s remarkable is he will often say, ‘Well let me show you this study, this is why.’ It is very evidence-based.”

The Endocrine Society is active in this kind of outreach with programs in different parts of the country such as its “Endocrine Essentials Live.”

new diabetes products, just behind peer-reviewed journal articles, sales representatives, and accredited lectures.

The respondents displayed a hesitance to be early adopters of new diabetes products, with 35% indicating that they were likely to wait to try a product only “after it becomes standard” and 30% waiting until “after many others have tried it.” Endocrinologists could potentially influence the timing of new product adoption, because 43% of the respondents said they would “certainly” try a new diabetes product earlier if it were recommended by an endocrinologist, and 47% said they would “possibly” do so.

Wergin says he appreciates his consultants’ specialized knowledge about fast-changing new products, and after a referral, “sometimes when my patients come back, they are on a new type of pump that I haven’t seen.”

The family physicians and internists also said that they tend to follow treatment plans as recommended by endocrinologists, with some three-quarters of them reporting that they change fewer than one in 10 treatment plans.

Addressing Issues of Access

The main concern that the surveys raised related to accessibility. Asked to rank various information sources in terms of “access,” the survey respondents ranked endocrinologists last among a list of eight sources. “These results complement the conclusions of the Society’s workforce study, which suggest that there are insufficient numbers of endocrinologists for the volume

The Personal Touch

All three experts stressed the importance of personal relationships. Fish and Vigersky say the “curbside consults” with colleagues one encounters in the hall or cafeteria can be invaluable, but only help with physicians in one’s institution. When seeing a patient from an outside referral, Vigersky says, “The consultation often can be supplemented with a quick phone call, because that establishes a more personal relationship. I think that a very important way to work with primary care providers is to make this a little bit more personal than just a letter.”

“In my area, there are not a great number of endocrinologists, and they are very busy,” Wergin says. But he has built good personal relationships with endocrinologists in the nearby cities of Lincoln and Omaha, and they manage to see the patients he refers on a timely basis. And if a patient has an urgent need to be seen, he picks up the phone. “If you communicate effectively, my experience is it has worked out okay,” Wergin says, both in terms of having patients seen and working together to develop treatment plans truly tailored to the patient’s needs — which, as a family physician, Wergin knows intimately. **EN**



There are insufficient numbers of endocrinologists for the volume of patients with endocrine diseases in the United States.

READ IT Yourself

The full report the Society conducted that details how much other physicians depend on the information provided by endocrinologists can be viewed at www.endocrine.org/influence.

— Seaborg is a freelance writer based in Charlottesville, Va. He wrote about treating transgender patients in the May issue.

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FOOD FIGHT

While healthcare professionals continue to debate whether the right foods and spices are a substitute for medications, science is emerging that could indicate these alternative remedies might benefit some chronic health conditions.

By Glenda Fauntleroy

The use of foods for their medicinal purposes dates back hundreds of years. Ginger is known to help reduce nausea. Green tea may help protect against certain cancers. And flaxseed may also lower cholesterol. But are there foods that can help prevent or treat other chronic conditions such as diabetes and heart disease?

While numerous research studies have explored the benefits, there is strong debate within the healthcare community on whether now is the time for physicians to begin promoting food as an alternative medicine.

Food as Medicine

Americans' interest in the use of natural products, such as herbs and probiotics, to stay healthy has seen considerable growth in recent years. In a 2007 National Health Interview Survey, which included a comprehensive survey on the use of complementary health approaches, almost 18% of American adults had used a nonvitamin/nonmineral natural product in the past year — with fish oil/omega 3s as the most commonly used product.

And while interest in these natural products has

AT-A-GLANCE

- Debate within the healthcare community weighs whether physicians should promote certain foods as an alternative medicine.
- Some experts say that for patients with a chronic condition such as diabetes, the suggestion of food treating or preventing their condition is risky.
- Studies associate ground cinnamon with some improvements in fasting blood glucose, total cholesterol, and insulin sensitivity.



spiked, experts agree that no one is suggesting that patients with diabetes or heart disease swap their prescribed medications for what's in their kitchen cabinets.

"While foods cannot replace prescribed medications, they have been shown to be part of a disciplined approach by many to ward off chronic health conditions and even to reverse them in some cases," says Kantha Shelke, PhD, a food scientist and principal at Corvus Blue. "Drugs have an important role in managing the symptoms in chronic health conditions such as diabetes and heart disease, but foods, if used judiciously, can go a long way to help prevent the chronic condition from happening." Corvus Blue is a food science and research company in Chicago.

Nutrition expert Roger A. Clemens, Dr.PH, an adjunct professor at the University of Southern California School of Pharmacy and past president of the Institute of Food Technologists, says the theory of food as medicine is not a new one. "Hippocrates is credited by saying, 'Let food be thy medicine,' and so now we ramp ourselves forward several centuries since that time, and the whole notion that food be thy medicine seems to be emerging," he says.

"One of the challenges, though, is that ... when you put food in the same sentence with 'cure, mitigate, treat, diagnose, or prevent,' it signifies a drug, and there is a different standard to look at drugs from a therapeutic perspective versus overall health," he continues.

Clemens says he is adamant about drawing the line in the sand when it comes to food and health claims, and weighing the burden of proof or the quality of evidence is crucial.

"Hippocrates also said 'do no harm,'" he adds. "As we pursue food as thy medicine, it's incumbent on us to first do no harm because we just don't know with [some of the elevated doses of these foods required]."

Nora Saul, manager of nutrition services at Joslin Diabetes Center in Boston, agrees that for patients with a chronic condition such as diabetes, the suggestion of food treating or preventing their condition is risky. "Food and

exercise are the two biggest components of diabetes treatment," she explains. "But, I consider it a triad, with medication as needed as the third major component."

"There are some patients who follow an excellent lifestyle program of eating healthy and exercising that allows them to never need medication or to get off medications, but that's just some patients," Saul continues. "There are other patients who will never be able to get off their medications. I think it's important to give patients a realistic idea of what's possible."

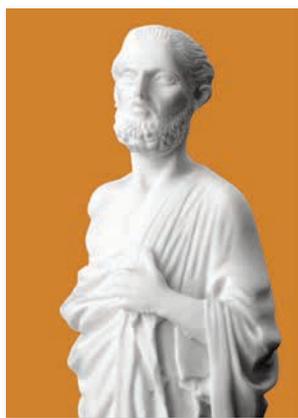
Healing Spices?

At the McCormick Science Institute (MSI), in Hunt Valley, Md., 22 clinical studies are being funded to explore the potential health benefits of culinary spices and herbs. The role of spices in the prevention or treatment of diabetes is commonly researched.

For example, a small MSI-funded study published in 2012 in the *Journal of the Academy of Nutrition and Dietetics* reported that adding 6 grams of ground cinnamon to 50 grams of instant farina breakfast cereal lowered blood glucose in both normal weight and obese participants.

In another study appearing in the January 2013 issue of *Diabetic Medicine*, researchers studied 22 men with type 2 diabetes to see whether adding a polyphenol-rich spice mixture to a hamburger before cooking would reduce postprandial lipid oxidation and endothelial dysfunction compared with a hamburger cooked with salt only. The men who ate the burger and spice mixture, which included cinnamon, ginger, oregano, and turmeric, had a reduction in urine malondialdehyde, an increase in urinary nitrate/nitrite, and improved postprandial endothelial dysfunction.

"Giving these hamburgers to people decreased their lipid peroxidation in urine by 30%," says study author



"Hippocrates is credited by saying, 'Let food be thy medicine,' and so now we ramp ourselves forward several centuries since that time, and the whole notion that food be thy medicine seems to be emerging."

— Roger A. Clemens, Dr.PH, adjunct professor, University of Southern California School of Pharmacy; past president, Institute of Food Technologists



Susanne Henning, PhD, from the Center for Human Nutrition at UCLA's David Geffen School of Medicine. "After we saw this effect, we were not surprised to also find a significant effect on endothelial function. However, the effect on endothelial function is most likely due to several mechanisms, not only a decrease in lipid peroxidation, but also an increase in nitric oxide."

Our research clearly demonstrated a beneficial health effect of adding spices to your meat prior to frying, Henning adds. "A mixture of turmeric and/or oregano was the best among the ones tested in our research. Disappointing was that garlic didn't reduce the generation of lipid peroxides. However, garlic has other health benefits such as the oregano-sulfur compounds."

Ground cinnamon is another spice associated with some improvements in fasting blood glucose, total cholesterol, and insulin sensitivity. Many, though, debate whether the hard science exists. "There have been a



Giving Healthy Foods FLAVOR AND APPEAL

Food scientist Kantha Shelke offers tips on helping patients make healthy food more flavorful and inviting:

- **Enhance the level of "umami."** The Japanese term for the "fifth taste" is similar to the much-maligned monosodium glutamate, but without the sodium or other health implications. Ingredients such as parmesan cheese, tomatoes, kelp or seaweed, and mushrooms can add an additional dimension of flavor to simple salt-free foods such as soups, grits, and porridge.
- **Enhance the aroma and taste.** Herbs and spices are potent in aroma and taste-enhancing phytonutrients—the natural chemicals found in plants—and just a pinch can take a saltless or fat-free food from bland to delicious. Cilantro, parsley, rosemary, and thyme can fill the air with their powerful volatiles and help wake up the taste buds of patients who may not be as interested in food. Just a pinch can do wonders for dry crackers and plain scrambled egg whites.
- **Improve the appearance.** Most foods served to patients tend to appear dull, gray, and monotonous. A dash of cilantro, paprika flakes, or very finely diced red, green, and yellow peppers go a long way to change the perception of what the food must taste like. — G.F.

number of studies that have shown cinnamon might have some small benefit of reducing blood glucose levels, but this a small effect," says Saul. "It's not the kind of reduction you would see with medication."

What's more, says Clemens, is that suggesting spices to patients is off-label "and physicians don't want to do things off-label."

"Medications are standardized, but when you come with cinnamon or ginger, it becomes complicated when you want to suggest a certain profile or characteristic that is not regulated," Clemens says. "Today we have a higher expectation. We just are not there yet."

The federal government agrees. The National Center for Complementary and Alternative Medicine (NCCAM) states that high-quality clinical evidence to support the use of cinnamon for any medical condition is "generally lacking." NCCAM cites a 2012 systematic review of 10 randomized controlled trials that did not support using cinnamon for type 1 or type 2 diabetes.

"Drugs have an important role in managing the symptoms in chronic health conditions such as diabetes and heart disease, but foods, if used judiciously, can go a long way to help prevent the chronic condition from happening."

— Kantha Shelke, PhD, food scientist and principal, Corvus Blue, Chicago

Cinnamon does have a place in a diabetes meal plan, however. Saul says patients can use cinnamon as an adjunct to their medication. "The truth is, there's very little harm in using cinnamon in our food. And it tastes good."

Boosting the "Diabetes Diet"

Although science may not yet support the notion that food can replace medicine, food does play a significant role in diabetes treatment, says Saul. The right foods for a diabetes meal plan have a low-glycemic index and provide key nutrients. "The basis of a diabetes diet has lots of non-starchy vegetables, fruits, proteins, low-fat dairy products, lots of legumes, and some of the healthy fats," she explains.

Saul admits that many of her patients sometimes struggle with adopting the new diet. The issue is often that healthy foods don't always taste good, they say, without salt and fat.

But Shelke says that healthful foods do not have to taste bad, and foods without added fat and salt don't have to taste bland (see sidebar). "The art and science of combining food ingredients into healthful and delicious finished foods has been alive for a long time," she explains. "History has established the tastiness of many foods that are good for those struggling with chronic conditions such as diabetes or with sodium and fat intake." **EN**

— Fauntleroy is a freelance writer based in Carmel, Ind., and a regular contributor to Endocrine News. She wrote about Cushing's disease in the May issue.

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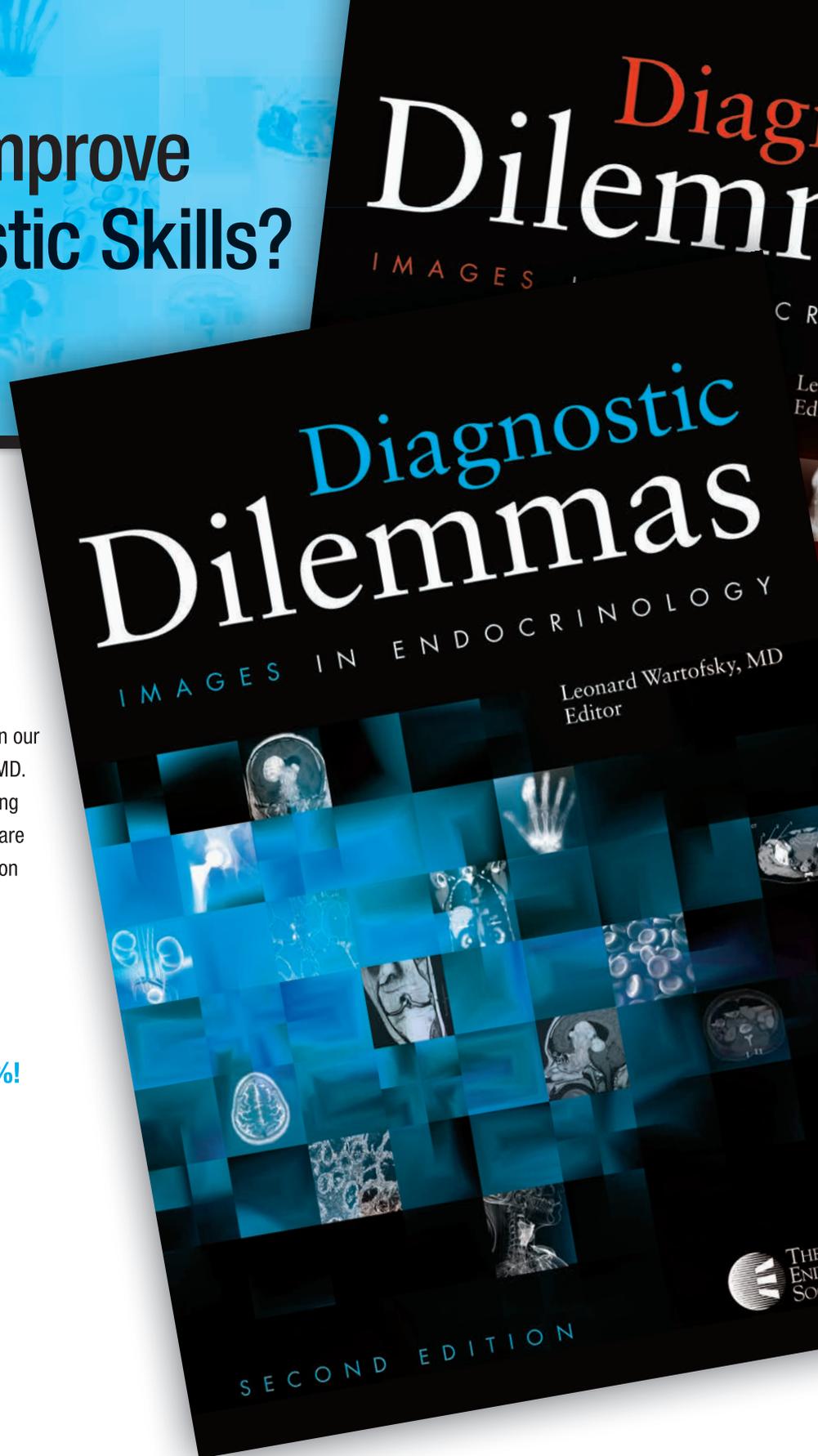
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SOCIETY EXPANDS EXPERT ENGAGEMENT TO INFORM Global EDC Policy with Endocrine Science

By Loretta Doan, PhD

The Endocrine Society has redoubled its efforts to bring endocrine expertise to the global policy arena on the issue of endocrine-disrupting chemicals (EDCs). With members from approximately 120 countries, the Endocrine Society is a global organization with the expertise and capacity to address this global scientific and public health issue. Through a strategic initiative that expands its base of experts engaged in policy work and further positions the Society as a resource for policymakers worldwide, the Society has established two new task forces with distinct but complementary goals. This new infrastructure provides connectedness and continuity to the Endocrine Society's efforts not only to promote awareness among policy makers but to gain a better understanding of the research and education needs in different regions of the world.

On March 31 and April 1, the Society's European Union (EU) EDC Task Force convened in Brussels, Belgium, to meet with EU policy makers to discuss ongoing processes to define and regulate EDCs. Comprising endocrine experts from key EU countries, the Task Force works to ensure endocrine principles are incorporated into EDC regulatory policies. During this trip, Task Force members met with members of the European Parliament (MEPs) — elected officials representing individual countries — to raise awareness of EDCs. They also met with officials from the European Commission Directorates General (DG) in

charge of research and of chemicals laws and regulations. The European Commission is the EU's executive body and represents the interests of Europe as a whole. The work of the European Commission is accomplished through the policy-relevant DGs, or departments, which are classified according to the policies they address and through services, which deal with more general administrative issues or have a specific mandate.

The Commission is in the process of examining EU chemicals legislation and preparing to establish criteria for defining endocrine disruptors, making this a critical time for policy makers to hear from endocrine experts who have a unique and integral perspective on the science of EDCs. Co-chaired by R. Thomas Zoeller, PhD (USA), and Jean-Pierre Bourguignon, MD PhD (Belgium), the EU EDC Task Force members hail from France, Germany, Italy, and the United Kingdom. Task Force members are Barbara Demeneix, PhD, DSC; Richard Ivell, PhD; Josef Koehrlé, PhD; Adriana Maggi, PhD; GianCarlo Panzica, PhD; and Remy Slama, PhD.

Task Force members met with MEP Sirpa Pietikainen (Finland) and with staff of MEP Michele Rivasi (France) to discuss the importance of EDCs in human health and the environment. MEPs Pietikainen and Rivasi have shown leadership on this issue and welcomed the Society's engagement in the EU process. Scientific details were discussed with officials from

A Timeline of the Endocrine Society's ADVOCACY EFFORTS ON EDCS

2009	2012	2013	2014
<p>Scientific Statement released and U.S. work begins</p> <p>Education and advocacy with U.S. Congress, EPA, FDA, NIEHS, National Academies, U.S. media outlets</p>	<p>Statement of Principles and EU work begins with presentation at EU Commission and meetings with policymakers in collaboration with HEAL</p>	<p>Independent advocacy in EU begins with engagement of consultants and independent meetings with policy makers</p> <p>First foray into global policy work in collaboration with IPEN</p>	<p>Strategic Initiative is launched (described in text); new scientific statement under way, EDC guide to be completed</p> <p>Endocrine Society EU and Global EDC Policy Task Forces convened</p>



DG Research and Innovation, DG Health and Consumers, DG Enterprise and Industry, and DG Environment. The Society will continue to engage these officials to advance knowledge and understanding of EDCs and to ensure the endocrine perspective is considered in policy decisions.

To facilitate the advancement of knowledge, **ICE/ENDO 2014** features a Meet-the-Director workshop in which attendees can learn from Laurent Bocheran, PhD, about scientific priorities and funding opportunities from DG Research and Innovation (Saturday, June 21, 2014, 2:30 PM – 3:15 PM, W475).

While the EU EDC Task Force focuses its efforts on communicating with leaders in the EU, which has in place a well developed mechanism for chemicals regulations, the global policy picture is less developed, requiring a different approach. The Endocrine Society has taken steps also to address the needs on the global stage, particularly in developing countries and countries with economies in transition.

The new Global EDC Policy Task Force (GEPTF) will implement a strategy of education and awareness-raising that will reach policy makers and other audiences worldwide. The GEPTF has members from each of five global regions as defined under the Strategic Approach to International Chemicals Management (SAICM), a policy framework to promote chemical safety around the world. SAICM states its overall objective as the achievement of the sound management of chemicals throughout their life cycle so that, by 2020, chemicals are produced and used in ways that minimize significant adverse impacts on human health and the environment. More than 150 stakeholder groups participate in SAICM, including the chemical industry, non-governmental organizations, and more than 100 governments. The GEPTF is co-chaired by the EU EDC Task Force co-chairs, and its members are Tania Bachega, MD, PhD (Brazil); Riana Bornman, MD, DSc (South Africa); Noriyuki Koibuchi, MD, PhD (Japan); Patricia Joseph-Bravo, PhD (Mexico); and Djuro Macut, MD, PhD (Serbia).

During its inaugural meeting at the Society's Washington, D.C., headquarters on April 22, the GEPTF began

MEET-THE-DIRECTOR WORKSHOP

**Saturday, June 21, 2014
2:30 PM – 3:15 PM (W475)**

To facilitate the advancement of knowledge, **ICE/ENDO 2014** features a Meet-the-Director workshop in which attendees can learn from Laurent Bocheran, PhD, about scientific priorities and funding opportunities from DG Research and Innovation.

to lay out its overall strategy, focusing primarily on achievable outcomes in 2014. Task Force members agreed that a primary activity will be to communicate the Society's scientific messages to SAICM stakeholders and other interested parties. To aid in this endeavor, the Society is collaborating with International POPs Elimination Network (IPEN) to produce and distribute a policy-

makers' guide to EDCs, which is expected to be completed sometime this summer. The guide's content is being written entirely by a team of Endocrine Society experts, led by Andrea Gore, PhD, with the IPEN reviewing the language for the target audience and distributing the finished product to relevant stakeholders. Rounding out the Society writing group are David Crews, PhD; Heather Patisaul, PhD; Michele La Merrill, PhD; and Ami Zota, PhD. GEPTF members will be instrumental in disseminating the guide and raising the Society's profile on the global stage, as they will share the guide's content in educational activities and discussions with SAICM participants and others.

2014 is a pivotal year in global action on EDCs, with crucial decisions being made and important activities initiated across the globe. The Society's strategic investment in education, awareness-raising, and influence will potentially have far-reaching and long-lasting impact on the science and regulation of chemicals that interfere with hormone action. Society members' knowledge and expertise, coupled with the Society's organizational capacity, will inform the global debate through broad dissemination of accepted endocrine principles and cutting-edge endocrine research. By taking leadership in this pressing public health issue, the Society also is demonstrating the central role of endocrinology and endocrinologists in protecting the environment and human health. Society members are the world's leading experts in endocrinology, and by bringing that expertise to bear on important public health issues, the Society is helping to improve the health and well being of generations to come. **EN**

— Doan, PhD, is the director of science policy at the Endocrine Society.



with Glenn Matfin, MD, editor,

Endocrine and Metabolic Medical Emergencies

By Mark A. Newman

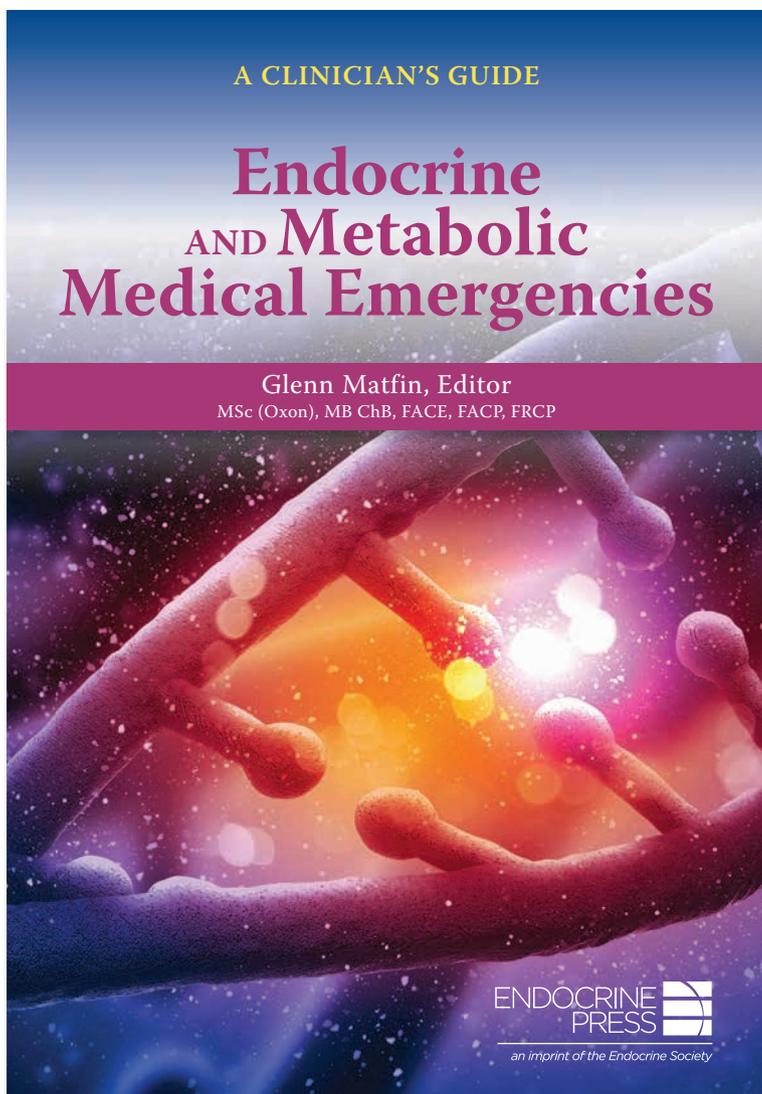
An endocrine emergency flummoxes many general practitioners, not to mention ER doctors who may not be very well versed in these often complex disorders. To that end, the Society's book publishing arm, The Endocrine Press, has just published *Endocrine and Metabolic Medical Emergencies* to provide practitioners with a wealth of information on a variety of endocrine emergencies.

"Whether in the emergency room, critical care unit, or on the inpatient floor, acute and chronic diseases can perturb the endocrine system, having important implications for testing, diagnosis, and treatment," says J. Larry Jameson, MD, PhD, dean, Perelman School of Medicine, University of Pennsylvania, who also wrote the book's foreword. "It is useful for trainees and practitioners to have access to a resource that addresses these practical and common clinical scenarios."

The massive tome is well over 400 pages and is edited by Glenn Matfin, MD, a consultant physician in the UK's National Health Service. *Endocrine News* reached out to Matfin to discuss this exciting book, which will undoubtedly become a must-read for practitioners regardless of specialty.

Endocrine News: What inspired you to come up with the concept of a book about *Endocrine and Metabolic Medical Emergencies*?

Glenn Matfin: Acute medical care is a major focus for many healthcare providers and funders. Patients with endocrine and metabolic emergencies constitute a large proportion of this clinical workload. Unfortunately, many patients are not ideally managed due to the lack of excellent, up-to-date, and practical guidance. The purpose of this book, *Endocrine and Metabolic Medical Emergencies*, is to help fill this gap by updating and collating existing knowledge on the management of numerous everyday endocrine and metabolic emergencies facing clinicians everywhere. We believe that this book will bring the topic areas up-to-date, set a standard for diagnosis and treatment in each category, and comprehensively cover the area.



Book Signing at ENDO/ICE 2014

Attendees at **ICE/ENDO 2014** can get their copies of *Endocrine and Metabolic Medical Emergencies* signed by the editor and contributing authors on

Monday, June 23 from 6:30 to 7:00 PM

immediately following the

"Update in Endocrine Emergencies" session in the foyer

outside Room 375, Skyline E

McCormick Place West.

About GLENN MATFIN



Matfin has broad clinical experience in the UK (accredited in General Internal Medicine, Diabetes, and Endocrinology); and the U.S. (Board Certified in general internal medicine [Recertified October 2013], and diabetes and endocrinology [Recertified October 2010]).

Currently he is a consultant physician in Acute and General Internal Medicine, Diabetes, and Endocrinology in the UK National Health Service (NHS). Previously he was medical director at the International Diabetes Center and clinical professor of medicine at the University of Minnesota, Minneapolis. Prior to this, he was a senior physician

at the Joslin Diabetes Center, Boston. Much of his clinical practice involves the care of patients with endocrine and metabolic emergencies.

His previous editor roles include Clinical Editor (2008–2012) at the *British Medical Journal* (BMJ) Education Group; Founding Editor-in-Chief of the PubMed-listed *Therapeutic Advances in Endocrinology and Metabolism*; Co-editor of *Pathophysiology – Concepts of Altered Health States* (8th Edition), Lippincott; and member of the inaugural International Editorial Advisory Board to the *Lancet Diabetes and Endocrinology*.

Why do you think this book is important for the Endocrine Society to publish?

GM: There is an unmet need for a comprehensive clinician resource covering acute endocrine and metabolic emergencies. As the Endocrine Society is a world leader in education and translation of clinical endocrinology, it is understandable that this unmet need be addressed by the Endocrine Society. The chosen medium for this clinician resource is book format with both paper and electronic versions.

In addition, the timing for the concept of this book proposal coincided with the establishment of Endocrine Press as the publishing arm of the Endocrine Society. *Endocrine and Metabolic Medical Emergencies* is the first book produced wholly by this new group and has been a useful learning exercise for all involved. These learnings will enable the Endocrine Society to successfully publish many more important titles and impact both basic and clinical endocrine knowledge leading to better patient care.

What is the biggest challenge in treating endocrine and metabolic emergencies for clinicians and hospitalists?

GM: Sir Richard Thompson (president of the Royal College of Physicians in the United Kingdom), and the distinguished endocrinologist, John Wass, state in the book that there is a crisis in acute medical care for multifarious reasons, including rising acute medical admissions, increasingly older and frailer patients with complex illnesses and multiple comorbidities, systemic failures of care, poor patient experience, and a medical workforce crisis. This provides the context within which endocrine and metabolic emergency care occurs.

However, despite the challenges, many opportunities exist for delivering high-quality, patient-centered, cost-effective care. One of these challenges is to translate knowledge about common (and not so common) endocrine and metabolic emergencies to improve clinical care. Larry Jameson writes in the Foreword to the book that “this text expands the repertoire of traditional endocrine emergencies to myriad other conditions that require urgent attention to optimize clinical outcomes.”

What do you think are some of the biggest misconceptions about emergency endocrine and metabolic treatments?

GM: Many clinicians (especially junior doctors and non-endocrine specialists) believe that patients presenting with various emergency endocrine and metabolic disorders must be treated to “normal” values as quickly as possible. It is almost a “badge of honor” to rapidly correct the abnormal value (e.g. level of glucose, sodium, osmolality, anion gap, blood pressure) to “normal” levels. This practice can lead to increased morbidity and mortality. Preventing rapid and over-correction by education, guidelines, and other resources (such as this book) can reduce unnecessary suffering and potentially save lives.

Who is the ideal audience for this book?

GM: *Endocrine and Metabolic Medical Emergencies* is certain to prove a valuable resource that will benefit endocrinologists and other clinicians (including internists, acute care, critical care, and hospitalists). All levels of expertise (junior doctors, mid-level practitioners, and even established professors) will find that this clinical resource will help close important knowledge gaps and that this will translate to improved patient care.

You state in your Preface that the way the book is structured makes it easy for the reader to tackle the subjects they are most interested in first and read about other topics at a later time. What was your thinking behind assembling this book so that each chapter stands on its own?

GM: The rationale is that endocrine emergencies can present to the clinician in no particular order and at any time. They each require specific investigations and management, which is covered in the specific chapter.

Ideally, more generic aspects of acute medical care and the impact of acute medical and critical illness on endocrine investigations and management can be read in the early sections prior to reading the rest of the book.

What do you think will surprise endocrinologists and general practitioners most about this book?

GM: The diversity of topics covered. The earlier sections focus on the initial management of acute medical illness, the effects of acute medical and critical illness on the endocrine and metabolic systems, and the impact of these changes and other factors on endocrine investigations in this setting. Several special populations of patients are also discussed including the unique impact of aging, pregnancy, and HIV/AIDS on emergent endocrine and metabolic disorders presentation and management. The remaining sections cover various different endocrine and metabolic systems including pituitary, thyroid, adrenal; calcium, phosphate, and metabolic bone diseases; neuroendocrine tumors; glucose; sodium; obesity and clinical lipidology; and inherited metabolic disorders.

In addition, some of the thorny issues that are especially taxing to the clinician or areas not so often addressed in publications (such as the management of insulin pumps or U-500 insulin in the inpatient setting) are covered.

The excellence and geographical representation of

the authors will also surprise many readers. We have key leaders of numerous societies represented in the authorship (including current presidents, past-presidents, and presidents-elect). We also have many authors who have been involved in developing national and international guidelines in the areas related to their chapter content.

What did you learn after your experience with *Endocrine and Metabolic Medical Emergencies*?

GM: This is a full-time job!

Many different stakeholders are involved in taking an initial concept through to successful book publication. Effective teamwork and project management is critical in this process and the Endocrine Press team and publishers met the challenges to achieve this goal.

Last but not least, I was humbled by the tremendous effort by the authors. Despite very tight deadlines and having numerous other commitments, they generously shared their time and expertise in writing the excellent chapters. **EN**

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Organizers:

Lee Weinstein, M.D., Metabolic Diseases Branch, NIDDK, NIH
Monica Skarulis, M.D., Diabetes, Endocrinology, and Obesity Branch, NIDDK, NIH
Kristina Rother, M.D., Diabetes, Endocrinology, and Obesity Branch, NIDDK, NIH
Andrew Bauer, M.D., The Children's Hospital of Philadelphia and Perelman School of Medicine at the University of Pennsylvania
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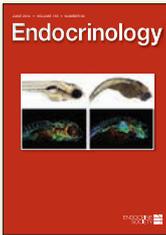
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The following studies, among others, will be published in Endocrine Society journals. Before print, they are edited and posted online in each journal's Early Release section. You can access the journals at www.endocrine.org.



Advanced Glycation End Product 3 (AGE3) Suppresses the Mineralization of Mouse Stromal ST2 Cells and Human Mesenchymal Stem Cells by Increasing TGF- β Expression and Secretion

Masakazu Notsu, Toru Yamaguchi, Kyoko Okazaki, Ken-ichiro Tanaka, Noriko Ogawa, Ipeei Kanazawa, and Toshitsugu Sugimoto • *These findings indicate that, after cells become confluent, AGE3 partially inhibits the differentiation and mineralization of osteoblastic cells by binding to RAGE and increasing TGF- β expression and secretion. They also suggest that TGF- β adversely affects bone quality not only in primary osteoporosis but also in diabetes-related bone disorder.*

Impaired Preadipocyte Differentiation into Adipocytes in Subcutaneous Abdominal Adipose of PCOS-Like Female Rhesus Monkeys • Erica Keller, Gregorio D. Chazenbalk, Paul Aguilera, Vanessa Madrigal, Tristan Grogan, David Elashoff, Daniel A. Dumesic, and David H. Abbott • *Early-to-mid gestational T excess in female rhesus monkeys impairs adult preadipocyte differentiation to adipocytes in SC abdominal adipose and may constrain the ability of this adipose depot to safely store fat with age.*

A Polymorphism in the Crhr1 Gene Determines Stress Vulnerability in Male Mice • Christiana Labermaier, Christine Kohl, Jakob Hartmann, Christian Devigny, Andre Altmann, Peter Weber, Janine Arloth, Carina Quast, Klaus V. Wagner, Sebastian H. Scharf, Ludwig Czibere, Regina Widner-Andrä, Julia Brenndörfer, R. Landgraf, Felix Hausch, Ken A. Jones, Marianne B. Müller, Manfred Uhr, Florian Holsboer, Elisabeth B. Binder, and Mathias V. Schmidt • *The results suggest that patients with a specific genetic predisposition in*

the CRHR1 gene together with an exposure to chronic stress may benefit from a treatment selectively antagonizing CRHR1 hyperactivity.



Blunted Day-Night Changes in Luteinizing Hormone Pulse Frequency in Girls with Obesity: The Potential Role of Hyperandrogenemia

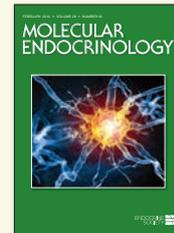
Jessica S. Collins, Jennifer P. Beller, Christine Burt Solorzano, James T. Patrie, R. Jeffrey Chang, John C. Marshall, and Christopher R. McCartney • *Day-to-night changes in LH pulse secretion are blunted in postmenarcheal obese adolescent girls. This phenomenon may in part reflect hyperandrogenemia.*

An Independent Study of a Gene Expression Classifier (Afirma™) in the Evaluation of Cytologically Indeterminate Thyroid Nodules • Bryan McIver, M. Regina Castro, John C. Morris, Victor Bernet, Robert Smallridge, Michael Henry, Laura Kosok, and Honey Reddi • *The Afirma GEC demonstrates a lower than expected rate of benign reports in FN/HCN, and a lower than anticipated malignancy rate within GEC-suspicious nodules. These data suggest that the Positive Predictive Value of the GEC is lower than previously reported and call into question the performance of the test when applied in the context of specialized Academic cytopathology.*

The World Health Organization Fracture Risk Assessment Tool (FRAX) Underestimates Incident and Recurrent Fractures in Consecutive Patients with Fragility Fractures • Sophie Roux, François Cabana, Nathalie Carrier, Michèle Beaulieu, Pierre-Marc April, Marie-Claude Beaulieu, and Gilles Boire • *The FRAX-BMI scores were below the Canadian threshold for treatment in more than half the patients at the time of a FF and in close to a third of*

patients with recurrent FF. FRAX-BMI severely underestimates the FF risk in patients younger than 65 years old and after a single FF.

Implication of Circulating Irisin Levels with Brown Adipose Tissue and Sarcopenia in Humans • Hae Yoon Choi, Sungeun Kim, Ji Woo Park, Nam Seok Lee, Soon Young Hwang, Joo Young Huh, Ho Cheol Hong, Hye Jin Yoo, Sei Hyun Baik, Byung-Soo Youn, Christos S. Mantzoros, and Kyung Mook Choi • *Circulating irisin levels were not different in individuals with detectable BAT or those with sarcopenia compared to control subjects and were not correlated with skeletal muscle mass index.*



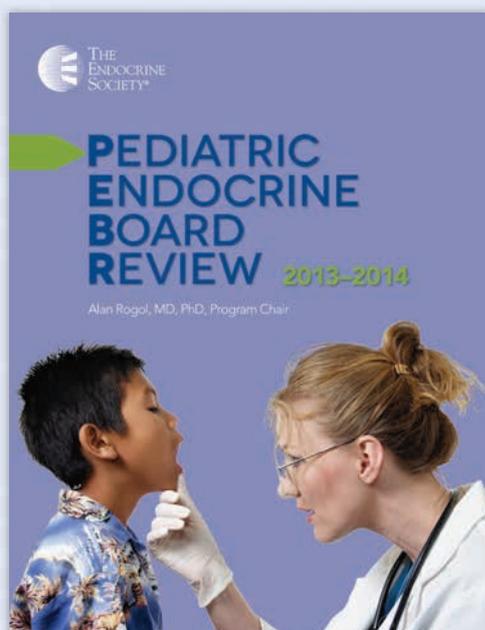
Incretin-Modulated Beta Cell Energetics in Intact Islets of Langerhans

David J. Hodson, Andrei I. Tarasov, Silvia Gimeno Brias, Ryan K. Mitchell, Natalie R. Johnston, Shahab Haghollahi, Matthew C. Cane, Marco Bugliani, Piero Marchetti, Domenico Bosco, Paul R. Johnson, Stephen J. Hughes, and Guy A. Rutter • *Together, these findings suggest that GLP-1 alters beta cell intermediary metabolism to influence ATP dynamics in a species-specific manner, and this may contribute to divergent regulation of the incretin-axis in rodents and man.*

Minireview: New Molecular Mediators of Glucocorticoid Receptor Activity in Metabolic Tissues • Rucha Patel, Jasmine Williams-Dautovich, and Carolyn L. Cummins • *This review summarizes recent discoveries of tissue-selective modulators of glucocorticoid signaling that are important in mediating the unwanted side effects of therapeutic glucocorticoid use, emphasizing the downstream molecular effects of GR activation in the liver, adipose tissue, muscle, and pancreas.*

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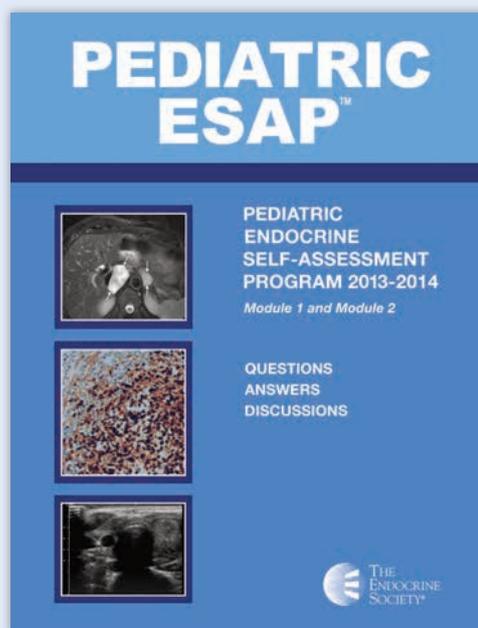
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NEW! Get the latest scientific evidence and best practice advice with our guideline *Diagnosis and Treatment of Polycystic Ovary Syndrome*.

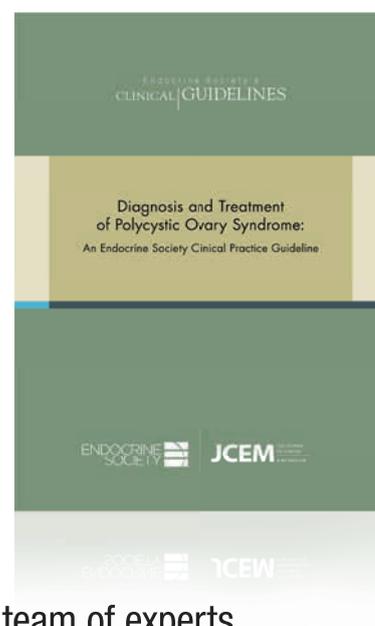
INCLUDES

- ▶ Diagnosing different subpopulations
- ▶ Associated morbidities, including fertility, obesity, endometrial cancer, and depression
- ▶ Treatment through hormonal contraceptives, lifestyle changes, and other medications

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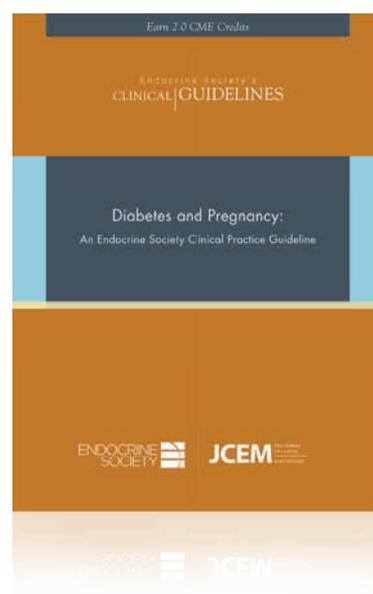
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ALL ABOUT YOUR HORMONES

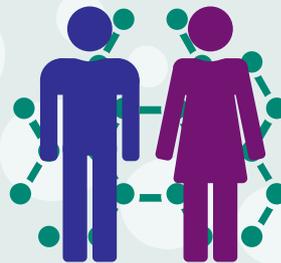
YOUR BODY'S CHEMICAL MESSENGERS



Hormone Health
NETWORK®
Keep your body in balance

Hormones are your body's chemical messengers. They travel in your bloodstream to tissues or organs to help them do their work. They work slowly, over time, and affect many different processes, including:

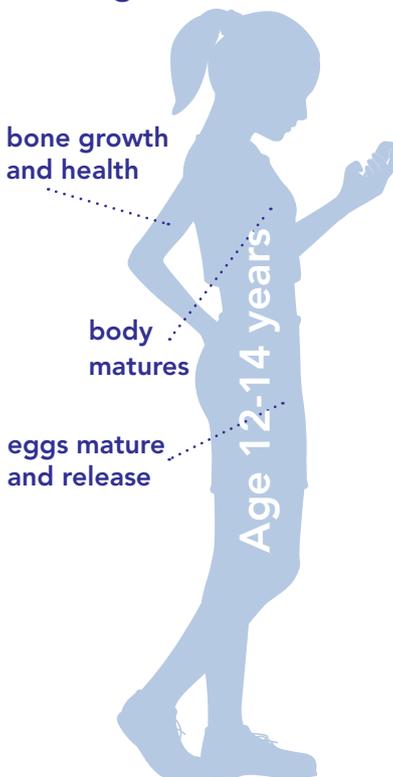
- Growth and development
- Metabolism – how your body gets energy from the foods you eat
- Sexual function
- Reproduction
- Mood



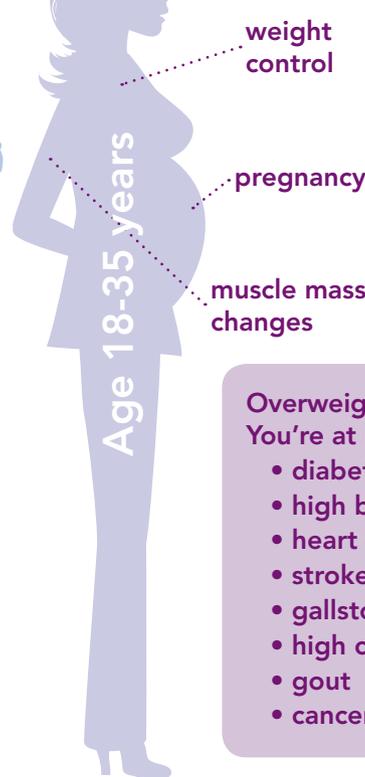
To find out much, much more about your hormones and the endocrine system, visit hormone.org

At any age, it is important to recognize changes in your body and talk to your healthcare provider about them.

Hormones and Young Girls



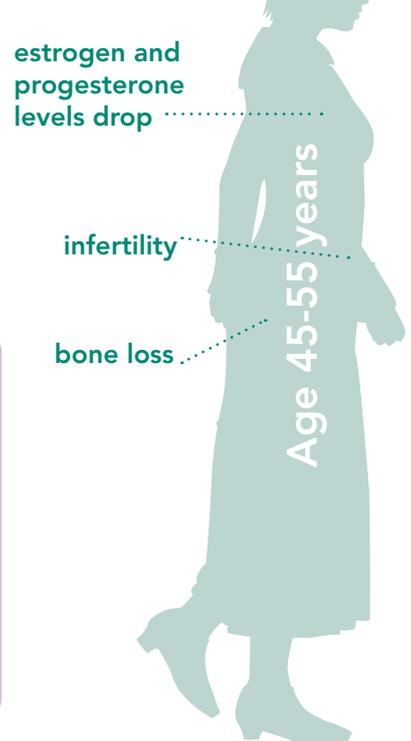
Hormones and Childbearing Years



Overweight + pregnant? You're at risk for:

- diabetes
- high blood pressure
- heart disease
- stroke
- gallstones
- high cholesterol
- gout
- cancer

Hormones and Menopause-Age Women



Side effects:

- mood changes
- acne
- menstrual cramps
- breast tenderness

Side effects of hormonal imbalances:

- weight gain
- lower energy, lower libido
- mood changes
- skin changes

Side effects of menopause:

- hot flashes, night sweats
- sleep problems
- mood changes, lower libido
- vaginal dryness/discomfort
- urinary problems

Exercise and a healthy diet are most helpful for overall good health, including natural hormonal development. Follow these tips for better health:

- Reduce portions of foods high in fat or sugar.
- Eat more fruits, vegetables, and whole grains.
- Eat three meals each day, including breakfast.
- Spend 30 minutes a day in moderate physical activity.
- Find ways to be more physically active. Take the stairs, or park farther away.

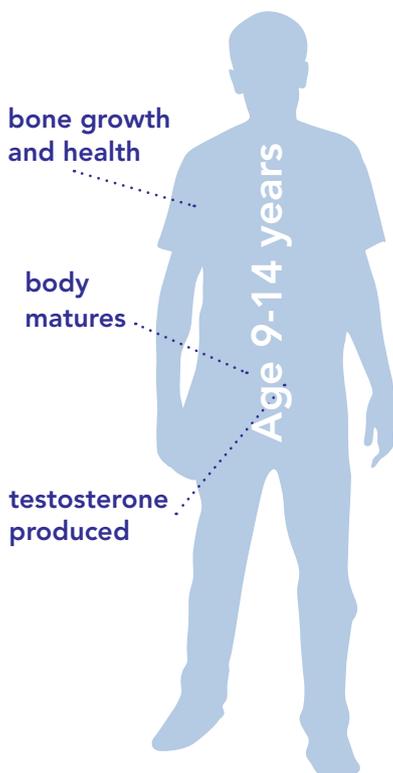


eat healthier



be more active,
30 minutes per day

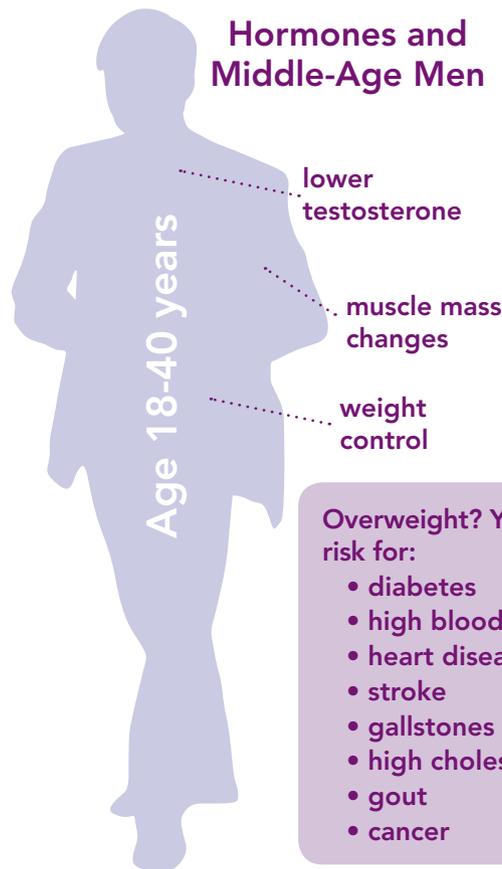
Hormones and Boys



Side effects:

- voice deepens
- acne
- new hair growth
- shoulders widen

Hormones and Middle-Age Men



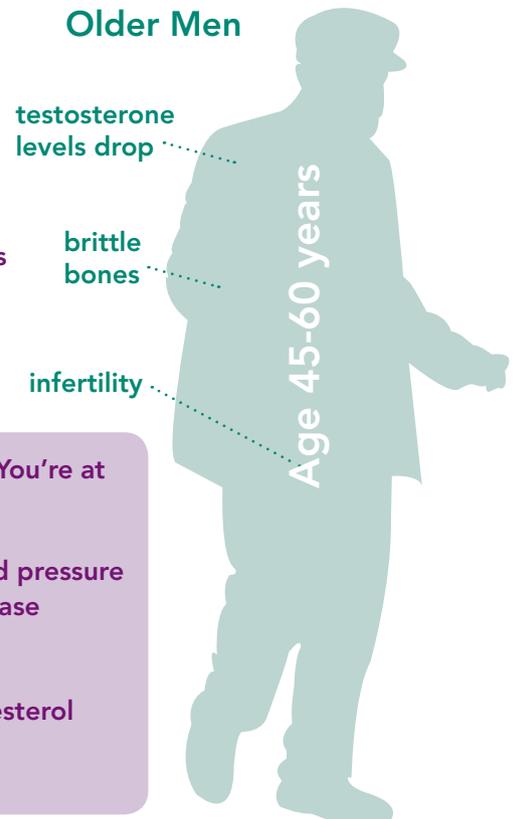
Overweight? You're at risk for:

- diabetes
- high blood pressure
- heart disease
- stroke
- gallstones
- high cholesterol
- gout
- cancer

Side effects of hormonal imbalances:

- weight gain
- lower energy, lower libido
- mood changes
- skin changes

Hormones and Older Men



Side effects:

- erectile dysfunction (ED)
- reduced energy
- lower libido
- loss of hair

Visit hormone.org to download your copy of *Major Hormones – What They Do Quick-Reference Guide*.

FLARE

FUTURE LEADERS ADVANCING RESEARCH IN ENDOCRINOLOGY

FLARE TRAVEL AWARD WINNERS

The Endocrine Society would like to congratulate the winners of the Future Leaders Advancing Research in Endocrinology (FLARE) ENDO Travel Award.

The winners are: Rodolfo J. Galindo, MD, of Hofstra North Shore LIJ School of Medicine; Darwin Omar Larco, PhD, of the Uniformed Services University; Alina P. Montalbano, PhD, of the University of Texas Southwestern Medical Center; Jaydira Del Rivero, MD, of the National Institutes of Health; and Chesinta Voma, BS, of Cleveland State University.

FLARE is for basic science and clinical research trainees from under-represented minority communities who have demonstrated achievement in endocrine research. The program components provide structured leadership development and in-depth, hands-on training in topics ranging from grantsmanship to lab management.

"This program is a wonderful opportunity to connect trainees such as myself with experienced and exceptional endocrine researchers, with the goal being to enhance our professional development," says Del Rivero. "In addition, it provides the tools for a successful career in research and opens opportunities of networking and meeting outstanding researchers!"

The winners will receive financial assistance to travel to **ICE/ENDO 2014** and present their outstanding research. They each expressed their excitement about the prospect of attending **ICE/ENDO 2014** in Chicago and pointed out that they're also looking forward to the networking possibilities this award provides.

"The FLARE program has really been a rewarding experience for me," Larco says. "At the workshop I met a lot of senior investigators who gave me really useful information. To make things even better, the FLARE program is helping with the cost of attending ENDO by awarding these travel grants. I really enjoy these events where the opportunity to network is made very easy and is, of course, very important for someone early in their career."

"I am ecstatic to be chosen," Montalbano says. "I am sure the competition was fierce. FLARE is a great program with wonderful people giving so generously of their time and expertise. Having been selected is an honor."

Galindo agrees: "I am proud to be a member of a professional society that recognizes young physicians and their efforts in advancing research. I am honored to be selected for the FLARE travel award as this represents the commitment of the Endocrine Society to promote the advancement of endocrinology through research, to promote diversity and to eliminate health disparities."

Voma says she views the FLARE Travel Award as the "equivalent to receiving the keys to unlock success" in her career path, especially since she's a beginning post-doctoral fellow. "I am beyond grateful for such a privilege given to me to attend the **ICE/ENDO** conference," she says. "It is a one-stop shop to knowing all there is to succeed in a career in research, interact with the people that matter, present my research work, and most importantly learn from the experts on how to be productive. The timing wouldn't have been any better than this." **EN**

— Derek Bagley

Event CALENDAR

JUNE 13-17, 2014, SAN FRANCISCO

The American Diabetes Association's 74th Scientific Sessions
http://professional.diabetes.org/Congress_Display.aspx?TYP=9&CID=93229

JUNE 17-22, 2014, NASHVILLE, TENN.

AANP 2014 – National Conference American Academy of Nurse Practitioners
<https://www.aanp.org/conferences/national-conference>

JUNE 21-24, 2014, CHICAGO

ICE/ENDO 2014 – The Endocrine Society
ICE-ENDO2014.org

AUGUST 6-9, 2014, ORLANDO, FLA.

AADE14 – American Association of Diabetes Educators
<http://www.diabeteseducator.org/ProfessionalResources/AnnualMeeting/CorporateOpps/>

SEPTEMBER 2-6, 2014, SAN FRANCISCO

Endocrine Board Review and Clinical Endocrinology Update
Endocrine.org/SF

ENDOCRINE news

COMING in JULY

EXERCISE & DIABETES:

What do your patients need to know?

YOUTH AND OBESITY:

How this epidemic affects your youngest patients

POST-CANCER CARE:

How cancer affects the endocrine system

NON-COMPETE CLAUSES:

What you should know before you sign

HHN Partners with Red Hot Mamas

The Endocrine Society's Hormone Health Network (HHN) has partnered with peer-to-peer support organization Red Hot Mamas to bring fresh, new resources to women, including educational materials and patient guides for menopausal women, as well as information for endocrinologists.



One educational resource in particular is HHN's Menopause Map, an online tool to help women and their doctors discuss which hormonal and non-hormonal treatment options would be most effective and safe to relieve the sometimes debilitating symptoms of menopause, the result of partnerships with organizations like the Red Hot Mamas.

"We're really excited [about the partnership] because we understand the value that the peer-to-peer support brings to our education materials in general," HHN director Cheretta A. Clerkley says. "The primary goal of the Network is to educate and inform patients; collaborating with peer support groups, like the Red Hot Mamas, enables us to reach patients through their own networks that they trust and provide the educational materials they need."

Lost and Found

Red Hot Mamas — the largest menopause education organization in North America — was founded by Karen Giblin in 1991 as a response to the frustration she felt when she began going through menopause after a hysterectomy. At the time, Giblin was serving her third term as selectman in Ridgefield, Conn.

After her hysterectomy, Giblin returned to work but began experiencing the initial stages of menopause, the

"devilish duo" of hot flashes and night sweats, which inevitably lead to insomnia. "I was fatigued, and I became really forgetful," she says, "due to a lot of lack of sleep." Giblin says her doctor had prepared her for the surgery, but not the accompanying menopause symptoms, "and this new way of life, taking estrogen therapy."

"I didn't have enough information," Giblin says. "I felt like I was lost in the Bermuda Triangle." It took about a year for the estrogen therapy to finally start working, to "quell a lot of the symptoms."

Giblin parlayed her public office into a beacon of hope for women in her community, many of whom were her constituents, who not only inquired about Giblin's health, but also "openly confided" in Giblin about their own menopause issues and wanted solutions for themselves.

"I just decided that I wanted to show some leadership in my community," Giblin says. Soon, she was hosting and developing her own menopause help and support program so that women could "know everything that they could possibly know" about menopause and what to expect when it arrives and how to manage its course, so "they can optimize their health through the menopause transition."

Giblin named her 12-month support programs Red Hot Mamas, off of a suggestion from her daughter, who noted that Giblin was a "red hot mama" during the hot flashes. From there, "the rest is history," Giblin says. "It mushroomed into the largest menopause education program in the United States and Canada," available in more than 200 hospitals and physician group practices.

The programs cover myriad topics, from hormone therapy to breast health, and even other endocrine

disorders, such as diabetes and thyroid conditions, allowing participants to share their stories, questions, and concerns, supporting each other, peer to peer. There's even a robust online community where women can find answers, information, or just have a digital shoulder to lean on.

Giblin also wants Red Hot Mamas to stress positive lifestyle changes during the transition: eating well, smoking cessation, managing stress, and even maintaining a positive attitude. "I always tell women they gotta keep that twinkle in their wrinkle," she says.

The M-Word

As with any endeavor worth pursuing, there were struggles. "It hasn't been all that easy," Giblin says. For one thing, in the early 1990s, "you couldn't even say that M-word out loud." As such, there was very little literature on menopause, and the books that were available, like Dr. Lila Nachtigall's *Estrogen: Yes or No?* (which Giblin referred to as "her bible") had to be hidden under magazines. "I didn't want anyone to know I was in menopause," she admits.

But as Giblin's education programs grew and spread, and discussions of the M-word became more prevalent in her local community and then nationwide, the need to feel embarrassed and hide helpful books became less commonplace. "We really brought it to the forefront of discussion," she says.

Still, there was work to be done. The next step was establishing credibility with medical professionals and the media. Giblin had that covered, too. She presented research conducted through the Red Hot Mamas program at the North American Menopause Society's meetings and was an invited speaker at the International Menopause Society's Global Summit on menopause in Zurich, Switzerland. "I had to prove

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myself," she says. Now, most major media outlets look to Giblin and the Red Hot Mamas whenever any new information about menopause crops up.

"But one of the biggest struggles we have today is health education budgets in hospitals have really been cut in a lot of ways," Giblin says. "It's unfortunate, because a lot of women need a lot of information during the menopause transition. That makes it really difficult to implement our Red Hot Mamas program in hospitals."

With a Little Help from My Friends

Red Hot Mamas' partnership with HHN provides an opportunity to

work with endocrinologists directly, according to Giblin. "I'm certain [endocrinologists] are receiving lots of questions from menopausal women," she says. Menopausal women are turning to their endocrinologists with questions about diabetes and obesity, thyroid conditions, and libido issues, to name a few. "Working with the Hormone Health Network will help bring information to not only the general public," but also to physicians, by sharing information that the Red Hot Mamas have learned.

"This is the first time we've partnered with a group like the Red Hot Mamas to develop an online, comprehensive tool," Clerkey explains. The

team-up allows the Red Hot Mamas to have a hand in all aspects of the Menopause Map's development and evolution. "By partnering with [the Red Hot Mamas], we feel like we'll come out with a stronger tool, but at the same time be empowering women with the education that they need and providing endocrinologists with the information they may not be aware of, as well."

"The peer-to-peer support is so important to women," Giblin says. "Having women support each other is a very essential thing to having good health."

For more information, check out the Red Hot Mamas at www.redhot-mamas.org. **EN**

— Derek Bagley

Hormone Health NETWORK

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ICE/ENDO EXPO 2014

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Geisinger Health System (GHS) is seeking Endocrinologists for two locations:

- **Endocrinology at Geisinger Wyoming Valley Medical Center (GWV), Wilkes-Barre, Pa.**
- **The Endocrinology team at Geisinger-Patton Forrest, State College, Pa.**

About the Position at GWV

- Join a team of 3 Endocrinologists, 2 Nurse Practitioners and 3 Certified Diabetes Educators, and is positioned for additional growth
- Work collaboratively with Geisinger's community practice network to enhance diabetes care, as well as to work with multiple subspecialties to enhance inpatient care
- Opportunities for clinical practice include serving as investigator on diabetes clinical trials, US-guided Thyroid Fine Needle Aspiration Biopsies, Continuous Glucose Sensors and Bone Density interpretation
- Engage in clinical mentoring and educational programs for medical students and family medicine residents on the GWV campus, as well as internal medicine residents on rotation at GWV

About the Position at Geisinger-Patton Forrest

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¹ **Study 1:** Brazg RL, Klaff L, Parkin C. Performance variability of seven commonly used self-monitoring of blood glucose systems: clinical considerations for patients and providers. *J Diabetes Sci Technol.* 2013;7(1):144-152.

Study 2: Baumstark A, Pleus S, Schmid C, Link M, Haug C, Freckmann G. Lot-to-lot variability of test strips and accuracy assessment of systems for self-monitoring of blood glucose according to ISO 15197. *J Diabetes Sci Technol.* 2012;6(5):1076-1086. **Study 3:** Freckmann G, Schmid C, Baumstark A, Pleus S, Link M, Haug C. System accuracy evaluation of 43 blood glucose monitoring systems for self-monitoring of blood glucose according to DIN EN ISO 15197. *J Diabetes Sci Technol.* 2012;6(5):1060-1075. Studies funded by grants from Roche Diagnostics.

² Each lot must have $\geq 95\%$ of individual glucose results within ± 15 mg/dL at glucose concentrations < 100 mg/dL and within $\pm 15\%$ at ≥ 100 mg/dL.

³ The FDA currently assesses 510(k) clearance based on the ISO 15197:2003 standard. Not all meters were included in all 3 studies. The ACCU-CHEK® Aviva meter was included in all 3 studies, while the ACCU-CHEK® Nano meter was included in 1 of the studies.