

MARCH 2018

THE LEADING MAGAZINE FOR ENDOCRINOLOGISTS

Endocrine news

INTERNATIONAL

HOW *sweet* IT IS!

ENDOCRINOLOGY OF THE TONGUE

As part of the **ENDO 2018** Plenary Session, “Why We Eat What We Eat, and Why What You Thought You Knew about Salt and Water Balance was all Wrong,” Josephine M. Egan, MD, discusses her talk, “Endocrinology of the Tongue,” and gives us a taste of what to expect:

- How we evolved to seek out sweet tastes since they're linked to energy and happiness.
- The impact of artificial sweeteners on energy value.
- What the endocrinology and physiology textbooks are missing.
- How gut hormones could play a role in treating obesity and diabetes.

ADDED EXTRAS:

Are ancillary services right for your practice?

STATE OF THE ART:

New scientific statement details obesity management.

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Hormone Science to Health

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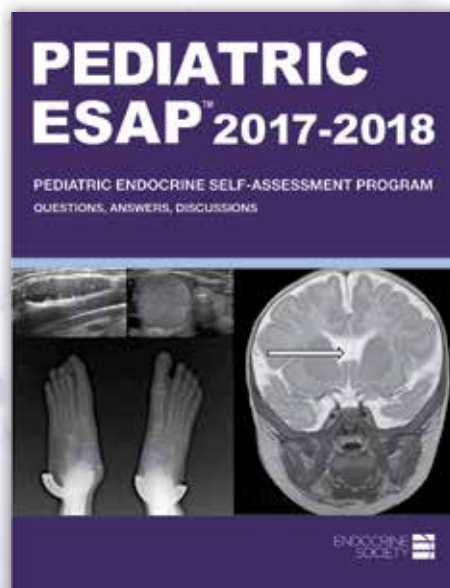
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As obesity and diabetes rates reach epidemic proportions, a presentation at **ENDO 2018** explains why we eat what we eat. We talked with Josephine M. Egan, MD, to give you a taste of what you can expect from her talk entitled, "Endocrinology of the Tongue."

BY DEREK BAGLEY

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BY DEREK BAGLEY

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In the spring, the Endocrine Society will release "Science of Obesity Management: An Endocrine Society Scientific Statement," which establishes the state-of-the-art in obesity management. Much of the data will also serve to confirm many widely accepted beliefs while dispelling others.

BY ERIC SEABORG

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As personal technology improves by leaps and bounds making our daily lives easier — smart phones, Alexa, self-driving cars — patients are expecting the same

improvements when they walk into their doctor's office. Eric Ocampo, MD, FACP, FACE, shares with *Endocrine News* just a few of the items that have made his daily practice easier on him and his patients.

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The Five Ws of EDCs

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Looking Back on a Once-in-a-Lifetime Opportunity

THIS IS MY LAST PRESIDENT'S LETTER, AS I will pass the gavel to Susan Mandel, MD, during **ENDO 2018** in Chicago. It has been a tremendous honor to serve as your president and to represent the Society around the world. Thanks to all of you for giving me this once-in-a-lifetime opportunity. I hope that I have contributed to our Society's well-being and ability to meet your professional needs.

I will give a more thorough "State of the Society" talk at the meeting — but for those of you not able to attend, we will post a video on the Society site. But for now, I'd like to highlight some of our accomplishments over the past year and give a bit of a preview into the future.

Who are we, and how's our bank account doing in 2018?

Our global membership continues to increase, and now numbers 44% of whom live outside the U.S. The Society is financially sound, ending 2017 beating expectations for the "bottom line" thanks to the hard work of secretary-treasurer Rick Legro and our Finance staff.

SP4

The development and approval of our fourth strategic plan (SP4) has my vote as the most influential accomplishment in 2017. After approving SP4 in December, the Council used our vision of the future to choose initiatives that reflect our priorities (see box). As mentioned last month, these working groups will make recommendations regarding the governance of the Society, improvements to the Clinical Practice Guidelines, and ways to enhance the experience of basic scientist members. At the Council meetings in March and June, we will prioritize the current projects and initiatives of the Society and will consider which new ones to embrace.

The Governance Task Force (GTF) charge is to "conduct a governance review to include an evaluation of the tripartite system and the optimal process/approach for nominations and elections." As was done during the development of SP4, we will use **ENDO 2018** as a venue to gather your opinions on these and other matters. Please stop by the Society booth to complete a survey and ask about the focus groups that we

will be conducting. In case you aren't able to give input at the meeting, please do so by contacting any of the GTF members: Ursula Kaiser, MD; Anthony Means, PhD; Genevieve Neal-Perry, MD, PhD; Carolyn Smith, PhD; Henry Anhalt, DO; Samantha Butts, MD, MSCE; Ken Ho, MBBS, FRACP, PhD; Daniel Oppenheim, MD, PhD; Samuel Dagogo-Jack, MD, MBBS; Alvin Powers, MD; A.J. Van der Lely, MD, PhD; Lindsey Trevino, PhD; Cesar Boguszewski, MD, PhD; B. Gabriel Smolarz, MD; Lynnette Nieman, MD (chair); Susan Mandel, MD (ex officio); Dale Abel, MD, PhD (ex officio); and Barbara Byrd Keenan, FASAE, CAE (ex officio).

OUR JOURNALS

We are fortunate that Daniel Drucker, MD, has accepted the editor-in-chief position at *Endocrine Reviews*, receiving the baton from Len Wartofsky, MD, who has served the Society in so many ways. Dan has established a fantastic editorial board and aims to raise the impact factor of *Endocrine Reviews* even higher. More innovations to come!

Under Teresa Woodruff's leadership, *Endocrinology* is reaching out to authors and increasing the visibility of its offerings. Good news for you basic scientists: **Page charges are waived for the first eight published pages of manuscripts authored by members of the Endocrine Society – and all color is free!**

Although the *Journal of the Endocrine Society* (JES), is still in its infancy, having published its first article in January 2017, it is now indexed in PubMed Central and PubMed. We are celebrating that it is now included in the Emerging Sources Citation Index. After two years in this index, an impact factor can be calculated. Congratulations to editor-in-chief Larry Jameson, MD, PhD, Oxford University Press, and Society Publications staff on this important accomplishment!

Global Outreach

Consonant with our increasing global membership, the Society continues to seek strategic partnerships with sister organizations to enhance educational programming and patient outreach. Our 2017 partners included Argentina, Brazil and Peru (Endocares), the United Arab Emirates, India, and the ASEAN Societies. Additionally, with the help of members at George Washington University, we partnered with

the Peruvian embassy to offer an Endocares experience to a number of expats. With leaders of the European Endocrine Society and the International Society of Endocrinology, we also participated in a celebration of the Japan Endocrine Society's 90th anniversary.

We also have new applications for smartphones that distill parts of the Clinical Practice Guidelines, for those of you who want to check things on the fly. Check out <https://endocrine.org/app>.

Based on the amazing success of CEU 2017, the program will now be offered on both the east and west coast of the U.S. in 2018. We hope that a shorter distance to travel will lead to less cost and a greater ability of clinicians to attend. I was there in 2017 and found the program to be extremely helpful, very clinically focused, and as usual, the faculty members were very available to discuss cases.

The Society continues to be extremely attentive to advocacy issues. As you may know, this involves being available, and making legislators aware that we are a great resource. We weighed in on a number of issues in the U.S. and Europe. I truly believe that our input was instrumental in influencing the outcome of a European Union vote on how to identify and track endocrine-disrupting chemicals. And to point out one similar initiative in the U.S., the Congressional Diabetes Caucus requested the Society's position on insulin pricing and is considering our recommendations as they develop policy solutions.

I Am Endocrinology

I encourage everyone to contribute to the "I am Endocrinology" initiative, which aims to tell the story in words and pictures of who we are and what we do. Endocrine clinicians and scientists can send us their stories using the hashtag #IamEndocrinology. **ENDO 2018** attendees can join in the fun by taking selfies or group shots at our #IamEndocrinology photo wall at the Society booth.

My Thanks To You

Thanks to all members who participated in working groups, focus groups, task forces, committees, Council, and who

Mission: We unite, lead, and grow the endocrine community to accelerate scientific breakthroughs and improve health worldwide.

Vision: We envision a world in which advances in endocrine science, education, and care promote optimal health and well-being.

OUR PRIORITIES

Community Building and Leadership

We will build dynamic, interdisciplinary communities that create innovative solutions to important endocrine problems.

Trusted Advisor and Advocate

We will be sought out as a trusted educational resource for the media, policy makers, and the public, ensuring that scientific discovery is appropriately funded and advocating for healthcare policies that benefit patients and providers.

Science and Clinical Innovation

We will accelerate innovative initiatives and create tools and resources to advance discovery and care.

Champion of the Professional

We will be the primary professional home for endocrine scientists and clinical practitioners by supporting and valuing them through all career stages.

sent their pictures in to "I am Endocrinology" — it is your collective energy, enthusiasm, and hard work that makes this both a home and an engine of innovation in endocrinology.

I have been lucky to work alongside our immediate past-president, Hank Kronenberg, MD, our incoming president, Susan Mandel, MD, and since the election, our incoming president designate, Dale Abel, MD, PhD. All care passionately about our Society and work tirelessly for members and for a successful transformation vis a vis SP4.

And finally, a big thanks to our wonderful talent-rich staff and CEO, who make sure that our lofty ideas reach reality. One of my best memories of this year was the seamless integration of staff, Council members, and guest members in our SP4 discussions — we are now taking advantage of the perspective of our staff as well as members — and SP4 and the organization are better for it.

With best wishes for your health and professional success. 

— **Lynnette Nieman**, MD, President, Endocrine Society



FROM THE **EDITOR**

March Madness: What's New at ENDO 2018

WHEN THE CROWDS DESCEND ON MCCORMICK PLACE in Chicago for ENDO 2018, they're in for a treat. Not only will the scientific sessions attendees have come to expect and the chance to connect with colleagues be there, but there are a few new features this year that will make ENDO 2018 one to remember for years to come:

- **Managing Cardiometabolic Risk Pre-Conference**

Taking place on Friday, March 16, from 8 a.m. to 5:20 p.m., this daylong conference focuses on current clinical topics in diabetes management, cardiovascular risk reduction, and endocrine metabolic disease. Attendees will discuss cases and hear from renowned clinicians and researchers via lectures, debates, and a "Master Clinician" session. (Eligible for up to eight AMA PRA Category 1 and ABIM MOC credits.)

- **Three Patient Engagement Sessions**

To really help bring home the effects that endocrine disorders and their treatments have on the patients, there will be three sessions devoted to patients' stories told by the patients themselves. The topics are "Transgender Children and Adolescents," "Diabetes in the Athlete," and "Meet the Patient: Working with Patients and Families with Inherited Endocrinopathies."

- **Unopposed Expo Time**

For the first time, ENDO 2018 attendees can spend time on the ENDOExpo floor without having to worry about missing any sessions. On each day of ENDO there will be at least an hour available for attendees to meet with exhibitors and explore their latest offerings.

- **Presidential and High-Scoring Poster Discussion Areas**

To make commiserating with peers and mentors easier, there will be a series of breakout areas in the poster exhibit spaces. This will enhance the discussions in a more relaxed environment without hindering other attendees from viewing the posters.

- **Advocacy How-To Session in the Science Hub**

For any members who want to learn how to advocate on behalf of endocrine science and research, there will be a new session hosted by the Society's Advocacy and Public Outreach Core Committee (APOCC) on Saturday, March 17, at noon in the Science Hub. This

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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.

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The Moderated Poster Areas will eliminate the bottlenecks that often occur at the poster displays. Discussions on a specific study's findings can take place in relative peace and quiet away from the throngs of attendees looking at the latest scientific developments.




session will discuss how members can impact policy that affects their patients, practice, or research.

refreshments, this lounge promises to be an **ENDO 2018** hot spot!

• **March Madness Lounge**

Timing is everything, and just because attendees are experiencing the largest meeting of endocrine professionals in the world, that is no reason they should ignore other important events: Namely the NCAA basketball finals better known as March Madness. With 600 square feet of space, two big-screen TVs, and

Of course, these new additions only scratch the surface of what **ENDO 2018** has to offer. For those of you who couldn't make it to the Windy City this year, be sure to check out the April *Endocrine News* to see the highlights of what you missed at **ENDO 2018!** 

— **Mark A. Newman**, Editor, *Endocrine News*



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Rat and Mouse
IGF-I (Bioactive):
Rat and Mouse
Inhibin A: Canine, Equine, Rodent
Inhibin B: Canine, Equine, Rodent
PAPP-A: Mouse

Neuronal Disorders*

MBP

* In development.

* Within the U.S., intended for Research Use Only (RUO). Not for use in diagnostic or therapeutic procedures.

Endocrine Society Applauds SPD Renewal

The Endocrine Society praised Congress' decision to include the Special Diabetes Program (SDP) and increased funding for the National Institutes of Health (NIH) in a Continuing Resolution (CR) to fund the federal government that passed today.

The CR included a provision to renew the SDP for two years with \$300 million in funding each year, a measure the Society has championed for the past year. In addition, the CR will keep the federal government open through March 23, and the bipartisan budget deal raises existing federal spending caps to free up billions of dollars for priority issues, including increasing funding for the NIH.

The renewal of SDP will allow the National Institute of Diabetes, Digestive, and Kidney Disease (NIDDK) to issue research grants to fund type 1 diabetes research for the current fiscal year. The SDP funds type 1 diabetes research as well as education and prevention programs for Alaska Natives and American Indians. Since it was created in 1997, the program has advanced research in islet cell transplantation, beta-cell

therapy, treatment for diabetic retinopathy, and innovative therapies like the artificial pancreas. In addition, the program has helped prevent and manage type 2 diabetes in the American Indian population, resulting in significant reductions in A1c and amputation rates and improvements in blood pressure and kidney function.

"The renewal of the Special Diabetes Program is key in continuing groundbreaking diabetes research and ensuring the most vulnerable patients with diabetes have access to prevention and education programs," says Robert Lash, MD, the Society's chief professional and clinical officer.

Although there has always been bipartisan support for SDP, the program expired October 1, and Congress provided only a small amount of continuing funding. The Society was worried that without full funding, new research and clinical trials would be delayed or halted this year.

The Society has been a leader in calling for funding the Special Diabetes Program. Members and staff met with members of Congress, conducted educational briefings for Congress with NIDDK, sent letters to Congress, and engaged in social media campaigns to highlight the need to renew the program. The Society also worked closely with the leaders of the Congressional Diabetes Caucus to renew SDP alongside the February 8 CR, and the Society was instrumental in recommending language to ensure NIDDK research would not be disrupted this year.

The Society also tirelessly advocated for raising the budget caps, a move that was necessary to achieve any increase in NIH funding. The budget agreement includes a commitment to provide \$2 billion for important NIH research over the next two years. This funding is in addition to the funding increase included in the CURES Act.

"The Society is grateful to Congress, particularly the leadership of the Diabetes Caucus, for continuing support for the SDP, NIH research and federally funded health and prevention programs," Lash says. "These programs play a vital role in promoting the health and well-being of all."



Early Career Members Can Excel at ENDO 2018

Endocrine Society Early Career members who attend **ENDO 2018** in Chicago will have a wealth of opportunities to begin preparing for their careers in endocrinology practice, research, or both.

First off, on Friday March 16, there is the all-day Early Career Forum that will host 200 trainees and provide them with access to leading endocrinologists to discuss career options and hot topics in professional development through interactive education sessions.

Held each day during **ENDO 2018**, multi-topic Career Development Workshops will offer trainees and Early Career professionals with tips and tools on how to move ahead in their careers. Once again, there will be the engaging Communications Boot Camp and a new session, “Branching Out: The Entrepreneurial Side of Science and Medicine,” to reach those with an entrepreneurial spirit. The International Seminar Series will be held March 17 and 18 and provide practical advice on navigating the visa process to international trainees coming to the U.S. and tips on how to secure a research fellowship abroad to those interested in conducting research in other countries.

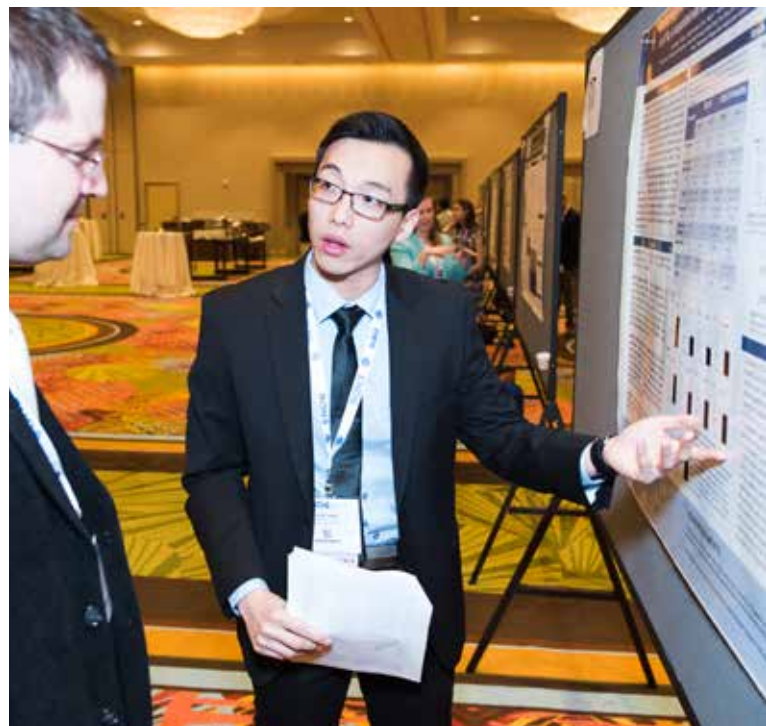
The Mentoring and Poster Reception, held on Sunday, March 18, provides opportunities for trainees to present their research and connect with professionals in the field. The reception will highlight the research of trainees and junior faculty from underrepresented groups in medicine and science.

The innovative work of the Chicago Center for Diabetes

Translation Research will be highlighted during the “Innovations in Diabetes Translational Research: Towards Eliminating Health Disparities in T2DM” symposium on Saturday, March 17. This interactive panel will feature ongoing research projects of Aarshiya Baig; Deborah Burnet, MD, MA, FACP, FAAP; Marshall Chin, MD; and Monica Peek, MD, MPH, FACP, and engage participants in discussion around identifying challenges in their ongoing health disparities research and identifying potential solutions to those challenges.

The Early Career Forum will take place in room W178 at McCormick Place from 7:30 a.m. to 6 p.m. on Friday, March 16. Visit www.endo2018.org for more information.

An Early Career attendee takes the opportunity to discuss his research with a fellow attendee at the Mentoring and Poster Reception.



Helmsley Charitable Trust Launches New Diabetes Research Grant

The Leona M. and Harry B. Helmsley Charitable Trust's Type 1 Diabetes Program has launched a funding opportunity through its new Future Technologies Initiative.

The goal of the Future Technologies Initiative is to accelerate the development of novel, early-stage, disruptive technologies that have the potential to change the current state of type 1 diabetes management and significantly improve glucose control while reducing the burden for people living with the disease.

While new technologies have been shown to improve glucose control and reduce the burden of living with type 1 diabetes, a large majority of people living with the disease are still not meeting recommended target average blood glucose levels.

"In the last number of years, we have seen great advances in



TIMELINE

- Letter of Inquiry (LOI) submission deadline — March 16, 2018
- Selected applicants proceed to full proposal — April 2018
- Full proposal submission deadline — June 15, 2018
- Anticipated commencement of selected programs — Late Summer/Fall 2018

Please direct any program-related questions about eligibility to t1dtechnology@helmsleytrust.org and online application questions to grants@helmsleytrust.org.



diabetes technology. However, gaps still exist in managing this difficult disease," says Sean Sullivan, program officer for Helmsley's Type 1 Diabetes Program. "With this RFP, we hope to attract novel approaches and advance the progress of early-stage ideas so we can get meaningful technology into the hands of people living with this disease."

Through the Future Technologies Initiative, Helmsley intends to support projects that are high-risk, high-impact, and have long-term vision. The initiative aims to incubate proof-of-concept, early-stage research and development to assist applicants in later securing larger funding. Bold thinking, novel approaches, and partnerships that incorporate technologies and expertise outside of the diabetes field are encouraged.

The Future Technologies Initiative offers two tracks for funding, with projects receiving up to \$750,000:

- ▶ **Novel insulin and glucagon delivery technologies**
- ▶ **Novel sensing technologies**

Applications from both for-profit and nonprofit U.S. and international entities are welcome for this funding opportunity. Helmsley will consider supporting one or more projects with a maximum term of 24 months. More information about the funding opportunity and how to apply is available at: <http://helmsleytrust.org/future-technologies-initiative>.

The Leona M. and Harry B. Helmsley Charitable Trust aspires to improve lives by supporting exceptional efforts in the U.S. and around the world in health and select place-based initiatives. Since beginning active grantmaking in 2008, Helmsley has committed more than \$2 billion for a wide range of charitable purposes.

Governance Task Force Created

As part of SP4 implementation, the Endocrine Society has created the Governance Task Force to address the SP4 recommendation to, “conduct a governance review to include an evaluation of the tripartite system and the optimal process/approach for nominations and elections.”

President-elect Susan Mandel, MD, appointed Lynnette Nieman, MD to chair the task force. The task force members are: Ursula Kaiser, MD; Anthony Means, PhD; Genevieve Neal-Perry, MD, PhD; Carolyn Smith, PhD; Henry Anhalt, DO; Samantha Butts, MD, MSCE; Ken Ho, MBBS, FRACP,

PhD; Daniel Oppenheim, MD, PhD; Samuel Dagogo-Jack, MD, MBBS; Alvin Powers, MD; AJ Van der Lely, MD, PhD; Lindsey Trevino, PhD; Cesar Boguszewski, MD, PhD; B. Gabriel Smolarz, MD; Susan Mandel, MD (ex officio); Dale Abel, MD, PhD (ex officio); and Barbara Byrd Keenan, FASAE, CAE (ex officio).

The task force will work to engage members and lapsed members in its work, ensuring broad input to inform discussions. Council will be provided with periodic updates in 2018, with a final report tentatively anticipated by the end of 2019.

Society Celebrates Expanded Access to Diabetes Tech for Medicare Beneficiaries

The Endocrine Society applauded the move to extend older Americans’ access to insulin delivery devices used to treat diabetes as part of Medicare Part D.

The Society is committed to improving access to and coverage of lifesaving devices for people with diabetes. These technologies help individuals manage their blood sugar levels effectively and prevent dangerous complications such as hypoglycemia.

The Centers for Medicare & Medicaid Services (CMS) issued guidance Friday clarifying that Medicare Part D plan sponsors may provide coverage for newer insulin delivery devices that are not covered under Medicare Part B as part of the Part D prescription drug program.

The Endocrine Society is elated the guidance will give people with diabetes greater access to a wider range of insulin delivery devices. This opens the door for older Americans to gain coverage for devices such as the Omnipod® Insulin

Management System, a popular insulin pump system. Until the new guidance was issued, Omnipod was the only FDA-approved insulin pump system not covered by Medicare. Previously, people with diabetes who qualified for Medicare at age 65 had to pay out of pocket to continue using the Omnipod, and many lost access to the device.

For years, the Society has championed the importance of covering the Omnipod in discussions with policymakers and regulators. Such access gives people with diabetes the freedom to choose the device that best suits their individual



needs and helps them manage the chronic condition.

The guidance follows CMS’ decision last year to extend Medicare coverage to continuous glucose monitors (CGMs), a move the Society advocated and supported. CMS announced in January that it will provide coverage for the Abbott Freestyle Libre CGM, offering consumers an additional choice.

ENDO2018**Chicago, Ill.****March 17 – 20, 2018**www.endocrine.org/endo-2018

With over 7,000 attendees, nearly 2,000 abstracts, and over 200 other sessions, **ENDO 2018** is the leading global meeting for endocrinology research and clinical care. Join us for the most well attended and valued translational endocrinology meeting in the world. Bringing together leading experts, researchers, and the most respected clinicians in the field, **ENDO 2018** represents

a convergence of science and practice that highlights and facilitates breakthrough discoveries in the field of endocrinology. Spend time connecting with peers and colleagues, exchanging ideas and information, and getting out in front of the latest trends and advancements in hormone health. The meeting also hosts other satellite and pre-conference events.

9th International Congress of Neuroendocrinology**Toronto, Ontario, Canada, July 15 – 18, 2018**

At the ICN 2018, 64 state-of-the-art speakers and eight plenary lecturers will cover the excitement of modern neuroendocrinology from molecules to behavior, across four main themes — metabolism, reproduction, stress, and timing. Highlights include four concurrent symposium sessions, poster sessions with networking opportunities, and top research in neuroendocrinology from around the world.

www.icn2018.org**2018 Clinical Endocrinology Update/Endocrine Board Review****CEU/EBR East: Miami, Fla., Sept. 4 – 8, 2018****CEU West: Anaheim, Calif., Oct. 18 – 21, 2018**

Each year CEU brings together hundreds of endocrine clinicians for a unique learning experience and opportunities to network with expert faculty and colleagues. Unlike other board preparation meetings, the EBR offers a comprehensive mock-exam

format with case-based American Board of Internal Medicine (ABIM)–style questions forming the bulk of the presentations. This year for the first time, the Endocrine Society is offering two CEUs: one in Miami, Fla., that will also have an EBR component, and one in Anaheim, Calif.

www.endocrine.org/ceu**EndoBridge 2018****Antalya, Turkey, October 25 – 28, 2018**

Jointly organized by the Endocrine Society, European Society of Endocrinology, and the Society of Endocrinology and Metabolism of Turkey, EndoBridge will provide a comprehensive update in the field of endocrinology. Held on October 25–28, 2018, in Antalya, Turkey, this meeting is designed for the clinical endocrinologist. The official language of the meeting is English, but simultaneous translation will be available in Russian, Arabic, and Turkish.

www.endobridge.org**18th International Congress of Endocrinology and 53rd SEMDSA Congress****Cape Town, South Africa,****December 1 – 4, 2018**

The Society for Endocrinology, Metabolism and Diabetes of South Africa (SEMDSA) is proud and excited to have been selected to host ICE 2018 together with the 53rd annual SEMDSA Congress. The Program Organizing Committee is currently putting together a stimulating program including cutting-edge academic endocrinology for basic scientists and clinicians, as well as practical clinical sessions empowering doctors with the knowledge to optimize care for their patients with endocrine disorders.

www.ice2018.org

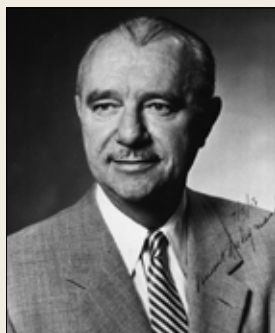
“ Other challenges [losing weight] include an obesogenic environment with abundant tasty, convenient, and inexpensive foods; reluctance of healthcare providers to reimburse for coverage of obesity treatment; expectations of patients that are greater than the weight loss that can be achieved; and patients reaching a ‘plateau’ of weight loss with difficulty in losing more weight. **Patients also face the stigma of people saying, ‘If they would only push themselves away from the table they wouldn’t be fat.’ ”**

— **GEORGE A. BRAY, MD**, emeritus professor at the Pennington Biomedical Research Center at Louisiana State University, who chaired the task force that drew up the Endocrine Society’s new “Science of Obesity Management: An Endocrine Society Scientific Statement” in “The Science of Managing Obesity” on page 34.

FROM THE CENTURY OF
ENDOCRINOLOGY TIMELINE

1955:

*Vincent du
Vigneaud
wins the
Nobel
Prize in
Chemistry*



In 1955, the Nobel Prize in Chemistry was awarded to Endocrine Society member Vincent du Vigneaud “for his work on biochemically important Sulphur compounds, especially for the first synthesis of a polypeptide hormone.”

For more about the Century of Endocrinology, go to:
www.endocrine.org/timeline.

5,000

The number of intragastric balloons that have been implanted in the U.S. since it was approved in 2016.

— SOURCE: ASMBS



“Do you solemnly swear to listen to my advice?”

2:1

Ratio of the occurrence of primary type 2 osteoporosis — or senile osteoporosis — after age 75 in women and men.

— SOURCE: : @OSTEOPOROSISFIX



BY DEREK BAGLEY
Senior Editor

Mixture of Exposure to EDCs and High-Fat Diet Affects Social Behaviors, Animal Study Finds

“

Moreover,” the authors write, “fatty foods such as oils, dairy, meat, and fish contain the highest level of phthalates, which is of concern as calorically dense and high-fat foods are readily available in the developed world.” They go on to write that exposure to these chemicals and HFD can separately increase oxidative stress and inflammation, so it’s important to study these effects.

”



A rat model of human prenatal exposure to an environmentally relevant mixture of phthalates — endocrine-disrupting chemicals — and a high-fat diet (HFD) shows that said mixture can impact social behavior, according to a study recently published in *Endocrinology*.

Researchers led by Janice M. Juraska, PhD, of the University of Illinois in Champaign, point out that diet is presumed to be the main source of human exposure to phthalates, since these chemicals are used during food production and are found in packaging. “Moreover,” the authors write, “fatty foods such as oils, dairy, meat, and fish contain the highest level of phthalates, which is of concern as calorically dense and high-fat foods are readily available in the developed world.” They go on to write that exposure to these chemicals and HFD can separately increase oxidative stress and inflammation, so it’s important to study these effects.

The researchers fed dams a mixture of phthalates and either a control diet or HFD from gestation

through postnatal day (P) 10. They found that the males’ perinatal exposure to the mixture decreased their prepubertal body weight and periadolescent social play behavior (pouncing and pinning). “A dose-specific effect from phthalates with HFD was also seen in increased time alone in females during social play,” the authors write.

What’s more, the dams that ate HFD consumed more calories, had a greater gestational weight, and tended to lick and nurse their pups more, which led to their pups having increased body weight. “There also was a tendency for increased oxidative stress markers at P10 within the medial prefrontal cortex of males exposed to the relatively high dose of phthalates and HFD. Effects on gene expression were inconsistent at P10 and P90 in both the medial prefrontal cortex and hypothalamus,” the authors write.

Findings: Based on these results, the researchers conclude that exposure to phthalates and HFD had independent effects on the animals that only sporadically interacted other than in the oxidative stress levels in the males. “The effects due to the mixture of phthalates were often small and either dose- or sex-specific. This study demonstrates that perinatal exposure to an environmentally relevant mixture of phthalates can modestly influence later behavior, without regard to diet,” the authors write.

Parental Diabetes Abrogates Ethnic Disparities in Glucoregulation, Study Finds

People whose parents have type 2 diabetes see no ethnic disparities in how they regulate glucose or whether they get type 2 diabetes themselves, according to a study recently published in *The Journal of Clinical Endocrinology and Metabolism*.

A study reported by Ebenezer Nyenwe, MD, FWACP, FACP, FACE, as part of a research project directed by Sam Dagogo-Jack, MD, DM, MSc, FRCP, of the University of Tennessee Health Science Center in Memphis, that ethnic minorities are disproportionately affected by type 2 diabetes. African Americans are nearly twice as likely to have type 2 diabetes than caucasians. However, there haven't been many studies looking at the role of genetics in modifying ethnic effects in normoglycemic African Americans and caucasians. "Therefore," the authors write, "we investigated glucoregulation in normoglycemic African Americans and caucasians with or without parental diabetes."

The researchers evaluated data from 100 healthy, normoglycemic African Americans and caucasians, 50 people with parental diabetes and 50 people whose parents did not have diabetes, matched in age, sex, ethnicity, and Body Mass Index (BMI). The mean age was 40.5 ± 11.6 years, BMI 28.7 ± 5.9 kg/m², fasting plasma glucose 90.2 ± 5.9 mg/dL, and 2-hour postglucose 120.0 ± 26.8 mg/dL. The patients underwent a 75-g oral glucose tolerance test (OGTT), physical



examination, anthropometry, biochemistries, indirect calorimetry and assessment of body composition, insulin sensitivity by euglycemic clamp (Si-clamp), and beta-cell function by Disposition index.

Subjects with parental diabetes showed higher glycemic excursion during OGTT-area under the curve-glucose, lower Si-clamp, and lower Disposition index. Beta-cell function was lower in subjects whose parents have diabetes (by 30% in lean subjects with parental diabetes and 40% in obese subjects with parental diabetes). African Americans without parental diabetes had ~40% lower insulin, twofold higher acute insulin secretion, but ~30% lower Disposition index compared with caucasians without parental diabetes, the authors write. "Remarkably," they continue, "there were no significant differences by ethnicity in these glucoregulatory measures among subjects with parental diabetes."

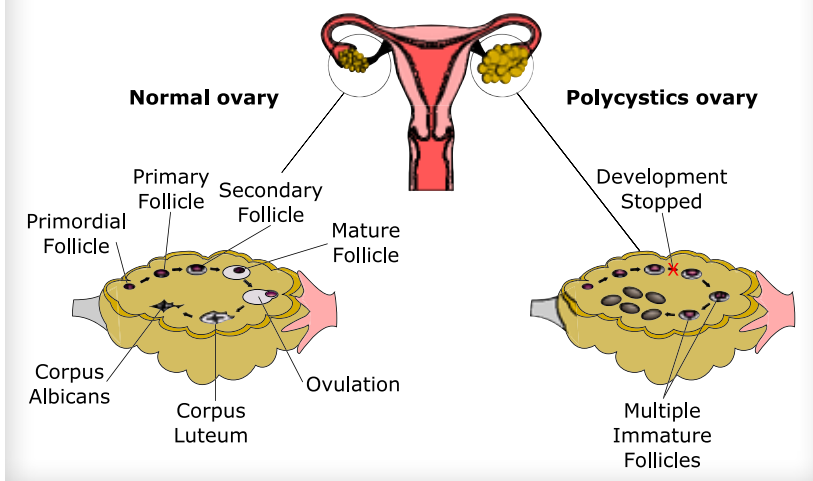
Findings: Based on these results, the authors conclude: "Offspring with parental diabetes harbor substantial impairments in glucoregulation compared with individuals without parental diabetes. Ethnic disparities in glucoregulation were abrogated by parental diabetes." They go on to note that these results represent the earliest glucoregulatory defect in the evolution of dysglycemia in high-risk individuals.

“

African Americans are nearly twice as likely to have type 2 diabetes than caucasians. However, there haven't been many studies looking at the role of genetics in modifying ethnic effects in normoglycemic African Americans and caucasians. "Therefore," the authors write, "we investigated glucoregulation in normoglycemic African Americans and caucasians with or without parental diabetes."

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POLYCYSTIC OVARY SYNDROME



“
Like other
metabolic
disorders, PCOS
is associated with
changes in the
composition of
the microbiome,”
says Thackray,
“Our analysis
indicates women
with PCOS tend to
have less diverse
populations of
gut bacteria,
a trend which
appears to be
linked to elevated
testosterone
levels.”

PCOS May Reduce Gut Bacteria Diversity

Women who have polycystic ovary syndrome (PCOS) tend to have less diverse gut bacteria than women who do not have the condition, according to a new study published in *The Journal of Clinical Endocrinology & Metabolism*.

Researchers led by Varykina Thackray, PhD, with the University of California San Diego School of Medicine in La Jolla, point out that the majority of women with PCOS have metabolic abnormalities that result in an increased risk of type 2 diabetes and heart disease.

Recent research suggests that the gut bacteria differ in individuals with metabolic conditions such as obesity and diabetes compared to individuals who do not have those conditions. “Like other metabolic disorders, PCOS is associated with changes in the composition of the microbiome,” says Thackray, “Our analysis indicates women with PCOS tend to have less diverse populations of gut bacteria, a trend which appears to be linked to elevated testosterone levels.”

The researchers examined fecal swabs from 73 women diagnosed with PCOS who were recruited

at the Poznan University of Medical Sciences in Poznan, Poland. Their samples were compared to swabs from 48 women who did not have PCOS and 42 women who had polycystic ovaries diagnosed using ultrasound imaging but did not have the other features of PCOS.

The analysis found women who had PCOS had the least diverse gut bacteria of the three groups. Women who did not have the condition had the most diverse gut bacteria. Women who had characteristics of polycystic ovaries diagnosed with an ultrasound tended to have more diverse gut bacteria than women with PCOS but less diversity than women without the condition.

Findings: “Our findings suggest testosterone and other androgen hormones may help shape the gut microbiome,” Thackray says. “These changes may influence the development of PCOS and the impact it has on a woman’s quality of life. Additional research is needed to determine whether specific gut bacterial species contribute to the development of PCOS and whether the microbiome offers potential pathways for treating the condition.”

Yoga Benefits Patients with Metabolic Syndrome

One year of yoga training decreased pro-inflammatory adipokines and increased an anti-inflammatory adipokine in adults with metabolic syndrome and high-normal blood pressure, according to a study recently published in the *Scandinavian Journal of Medicine & Science in Sports*.

Researchers led by Parco Siu, of the University of Hong Kong, point out that lifestyle modification is the first line of treatment in patients with metabolic syndrome, and that yoga is a blend of physical exercise, controlled breathing, and relaxation practice. The researchers' previous study showed that one year of yoga led to a decrease in waist circumference and a decreasing trend in blood pressure in people with metabolic syndrome.



The researchers evaluated data from 97 Hong Kong Chinese patients ages 57.6 ± 9.1 years with MetS and high-normal blood pressure, who were randomly assigned to control ($n = 45$) and yoga groups ($n = 52$). Control group participants were given no intervention but were contacted monthly to monitor their health. Subjects in the yoga group underwent three one-hour yoga sessions weekly for one year. "The participants' sera were harvested and assessed for adipokines," the authors write. "Generalized estimating equation (GEE) was used to examine the interaction effect between one-year time (pre vs. post), and intervention (control vs. yoga). GEE analyses revealed significant interaction effects between one-year time and yoga intervention for the decreases in leptin and chemerin and the increase in adiponectin concentration in the sera examined."

Findings: Based on these results, the authors write that this study shows yoga's health benefits in people with metabolic syndrome. "These findings support the notion that yoga exercise might serve as an effective lifestyle intervention to reduce chronic inflammation by downregulating the proinflammatory adipokines and upregulating the anti-inflammatory adipokines in individuals with high-normal blood pressure and MetS. A panel of adipokines as circulatory biomarkers might be useful for monitoring the beneficial outcomes of prolonged yoga exercise interventions," the authors write.

"These findings help to reveal the response of adipokines to long-term yoga exercise, which underpins the importance of regular exercise to human health," says Siu. ^{EN}

“
The researchers' previous study showed that one year of yoga led to a decrease in waist circumference and a decreasing trend in blood pressure in people with metabolic syndrome.
”



Taster's Choice:

BY DEREK BAGLEY

On Monday afternoon, March 19, Josephine M. Egan, MD, a senior investigator at the National Institutes of Health and an expert on diabetes and metabolism, will give a talk titled, “Endocrinology of the Tongue,” as part of a larger session that deals with why people eat what they eat, and the larger implications associated with diet as the obesity rates continue to rise.

“Endocrinology of the Tongue” will focus on how mammals evolved to eat, by not only seeking out calories but wanting

As obesity and diabetes rates reach epidemic proportions, a presentation at ENDO 2018 explains why we eat what we eat. We talked with Josephine M. Egan, MD, for a taste of what you can expect from her talk entitled, “Endocrinology of the Tongue.”

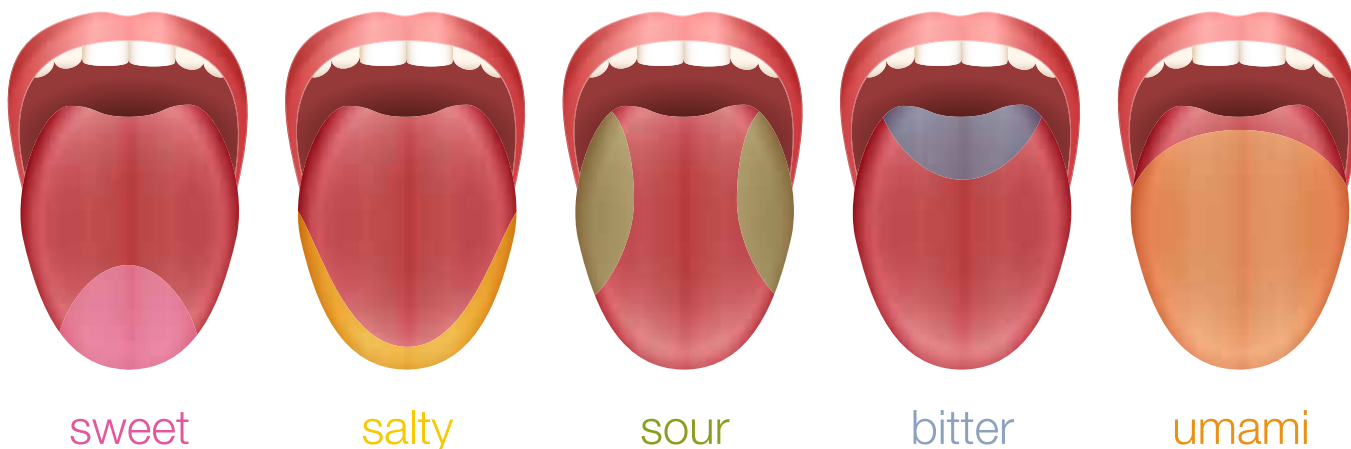
THE ENDOCRINOLOGY OF THE TONGUE

those calories to act as a reward that includes “feeling good.” For the most part, that means that mammals typically seek out sweet tastes and avoid bitter or sour tastes. However, Egan says that before the 1960s, when humans perceived a sweet taste, it meant they were enjoying the benefits of the calories and energy that came along with it. Now, with the introduction of artificial sweeteners, that’s no longer the case, since these sweeteners, in effect, uncoupled taste from nutrition.

According to Egan, “gut” hormones are produced in taste cells, and these hormones help the mammal perceive the intensity of the chemical stimulus. In this case, the taste and subsequent reward of whatever the meal they’re eating. Egan’s laboratory is primarily interested in beta-cell function, and she and her team have been studying incretin physiology and incretin effects in islets for a long

Illustration of the surface of the tongue.





“ There is still much research to be done on just about every hormone that has ever been isolated and described. I would want endocrinologists to take away a basic knowledge of how we ‘taste’ our food. Textbooks of endocrinology do not cover this, and physiology books are out of date on taste and taste mechanisms.”

The tongue is comprised of five tastes shown here: sweet, salty, sour, bitter, and umami, which corresponds to the flavor of glutamates, especially the notorious monosodium glutamate (MSG).

time: Incretins are hormones secreted from the gut in response to foods that are enhancers of glucose-mediated insulin secretion. “We noticed that mice lacking the receptor for GLP-1 (GLP-1RKO mice) were actually gaining less weight as they aged,” she says. “Yet, the expectation would be that they should maybe gain a little more weight than their wild type littermates with age.”

This revelation made Egan and her team curious, and when they looked further into it, they noticed that the GLP-1R mice did not eat as much of their chow because they did not perceive sweet taste to the same extent as wild-type mice. “In other words, their chow was not palatable to them,” she says. “That led us to investigate if GLP-1 was produced in taste cells and if it might be involved in regulating taste cell function.”

Taste Pathways

There are five prototypic tastes: sweet, bitter, sour, salty, and umami (the taste of broths, amino acids such as glutamate). Egan says that these tastes are perceived in the insula within the cortex of the brain and that taste is coded bilaterally in the insulae. Cranial nerves relay the information from the taste cells to the insula, going through “relay” stations on the way.

Egan describes the pathway like this: There are four taste cell types in taste buds — types 1, 2, and 3, with the last type sometimes called a basal cell, a precursor cell, or type 4 cell. The first three cell types are replenished, whenever they undergo apoptosis, from the type 4 cells. What we consider “classical” gut hormones are present in populations of type 1, 2, and 3, depending on the hormone. The hormones are regulating the signaling downstream of when a “tastant” engages its receptor.

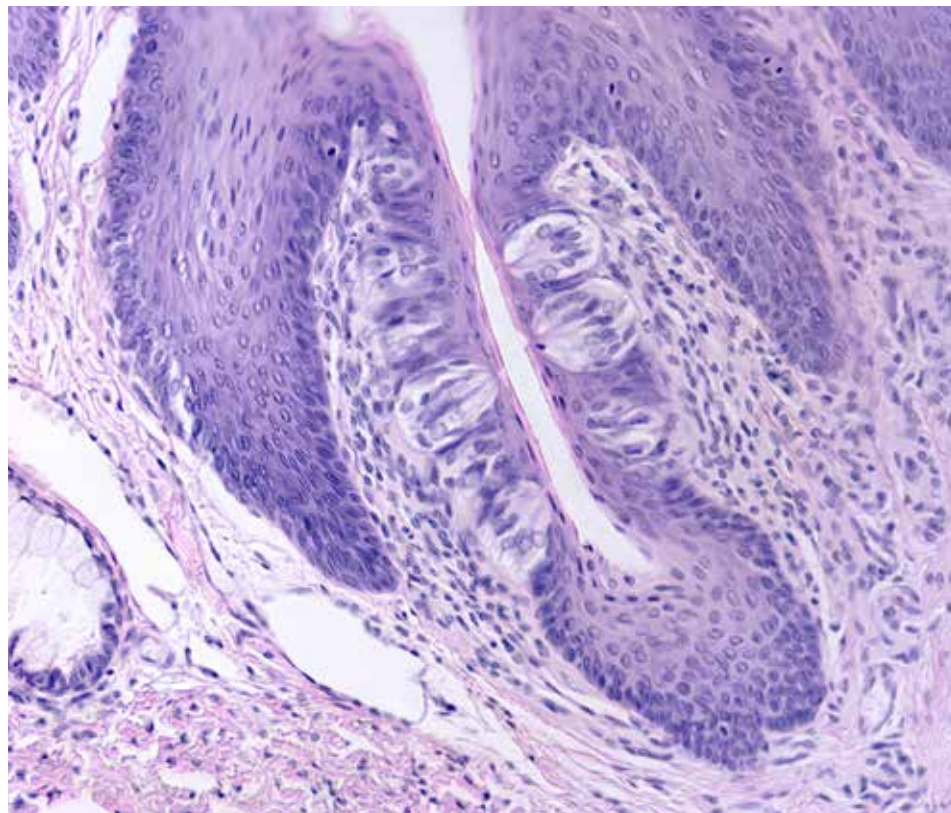
But here's where it gets tricky. With the introduction of these non-caloric artificial sweeteners, these receptors are having different reactions. Egan points to the fact that heavy consumers of non-nutritive sweetened drinks are at higher risk of being obese, which means that artificial sweeteners and sugar evoke a different quality and level of brain responses compared with calorie dense sugars.

"We are beginning to unravel how this is occurring. Based on very elegant studies in mice, we know that there are separate dopaminergic brain circuits for the hedonic and nutritive responses to sugar," she says. "The separation of the post-ingestive effects of sugar means the energy value of sugar is the prime motivation for its ingestion. Consumption of sugar leads to dopamine release in the nucleus accumbens, an area associated with motivation, novelty, and reward."

Gut Check

Non-caloric artificial sweeteners are ubiquitous in the modern diet, and yet obesity rates continue to climb. Egan says that's leading researchers to understand that sweetness, per se, is not the driving force, the ultimate goal, in food intake. "Undoubtedly sweetness enjoys a much more privileged position as a taste in contrast to the variable responses to sour and bitter tastes," she says. "No culture

Photomicrograph of tastebuds on tongue.



AT A GLANCE

- ▶ Mammals evolved to seek out sweet tastes because they're associated with energy and "feeling good."
- ▶ The introduction of artificial sweeteners uncoupled sweet taste from the energy value of sugar.
- ▶ Gut hormones like GLP-1 may be the key in changing food consumption and may serve as a potential target in treating obesity and diabetes.



SEE THE SESSION

Egan's talk on "Endocrinology of the Tongue" is part of a Presidential Plenary Session on Monday, March 19, beginning at 3:00 p.m. in room W375A.

Why We Eat What We Eat, and Why What You Thought You Knew about Salt and Water Balance was all Wrong

3:00 — 3:10 p.m.

President's Announcements and Awards

Outstanding Innovation Award

Presented to Barry Komm, PhD

Outstanding Leadership in Endocrinology Award

Presented to Lawrence A. Frohman, MD

Lynnette Kaye Nieman, MD

President, Endocrine Society, Washington, D.C.

3:10 — 3:35 p.m.

Endocrinology of the Tongue

Josephine Mary Egan, MD

National Institute on Aging, Baltimore, Md.

3:35 — 4:00 p.m.

Salt and Water Balance: Not So Simple

Jens M. Titze, MD

Duke-NUS, Singapore, Singapore

ENDO2018


THE ENDOCRINE SOCIETY'S 100TH ANNUAL MEETING & EXPO

or species rejects sweetness as unpleasant. Anthropologically this could be ascribed to the sweet taste indicating edibility. This notion is supported by the fact that we evolved from arboreal-dwelling primates that consumed huge quantities of fruit for which the ability to sense sweetness is imperative to avoid being poisoned by fruit that is stale or food that is bitter or sour. However, because of those studies in mice, we know that absorption of calorie-rich foods directly influences the brain's reward circuitry independent of taste perception."

“

The separation of the post-ingestive effects of sugar means the energy value of sugar is the prime motivation for its ingestion. Consumption of sugar leads to dopamine release in the nucleus accumbens, an area associated with motivation, novelty, and reward.”

This knowledge is another potential front in the battle against obesity and diabetes. Egan says that this work has opened up the field to an understanding that gut hormones like GLP-1 serve a previously undescribed function to modulate responses to taste, which in turn can change food consumption. And taste receptors on enteroendocrine cells in the gut have come under investigation as potential targets to stimulate endogenous production of GLP-1 as treatments for pre-diabetes and diabetes.

Egan says that as time goes on, endocrinologists are finding that hormones serve many functions, not just the first functions that were ascribed to them. GLP-1 was first isolated from endocrine cells in the gut, and endocrinologists now know it is synthesized in taste cells and subpopulations of neurons. "There is still much research to be done on just about every hormone that has ever been isolated and described," she says. "I would want endocrinologists to take away a basic knowledge of how we 'taste' our food. Textbooks of endocrinology do not cover this, and physiology books are out of date on taste and taste mechanisms." 

BAGLEY IS THE SENIOR EDITOR OF *ENDOCRINE NEWS*. HE WROTE ABOUT THE MEET THE PROFESSOR SESSION AT **ENDO 2018** BY LISA TANNOCK, MD, ON STATIN INTOLERANCE IN THE FEBRUARY ISSUE.

ENDOCRINE FACTS AND FIGURES

Endocrine Facts and Figures is a compendium of epidemiological data and trends related to a spectrum of endocrine diseases.

All information is sourced from peer-reviewed publications and reviewed by a group of experts in the field.



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Q&A: Kathryn Martin, MD



Endocrine News talks with Kathryn Martin, MD, chair of the task force that created the latest Endocrine Society Clinical Practice Guideline on hirsutism. She discusses why it was important for the Society to release such a guideline on this topic now and why she thinks it will impact the care patients receive in the future.

“Hirsutism can make women feel distressed, anxious, and depressed. But there are many available treatments that can help them manage the hair growth.”

In February, the Endocrine Society issued a Clinical Practice Guideline on hirsutism, the first such guideline since 2008. Titled “Evaluation and Treatment of Hirsutism in Premenopausal Women: An Endocrine Society Clinical Practice Guideline,” it was published online and will appear in the print issue of *The Journal of Clinical Endocrinology & Metabolism* (JCEM) in April.

Kathryn A. Martin, MD, of the Massachusetts General Hospital in Boston, served as the chair of the task force that created the guideline. She spoke with *Endocrine News* about how clinicians can address this problem, which is often key to other underlying disorders, as well as how hirsutism is much more common than many people may realize.

Endocrine News: For endocrinologists familiar with the 2008 guideline, what changes can they expect to see in the updated version?

Kathryn Martin: We have modified our recommendations for both the evaluation and management of hirsutism.

We have broadened our suggestions for biochemical testing. We now suggest testing (with a serum total testosterone level) for all women with hirsutism, not just those with moderate-to-severe hirsutism. We have also broadened the suggestions for measuring serum-free testosterone and 17-hydroxyprogesterone concentrations.

Our treatment suggestions are quite similar, but we have made a new recommendation for lifestyle changes for obese women with polycystic ovary syndrome (PCOS). We have a stronger recommendation against the use of flutamide because it causes hepatotoxicity, and we have reconfirmed that all oral contraceptives appear to be equally effective for hirsutism (based upon our

Hirsutism is often a sign of an underlying medical problem — often PCOS — and patients need to be tested to find out the underlying causes and potential treatments.



updated meta-analysis). Lastly, we provide more detail on the uses, efficacy, and safety of photoepilation (laser and intense pulsed light). It is a very effective therapy for women with light skin and dark hair but is less effective and sometimes associated with complications in women with darker skin.

EN: What was the main reason for the publication of the hirsutism guideline — what drove the decision, and why now?

KM: The original decision for doing this guideline (as well as the reason for updating it) is that hirsutism is:

- ▶ Very common (5% to 10% of all women);
- ▶ Usually associated with an underlying endocrine disorder (most commonly PCOS); and
- ▶ Associated with personal distress and high rates of depression and anxiety if not treated.

EN: What are your hopes for the impact of the guideline on endocrine standards of care of the patient with hirsutism?

KM: Our hope is that clinicians will become more aware that hirsutism causes important personal distress for women and is usually a sign of an underlying endocrine disorder. In addition, we hope that women who present with hirsutism will be offered an endocrine evaluation followed by appropriate therapy as outlined in the guideline (pharmacologic, direct hair removal methods, or both).

EN: How do you expect other medical specialties to be affected by the task force's recommendations?

KM: This guideline is relevant for a number of other specialties including primary care, family medicine, ob-gyn, and adolescent medicine.

EN: What are the key take-home messages for patients in this guideline?

KM: Hirsutism (excess facial or body hair) is often the sign of

“Our hope is that clinicians will become more aware that hirsutism causes important personal distress for women and is usually a sign of an underlying endocrine disorder.”

an underlying medical problem (particularly PCOS). Your healthcare provider can do testing to find out what is causing it and then offer you treatment.

Hirsutism can make women feel distressed, anxious, and depressed. But there are many available treatments that can help them manage the hair growth. They should ask their healthcare providers for more information. The main treatments are oral contraceptives, another group of medicines called “antiandrogens,” and direct hair removal methods like laser and electrolysis. Other cosmetic methods like shaving, plucking, waxing, and threading can also be helpful, and they do not make hair grow back faster. ^{EN}

In the spring, the Endocrine Society will release “Science of Obesity Management: An Endocrine Society Scientific Statement,” which establishes the state-of-the-art in obesity management.

Much of the data will also serve to confirm many widely accepted beliefs while dispelling others.





The Science of **MANAGING OBESITY**

BY ERIC SEABORG

A new Endocrine Society scientific statement on obesity confirms many current best practices and knocks down some misconceptions.

It provides the evidence for many well-accepted concepts: Obesity contributes to a host of associated illnesses; weight loss reduces these effects; and weight loss depends on a negative energy balance. It challenges the idea that people can be “fat and fit” without deleterious metabolic consequences and warns against the supplements and herbal preparations many patients use to treat obesity.

“This statement describes the state of the art in 2018 of

where we are on one of the major public health problems of the day,” says George A. Bray, MD, emeritus professor at the Pennington Biomedical Research Center at Louisiana State University, who chaired the task force that drew up the statement.

“Obesity ... contributes to: a shortened life span, type 2 diabetes mellitus, cardiovascular disease, some cancers, kidney disease, obstructive sleep apnea, gout, osteoarthritis, and hepatobiliary disease, among others,” the statement says. “Weight loss reduces all of these diseases in a dose-related manner — more weight loss, better outcome.” Weight loss of 10% is associated with improved life span.



“Weight loss is best achieved by reducing energy intake and increasing energy expenditure. Programs that are effective for weight loss include peer-reviewed and approved lifestyle modification programs, diets, commercial weight-loss programs, exercise programs, medications, and surgery.”

— FROM “SCIENCE OF OBESITY MANAGEMENT: AN ENDOCRINE SOCIETY SCIENTIFIC STATEMENT”

BMI and Risk Factors

Body mass index (BMI) remains the simplest measure of obesity and should be used to assess risk for morbidity and mortality, but when making treatment decisions clinicians should also consider body fat distribution to help identify individual health risks. Because increased visceral fat predicts the development of type 2 diabetes and cardiovascular mortality risk better than total body fat alone, the statement recommends the use of measurements such as waist circumference and the waist-to-hip ratio as straightforward methods of incorporating weight distribution to help assess risk.

“Genetic, environmental, and behavioral factors influence the development of obesity,” the statement says, but the mantra of eat less and move more remains the key to combatting it.

“Weight loss is best achieved by reducing energy intake and increasing energy expenditure. Programs that are effective for weight loss include peer-reviewed and approved lifestyle modification programs, diets, commercial weight-loss programs, exercise programs, medications, and surgery.”

Which Diet Is Best?

“There is no magic diet. Whatever diet you want to use will work, if you reduce your calories,” Bray says. One trial randomized 169 individuals with obesity to one of four popular diets — the Atkins diet, Ornish diet, Weight Watchers diet, and Zone diet. After 12 months, each diet produced similar weight losses,



with adherence to the diet being the single most important determinant of successful weight loss.

In the long-running low-fat vs. low-carb debate, there is no evidence that either is more effective for weight loss. A meta-analysis published last year found that “when you control for protein intake neither the carbohydrate nor the lipid content of the diet produces more weight loss,” Bray says.

Because “food consists of more than calories,” the statement recommends selecting “foods that you enjoy and [substituting] lower calorie, healthy foods.” Bray says an important point to keep in mind is that sugar-sweetened beverages contribute to development of obesity and diabetes and are a key target to eliminate. The Mediterranean diet and DASH (dietary approaches to stop hypertension) diet are cardioprotective and therefore sound dietary strategies.

There is marked variability between individuals in the success of weight-loss treatments and no way to predict the outcome of any treatment. Lifestyle interventions and diet are often not enough, so the statement says: “When weight loss is the goal, failure to lose $\geq 5\%$ of body weight at 3–6 months should generally lead to a review of treatment strategies.”

Medication and Surgery

Other strategies could include the several prescription medications approved by the Food and Drug Administration for weight loss. When a medication is added to lifestyle intervention, patients lose on average 5% more weight than they do with lifestyle efforts alone. Some of these medications are also associated with reduced cardiovascular events. A medication that produces clinically significant weight loss — generally defined as 5% or more after three months and 10% or more at one year — may be continued.

“Surgical treatment of severe obesity can produce sustained weight loss and is associated with improvement in mortality and morbidity as well as risk factor improvement,” Bray says.

Sleeve gastrectomy is the most common procedure today, followed by Roux-en-Y gastric bypass. The two account for three-quarters of bariatric surgeries. Surgery is the most effective strategy for weight loss, and “the poorest weight loss following gastric bypass is comparable to the best reported weight loss for non-surgical interventions,” according to the statement. Weight loss varies greatly among individuals, and weight regain is a common concern.

Those who achieve the greatest weight loss are those who are best at adjusting their postoperative eating and lifestyle behaviors, such as frequently monitoring their weight, not eating when full, and avoiding between-meal snacks.

“Evidence now indicates that some of these bariatric procedures (which were intended to either physically limit the ingestion of food or produce malabsorption of energy



AT A GLANCE

- ▶ Genetic, environmental, and behavioral factors influence the development of obesity, and both the general public and health professionals stigmatize those who suffer from the disease.
- ▶ Weight loss is a key to ameliorating the health-related effects, and effective treatments for weight loss include lifestyle modification programs, diets, commercial weight-loss programs, exercise programs, medications, and surgery.
- ▶ No specific diet has proven to be the most effective, and surgery has been shown to lead to the greatest weight loss in the average patient.

“

Obesity ... contributes to: a shortened life span, type 2 diabetes mellitus, cardiovascular disease, some cancers, kidney disease, obstructive sleep apnea, gout, osteoarthritis, and hepatobiliary disease, among others. Weight loss reduces all of these diseases in a dose-related manner — more weight loss, better outcome.”

— FROM “SCIENCE OF OBESITY MANAGEMENT: AN ENDOCRINE SOCIETY SCIENTIFIC STATEMENT”

“Science of Obesity Management: An Endocrine Society Scientific Statement” is slated to be published in the April issue of *Endocrine Reviews*.

containing nutrients) actually produce durable weight loss and health benefits by altering metabolic processes, reducing appetite, and inducing satiety early after meal ingestion.” Surgery has proven superior to intense medical treatment in controlling or inducing remission of type 2 diabetes, so much so that the term “metabolic” surgery has become popular.

The best surgical outcomes are produced by experienced surgeons who have performed 50 to 100 or more procedures at centers that focus on metabolic and bariatric surgery.

Countering Misconceptions

The statement also cautions against some pitfalls. For example, because some individuals with obesity do not manifest signs of ill health, such as prediabetes, dyslipidemia, or hypertension, the notion of “medically healthy obese” people has spread. “This phenotype appears to be a transient or intermediary state that progresses over time to an unhealthy phenotype, especially in children and adolescents,” Bray says, so clinicians should not fall into a false sense of security.

The statement also emphasizes that clinicians should be aware that many patients take over-the-counter dietary supplements and herbal preparations marketed with claims of helping weight loss. It notes that these preparations “have limited, if any, data documenting their efficacy or safety. There are no regulatory requirements to assure that what the consumer buys contains what the label indicates. The public would be better served if the dietary supplements were held to a higher standard and were overseen by the Food and Drug Administration.”

Headwinds

Treatment of obesity is subject to many “headwinds,” the statement says. Weight regain is expected, especially if treatment is discontinued, and is on average 50% of the original weight loss at two years.

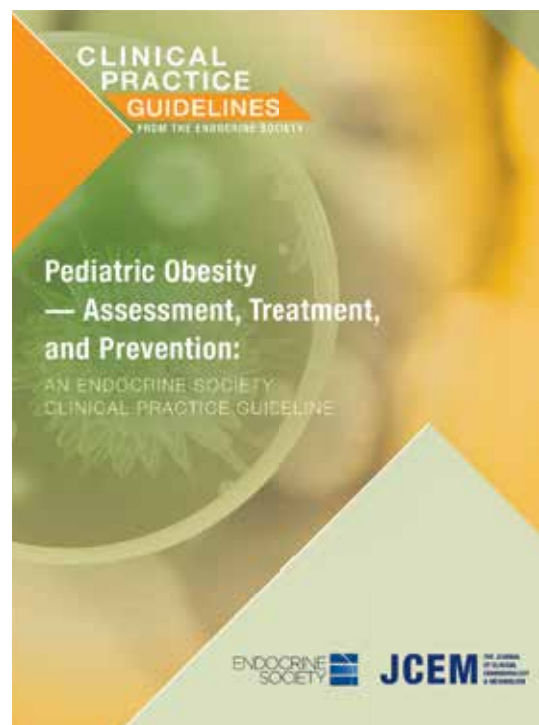
“Other challenges include an obesogenic environment with abundant tasty, convenient, and inexpensive foods; reluctance of healthcare providers to reimburse for coverage of obesity treatment; expectations of patients that are greater than the weight loss that can be achieved; and patients reaching a ‘plateau’ of weight loss with difficulty in losing more weight. Patients also face the stigma of people saying, ‘If they would only push themselves away from the table they wouldn’t be fat,’” Bray says. ^{EN}

SEABORG IS A FREELANCE WRITER BASED IN CHARLOTTESVILLE, VA. HE WROTE ABOUT THE DIABETIC MICROVASCULAR DISEASE SCIENTIFIC STATEMENT IN THE FEBRUARY ISSUE.

Pediatric Obesity —Assessment, Treatment, and Prevention

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- ▶ About 7 percent of children with extreme obesity may have rare chromosomal abnormalities or genetic mutations
- ▶ Specific genetic testing when there is early onset obesity (before 5 years old)

Peer-reviewed and developed by a team of experts, the Society's Clinical Practice Guidelines provide the highest quality, actionable recommendations for physicians in a clinical setting.

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Like Father, Like Son

As Anthony Hollenberg, MD, settles into his new positions at New York Presbyterian/Weill Cornell Medical Center and Weill Cornell Medicine, he reflects on the influence of his endocrinologist father as well as moving a lab from Boston to New York City.

BY GLENDA FAUNTLEROY

Anthony Hollenberg, MD, is preparing for his new role as chairman of the Department of Medicine at Weill Cornell Medicine and physician-in-chief at New York-Presbyterian/Weill Cornell Medical Center. As chairman, Hollenberg will lead the institutions' largest clinical and academic department, overseeing 16 divisions and nearly 2,600 physicians and scientists.

Hollenberg arrives at Weill Cornell from Beth Israel Deaconess Medical Center in Boston, where he served as chief of the Division of Endocrinology, Diabetes, and Metabolism since 2011. He specializes in the treatment of thyroid disorders, and as a basic and translational researcher, Hollenberg uses findings gleaned from his basic science research to help his patients, who further inform his work in the lab.

Endocrine News caught up with Hollenberg shortly before he began his new chair position on February 1.

EN: What are your early goals for your new position?

Hollenberg: My early goals when I first arrive are to learn as much as I can about the faculty and the institution and then begin working on a strategy to enhance each of the divisions and the missions of the department.

EN: What drew you to the field of endocrinology and, more specifically, the area of thyroid disorders?



Hollenberg: So, for the field of endocrinology, my father was an endocrinologist and did research in adipocyte biology. I became more interested in molecular endocrinology in college when I did a senior thesis project in the lab of Bill Chin, one of the early leading thyroid researchers. And after finishing my clinical training, I then went into the laboratory of Larry Jameson who was interested in thyroid

“ I think the most important thing is really liking the journey and enjoying the research that you are doing. I think perseverance is the most important quality needed in research.”

research and then Fred Wondisford who was also interested in thyroid research. Based on these experiences with both Larry and Fred, I became very interested in the field.

EN: You are a very prolific author with 11 peer-reviewed articles published just in 2017 alone. Can you share what projects are taking the lead in your laboratory right now?

Hollenberg: Well, we're interested in all things thyroid, and we have a large focus on how thyroid hormone regulates metabolism — both at the molecular level in context of what proteins it uses to do that and at the physiologic level in understanding what pathways thyroid hormone regulate. So that project is very much at the forefront of what we do. We're also very interested in thyroid gland development and understanding how the thyroid develops and whether we can use that information to potentially create new thyroids for patients from embryonic stem cell cultures. So all together, that is what we're focused on in the laboratory.

EN: You currently have a pretty large group of laboratory researchers with you at Beth Israel. Will your lab and team move to Weill Cornell?

Hollenberg: Yes, the lab will be moving to Cornell. I currently have nine or 10 people in my laboratory in Boston, and the majority of those people are planning to make the move. We're still working on the exact numbers, but at least five or six are coming when the lab moves in June.

EN: What advice do you give the young scientists in your laboratory and other endocrinology researchers in training about how they can excel in the field?

Hollenberg: I think the most important thing is really liking the journey and enjoying the research that you are doing. I think perseverance is the most important quality needed in research, so enjoying the intellectual stimulation and the area that you're in the most and getting excited from the challenge is the most important thing.

EN: Do you have a specific mentor who stands out in your career who you think set you on a good track or helped you stay focused?

“We're interested in all things thyroid, and we have a large focus on how thyroid hormone regulates metabolism — both at the molecular level in context of what proteins it uses to do that and at the physiologic level in understanding what pathways thyroid hormone regulate.”

Hollenberg: I think my early mentors, I mentioned them all earlier, Bill Chin, Larry Jameson, and Fred Wondisford were all great mentors, and also Jeff Flier here at Beth Israel, were all really instrumental in my development as an investigator.

EN: How important would you say it is for young researchers to network and have a mentor? Does it help one to stay engaged and excited about their career?

Hollenberg: Yes, it's incredibly important to seek out mentors and also having the time to do that is really important, I agree.

Hollenberg is also an associate editor of the Endocrine Society journal, *Endocrinology*. Board-certified in internal medicine, Hollenberg has published more than 80 original studies in journals and has also contributed 25 book chapters and reviews. ^{EN}

At Your Service

For endocrinology practices seeking to enhance the bottom line, ancillary services could be a viable option.

BY KURT ULLMAN

As reimbursements shrink, more practices are looking into providing ancillary services (AS) to their patients. Properly configured, they can add to a practice's income, provide better patient care, and possibly increase satisfaction by cutting down on the number of places a person goes to get care.

"If the healthcare pie is a fixed size, AS provision gives you access to a larger slice of that pie," says Kenneth Hertz, FACMPE, principal with Medical Group Management Association Health Care Consulting Group. "It helps you provide additional patient-care services and gives the physicians more tools to work with. They potentially offer you a competitive advantage by allowing patients to get more things taken care of in one trip."

Current Management

One of the first variables a practice should consider is its current management. Some

practices may say that they aren't as profitable as they used to be, and the answer is just adding an AS.

"It isn't always that simple," Hertz says. "If the practice is less than well managed at the start, adding product lines could make the problems even worse. These are essentially start-up businesses that require business knowledge and discipline to be successful."

It is necessary to have a frank discussion about how the partners view the addition of an AS. Is there a desire on the part of the partners in the practice to start thinking about providing additional services to patients? Is there one championing the cause or are all in agreement? Knowing how the group feels about adding services at the beginning of the process may help lessen the chances of hurt feelings or arguments among the owners later on.

"I would say that adding as



many ancillary services as possible is a good idea just for the overarching care of your patients,” says Karl Nadolsky, DO, a board-certified endocrinologist and obesity specialist with Spectrum Health Medical Group, Diabetes and Endocrinology Practice in Grand Rapids, Mich. “Theoretically, the sky is the limit, although there are logistical limits. I think every practice should do as much as they can to help optimize the overall care of the patient.”

Which Services to Offer?

There are a number of things to consider when thinking about adding extras to your practice. The first obviously is which ones to offer. Looking at your current referrals can be a fertile ground for ideas. If you are sending patients to another provider or facility at a high enough rate, perhaps it is time to bring these encounters back in-house.

“Perhaps the most overlooked ancillary service is the use of nurse practitioners and physician assistants,” Hertz says. “If your practice has reached what seems like the maximum of patients who can be seen, adding advanced practice practitioners is something to take a hard look at. It is something that at the functional and financial level is easily understood since it isn’t that much different than adding another physician. They improve patient care and access, increase continuity, and bring in more revenue, which are all good things.”

Depending on the size and patient panel, there are a number of services that can be added by endocrinology practices. Among these would be:

- ▶ **Diabetes services such as podiatry, weight or medication management, dieticians**
- ▶ **Thyroid ultrasound and guided biopsy**
- ▶ **Laboratory services**
- ▶ **Participation in clinical trials**
- ▶ **Counseling services**
- ▶ **Bone density testing**

“I think the size of the practice is not a consideration,” Nadolsky says. “If there was only one provider and they thought an AS could help, I think they could make it work.”

Look at your practice’s patient panel, and see what kinds of

“Endocrinology is a special subspecialty where we can utilize a holistic, multidisciplinary approach and use many ancillary services to optimize patient outcomes.”

— KARL NADOLSKY, DO, SPECTRUM HEALTH MEDICAL GROUP, DIABETES AND ENDOCRINOLOGY PRACTICE, GRAND RAPIDS, MICH.

people you are seeing. If you are mainly treating patients with diabetes, adding thyroid ultrasound services may not be your best bet. Don’t start adding programs just for the sake of adding programs.

Look at the Financial Impacts

The next step is to look at the financial aspects. Will you need to add more staff, both patient-facing and in the back office? Can you fit the service in your current space and if not, add in those extra costs? Some services may require remodeling the office, which is an added expense.

Another facet is the cost of any machinery that you may need to perform the new service. Is it better to buy it or lease it? How much will it cost to maintain the equipment over its life?

“After expenses, the other side is how are you going to get reimbursed,” says Karen Vangoor-Woltjer, the practice manager at Spectrum Health. “If insurance, Medicare, or Medicaid is involved, you will need to know the reimbursement level. For a strictly self-pay service, you will need to determine your charges. Then you have a better understanding of the return on investment of providing the service.”

How to divide up both the extra work and the extra money needs to be agreed to by the practice owners very early in the process to avoid problems.



“For some ancillary services, physician involvement will be minimal,” Vangoor-Woltjer says. “Others may require physician oversight. How to handle the work load, reimbursement, and expense concerns should be decided and agreed to by the physicians and administration.”

Legal Considerations

There are also legal concerns that need to be addressed before any program begins. Is the practice at risk for violation of any self-referral rules, especially if Medicare and Medicaid are providing payment? Carefully review your contracts to make sure you understand how your contracts with payers, your hospital, or others affect the addition of these services.

When the decision to start an AS is made, the hard part begins.

“Every AS, even in established practices, is a start-up business,” Hertz says. “Everybody needs to be on the same page on expectations and timelines, and the metrics for success.

Perhaps of equal importance is to have an objective measure for when to pull the plug.”

Other Resources

There are many resources available to guide the decision-making process. Involve your accountant and lawyers early. If you are going to purchase a piece of equipment, the vendor often has checklists and can help in developing a budget. State medical society or the professional organizations for the doctors or the practice manager are another good source. As with most other endeavors in medicine, there are consultants available to lend their expertise and experience.

“From my perspective, utilizing any AS that is beneficial to our patients should be considered,” Nadolsky says. “Endocrinology is a special subspecialty where we can utilize a holistic, multidisciplinary approach and use many ancillary services to optimize patient outcomes.” ^{EN}

President Trump Releases FY 2019 Budget Request

While Congress has not yet finalized fiscal year (FY) 2018 federal funding decisions, President Trump has kicked off the FY 2019 federal budget process by submitting his budget request to Congress on February 12. The president's budget proposal calls for approximately \$4.4 trillion in total spending. Much of the budget seeks to scale back nondefense programs and streamline review processes for projects.

In a departure from traditional Republican priorities, the president's budget will not balance over 10 years. The administration projected an annualized economic growth of 3.1 percent over the next three years. It would add \$984 billion to the

Department of Health and Human Services (HHS), a reversal from last year's proposed decreases and the administration's original plan for FY 2019. The president proposes \$95.4 billion for spending in FY 2019, compared to the \$86.7 billion that HHS had for FY 2017. The administration initially planned to see a 20% cut in HHS spending. The proposed increase for HHS would almost entirely go toward the administration's efforts to fight opioid abuse. But, despite the increase for a highly visible issue, other areas such as HIV/AIDS, cancer research, and emergency preparedness still have proposed cuts.

In addition, much of the president's proposal's long-term spending outlook is predicated by assumptions that Congress would pass a health care overhaul that would significantly cut Medicaid spending growth. The president's budget proposal shows that the administration still hopes to repeal the Affordable Care Act and replace it with block grants for states to provide coverage. The budget proposal calls for replacing the current law with a plan similar to the one proposed last year by Senators Lindsey Graham (R-SC), Bill Cassidy (R-LA), Ron Johnson (R-WI), and Dean Heller (R-NV).

The president's proposal was met with opposition from many health organizations that raised concerns about the impact on federal health agencies and programs to protect and promote the public's health. The research community noted that the National Institutes of Health (NIH) would receive roughly flat funding and called upon Congress to reject the president's request.

The president's budget request, however, is a proposal. It does not have the force of law and is only the first step in the annual budget and appropriations process. The Endocrine Society will continue to call for an increase for the NIH of \$2 billion over the Senate's recommended FY 2018 amount. Society members are encouraged to watch for future updates and advocacy campaigns.

federal deficit over the next year, despite seeking cuts to welfare programs such as Medicare and food stamps. Over the next 10 years, the plan would add \$7 trillion to the deficit.

Another unexpected departure for President Trump is that his proposed budget provides modest short-term increases for the



Take Action

Please join our campaign to contact your representative and senators before March 23. This is our last chance to ensure the NIH receives our recommended funding increase for FY 2018. Even if you have contacted your members of Congress previously, we need you to reach out to them now and share our message to support a final funding bill that includes a \$2 billion increase for NIH. Taking action is quick and easy. Simply visit www.endocrine.org/takeaction, and click on the NIH funding campaign. You will need to provide EITHER your home address OR your email and member ID. Our software will provide you with a pre-written email, which you can personalize if you wish, and will direct the email to your representative and senators.

FY 2018 Appropriations for the NIH Still Not Finalized; Join Our Campaign to Increase NIH Funding

On February 9, Congress passed a two-year bipartisan budget deal that increased spending caps to free up billions of dollars to be used to increase spending on federal programs, including the National Institutes of Health (NIH). At the same time, Congress passed a temporary funding measure to keep the government running through March 23 at its current funding level while leaving the congressional appropriations

committees six weeks to finalize fiscal year (FY) 2018 funding decisions.

The Endocrine Society has been a leading advocate for raising the spending caps, and this is a major legislative victory for us; however, our work is not done until Congress finalizes FY 2018 funding. We are calling on Congress to provide a \$2 billion increase over FY 2017, an amount the Senate Appropriations Committee recommended.

Join Us at ENDO 2018 for a Session on Advocacy and How You Can Make a Difference

To find out how you can become involved in the Society's advocacy efforts, including our efforts to increase funding for the National Institutes of Health, please join us at ENDO for a special session hosted by the Advocacy and Public Outreach Core Committee (APOCC).

The purpose of the session is to discuss the Society's advocacy priorities, how we achieve our "wins," and how you — our members — can be involved in the process. We will offer four different ways for you to participate including: advocacy opportunities in Washington, D.C., sharing your expertise to advise us on policy and position statements, and using social media as an advocacy tool. This is also a great opportunity to hear from seasoned "endocrine advocates" about their experience in impacting policy both on Capitol Hill and from the comfort of their own home.

The session takes place on Saturday, March 17 from 12:00 to 12:50 p.m. in the Science Hub. If you have questions or would like to participate in this session, please write to the Government & Public Affairs department at govt-prof@endocrine.org. We hope you will join us!



Endocrine Society Champions Access to Healthcare for Women, Transgender Individuals

Over the past year, the Trump administration has introduced several policies that have implications that could reduce access to care for women and transgender individuals. It is a top priority of the Endocrine Society to ensure that all patients, regardless of gender, have access to affordable, high-quality medical care. Based on the Society's 2018 position statements on the topics, we have responded to these policies through regulatory and judicial channels.

In October 2017, the Department of Health and Human Services (HHS) released a rule that would make it easier for companies to get an exemption from providing contraception at no cost to their employees, if their exemption was based on moral or religious grounds. In response, the Endocrine Society (along with AACE and the American Society for Reproductive Medicine) called on the American Medical Association (AMA) to work to halt the implementation of the rule to ensure that all women continue to have access to preventive contraception. The AMA House of Delegates reaffirmed its commitment to this issue based on existing policy. Similarly, the Endocrine Society also responded to a proposed rule from the new Office of Conscience and Religious Freedom in the HHS, which would enforce existing statutes that protect the rights of health care providers to refuse to provide services that go against their religious or moral beliefs. Our comments focused specifically on the need to ensure that all patients have alternative care options should a provider object to the care patients are receiving.

The Endocrine Society continues to support judicial efforts to protect the rights of transgender individuals by signing amicus briefs that focus on the biological underpinnings of gender identity and the health care needs of these individuals. Most recently, we joined other leading medical, mental health, and health care organizations in submitting an amicus brief to the third circuit appeals court hearing *Doe et al. v. Boyertown Area*



School District, et al., a case in which non-transgender students challenged the school district's trans-inclusive restroom and locker policy. Our brief informed the court of the consensus among health care professionals regarding what it means to be transgender, the protocols for the treatment of gender dysphoria, and the predictable harms to the health and well-being of transgender adolescents when they are excluded from restrooms that match their gender identity.

The Endocrine Society will continue to work to protect patient access to care, as well as the healthcare needs of women and transgender individuals. To learn more about the Society's position on these topics, please visit www.endocrine.org/advocacy/priorities-and-positions or contact govt-prof@endocrine.org.

Shifting Gear: What I Use In My Practice

As personal technology improves by leaps and bounds making our daily lives easier — smartphones, Alexa, self-driving cars — patients are expecting the same improvements when they walk into their doctor's office. Eric Ocampo, MD, FACP, FACE, shares with *Endocrine News* just a few of the items that have made his daily practice easier on him and his patients.

“The best part of the job is helping people. I like seeing my patients improve and when they start making progress and seeing results, they are very appreciative.”



Originally from the Philippines, Tyler, Minn.-based endocrinologist Eric Ocampo, MD, FACP, FACE, tells his patients that they are the ones driving their care: “It’s their show, I tell them,” he explains. “I’m not running it, they are. When they understand that they are the biggest part of how they can improve their health, that gets them really interested and motivated.”

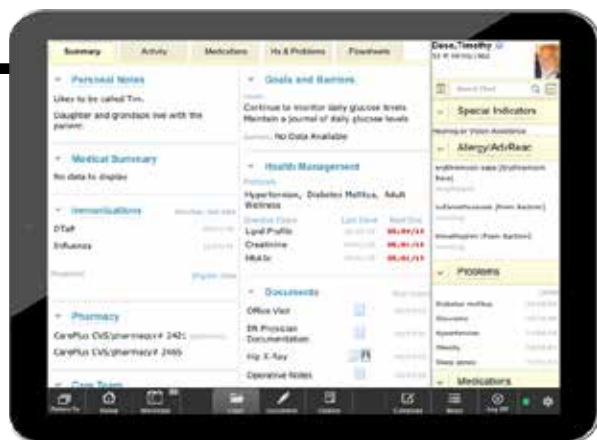
Ocampo received his MD from the University of the Philippines College of Medicine in Manila in 1990 and then came to the U.S. for his internship, residency, and fellowship at Montefiore

Medical Center in the Bronx in New York. His residency was in internal medicine while his fellowship was in endocrinology.

It was during his residency that Ocampo first became interested in endocrinology as he was deciding on a subspecialty in internal medicine. “I was originally going into cardiology, but when I observed my mentors — Martin I. Surks, MD, Lawrence Shapiro, MD, and Kenneth Hupart, MD — who were all endocrinologists, I decided to go that route,” he explains, adding that “they were all even-keeled and seemed less stressed; and I had a resident [Christine Resta, MD — and still a close friend] whom I respected who also went into endocrinology. So it was all fate.” On top of that, Montefiore had an opening in the endocrinology division while he was there, securing his future as an endocrinologist.

Although Ocampo is from a family of lawyers, he knew he wanted to be a doctor ever since he was a child and values the time he spends with his patients. “The best part of the job is helping people,” he says. “I like seeing my patients improve and when they start making progress and seeing results, they are very appreciative.”

In his daily practice, Ocampo treats a variety of endocrine conditions including thyroid disorders, metabolic and nutritional disorders, pituitary disease, menstrual and sexual problems, and diabetes. He took a few minutes out of his busy schedule to share with *Endocrine News* some of the products he finds helpful in his practice.



Meditech Electronic Health Records (EHR)

I was board-certified in endocrinology in 1997, so I had been totally dependent on my Catholic-school honed penmanship for chart notes, prescriptions, and professional correspondence for many years. During training, the computer was mainly used to check labs, and we still had to manually pull the actual x-ray plates to review films and physically look for paperwork in search of detailed patient information.

I would be lying if I said that I embraced the coming of EHRs (electronic medical records) without any resistance. For me, it was a total paradigm shift. I am presently using Meditech (with Dragon Software) since this is the EHR being utilized by the Avera system (in the Minnesota and South Dakota regions) and is the third EHR I've been exposed to since starting my practice. Compared to the two previous systems, Meditech is definitely more manageable.

I like many of the features in this system. My visit note can be completed right away, using the Dragon dictation system and/or using the incorporated templates. I don't need to wait for any transcriptions, which I have to proof again. I can customize as to how detailed or not the visit note should be. The

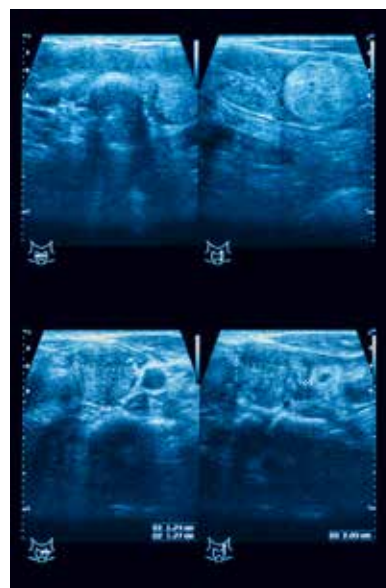
medication and lab orders are directly accessed from the visit encounter. There is also easy access to the patient's other information — labs, previous notes, other specialty notes, radiologic reports, and actual scan/radiographic images. I can tag the patient's other providers so that they would be notified of the patient's progress. The "Chart Notes" portion documents anything else that is patient related — phone calls, lab notification, med refills. The "Patient Portal" feature is becoming a very important means of ensuring timely patient notification; as well as a perfect way of making sure that the patient communication is documented and filed in the actual electronic chart. Since this system is web-based, I can access the EHR from home or elsewhere using a secure connection.

Overall, I do feel that Meditech IS making my life easier. Since I am getting older and my memory is not as "photographic" as it used to be, I am becoming very dependent on the records that I maintain in the system. The information becomes very important in making patient decisions, for the present and the future.

Today, I wonder why I thought it was such a big deal to switch. The bottom line is — any system can be as useful to a provider's practice as he or she wants it to be.

<https://ehr.meditech.com/>

“I would be lying if I said that I embraced the coming of EHRs without any resistance. For me, it was a total paradigm shift.”



Nuance PowerScribe 360 Reporting

During my fellowship, our program director Martin Surks, MD, a stalwart in thyroidology, stressed the importance of the proper and complete way of examining a thyroid. This was essential since it would take several days for a thyroid sonogram



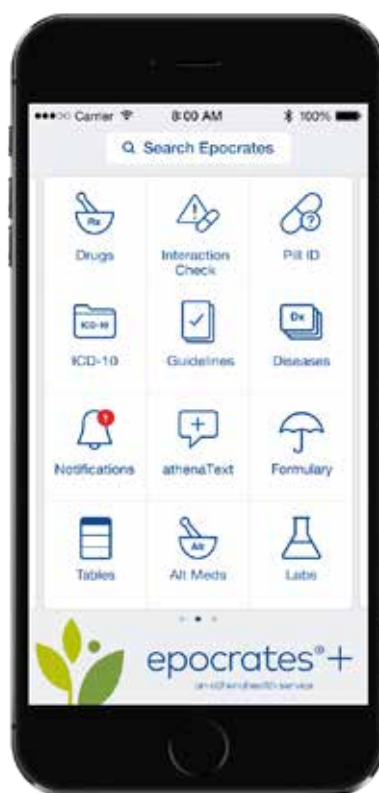
to be completed. I remember the days when we would perform fine-needle aspiration biopsies just with our fingers as guides.

I am glad that I learned from the best, but I believe that this art is slowly dying since the endos-in-training nowadays have portable thyroid sonograms in the office. You don't really need to feel it if you can already actually see it. The thyroid sonogram machine is definitely the most used device in my office today.

In the past, I had to manually write down my thyroid sonogram findings. When I found this very "unprofessional looking," I decided to make a template in a Word document for my thyroid sonogram reports and my thyroid biopsies. It was tedious and time consuming.

When I joined the Avera system, I was introduced to PowerScribe. I absolutely love this. My templates were incorporated into the system. I can dictate a complete thyroid sonogram report in a matter of minutes. It is automatically saved in the patient's EHR, along with the thyroid sonogram images. The final product looks professional and "official." In this system, I can visualize the report and images for comparison, when the patient comes back for a follow-up study.

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“Epocrates has been my ‘life saver’ for the longest time. The app is extremely easy to access and is very convenient to look up meds that I am absolutely not familiar with.”

Epocrates App

There are literally thousands of medications available on the market today. Granted that most of them are NOT endocrine meds, I definitely needed a resource to be able to look things up really quickly. The PDR (Physician Desk Reference) book, which was the “go-to” reference during my training years, has become so bulky and cumbersome to use. The PDR mobile app is available now, but I have not gotten this since I am very content using Epocrates. Epocrates has been my “life saver” for the longest

time. The app is extremely easy to access and is very convenient to look up meds that I am absolutely not familiar with. It is an effortless way to check adverse effects of meds, as well as their possible adverse interactions. Epocrates is a simple way to check if medications are safe for pregnancy/lactation and gives me an idea of simple medication pharmacology. It allows an estimate on pricing. The most useful feature is the pill pictures.

I have been using the “free” feature. This includes some notifications regarding important medical news. I just realized that some subspecialty practice guidelines are also included. Because I do have the free version, it also has its fair share of ads.

<http://www.epocrates.com>



ReeVue Basal Metabolic Rate Machine

Very often, patients will come in saying that they are gaining weight despite “not eating anything.” Their Internet research, or their chiropractors, or their naturopaths had told them that their metabolism is somewhat slow. They are surprised to find out that there is actually a test that can quantify this.

ReeVue measures oxygen consumption and can calculate a patient’s resting energy expenditure (REE) or resting metabolic rate (RMR). Through Indirect Calorimetry, it can calculate the number of calories an individual burns at rest in a day. From the information obtained, one would have an estimate as to whether a patient’s metabolism is fast or slow. One will be able to estimate the number of calories that should be consumed in a day to lose, maintain, or gain weight.

As advertised, it can be helpful in “proper nutritional assessment, hormonal treatment, and lifestyle monitoring.” It is a pretty simple test. Unfortunately, it is not a test that you can just tack on at the end of a visit, since it entails some patient preparation. The patient should be fasting for at least four hours, had not exercised for at least four hours, no caffeine or energy drinks for at least four hours, and had no nicotine for at least one hour. The patient should be resting supine or sitting for about 5–10 minutes, before his or her nose is clipped, and the patient is instructed to breathe through a disposable mouth piece. The more rested and relaxed the breathing, the quicker the test. The test generally takes an average of about 10 minutes and is administered by a medical assistant or a nurse. The results can be printed out pretty much right away.

This test is definitely not ideal for people who are claustrophobic or who have breathing problems to begin with. In the past, reimbursement for the test was not very good. Nowadays, if coded properly, I was informed that reimbursement is decent.

<https://korr.com>

“From the information obtained, one would have an estimate as to whether a patient’s metabolism is fast or slow.”



Endocrine Society Website

The Endocrine Society website is a good source for the latest clinical practice guidelines, covering issues from A to T (adrenal to transgender medicine). The guidelines definitely help me in making sound everyday clinical decisions in dealing with patients. After a patient starts off with “According to my Internet research ...,” I can confidently say, “According to clinical guidelines...,” when making management suggestions. I assure patients that the guidelines are always based on actual scientific evidence.

The ENDO conference is another highlight. I always look forward to hearing about the newest clinical developments in dealing with the different endocrine diseases, as well as seeing my colleagues. Almost every year, my fellowship director hosts a gathering of all his previous fellows. I know I am getting old since the new fellows are looking younger and younger.

The Endocrine Society Website is quite helpful with maintenance of certification (MOC) issues. I was able to get MOC points just by attending ENDO. I was also able to procure board review materials (ESAP, etc.) and earn more MOC points. I must say that the review material helped a lot in preparing for my second board ABIM endocrine recertification.

www.endocrine.com



“The Endocrine Society website is a good source for the latest clinical practice guidelines, covering issues from A to T (adrenal to transgender medicine).”





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Cleveland Clinic

The **Cleveland Clinic** seeks highly qualified board certified/board eligible endocrinologists to supplement our endocrine services. The duties of these predominantly clinical posts will be divided between our main campus in Cleveland and our regional facilities. The successful applicants will be expected to participate in the academic activities of the Endocrine Department. This position, at Associate or Staff level depending on experience, offers an attractive benefits package and a collegial and intellectually stimulating work environment.

The melting pot culture that has helped establish Cleveland as a vibrant and versatile metropolitan area adds a unique flair to the lifestyle here. The Cleveland area is a very comfortable and affordable place to live with a variety of activities, good school systems and a great place to raise a family.

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Jennifer Tonkli, Administrator
tonklij@ccf.org; 216-445-3784



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THE FIVE W'S OF EDCs



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WHAT are EDCs?



Endocrine disrupting chemicals, or EDCs, are substances in the environment (air, soil, or water supply), food and beverages, and manufactured products that can interfere with the normal functioning of our body's endocrine system. Many of their effects on humans are still unknown and require more research.

(The endocrine system controls the way your body develops and functions. It produces hormones that travel to all parts of your body to maintain your tissues and organs, and to participate in overall health.)

Visit hormone.org for more information.

WHY should I be concerned about EDCs?

EDCs are found in everyday household products. As of October 2013, there are nearly 1,000 chemicals on The Endocrine Disruption Exchange (TEDX) list: endocrinedisruption.org.

These chemicals are found in:

- Contaminated soil, water and air
- Food contaminated through chemicals in the food chain
- Food packaging: lining of cans, plastic
- Workplace: industrial chemicals, pesticides, fungicides
- Common household items: plastics, household chemicals, toys, flame-retardant fabrics, cosmetics, medications, antibacterial soaps

Plastics

Bisphenol A (BPA),
phthalates



Industrial solvents/lubricants

Polychlorinated biphenyls
(PCBs), dioxins



Pesticides

Dichlorodiphenyltrichloro-
ethane (DDT),
methoxychlor, chlorpyrifos



Fungicides

Vinclozolin



Herbicides

Atrazine



Antibacterials

Triclosan



Personal care products

Phthalates



Textiles, clothing

Perfluorochemicals
(PFCs)



Children's products

Lead, phthalates,
cadmium



Advocate for more research and improved federal regulations
by contacting members of Congress:

endocrine.org/advocacy-and-outreach/take-action/contact-congress

WHERE

do EDCs
impact
my body?

More research is
needed, but we
know EDCs affect:

Response to stress

- Neurological and behavioral changes
- Reduced ability to handle stress

Metabolism

- Industrial chemicals can interfere with thyroid function

Reproduction

- Virtually all classes of EDCs (DDT, BPA, phthalates, PCBs) can mimic or block effects of male and female sex hormones, affecting reproductive health

Growth and development

- Neural development
- Disrupted sexual development
- Weakened immune system

WHEN

do the
effects
take shape?

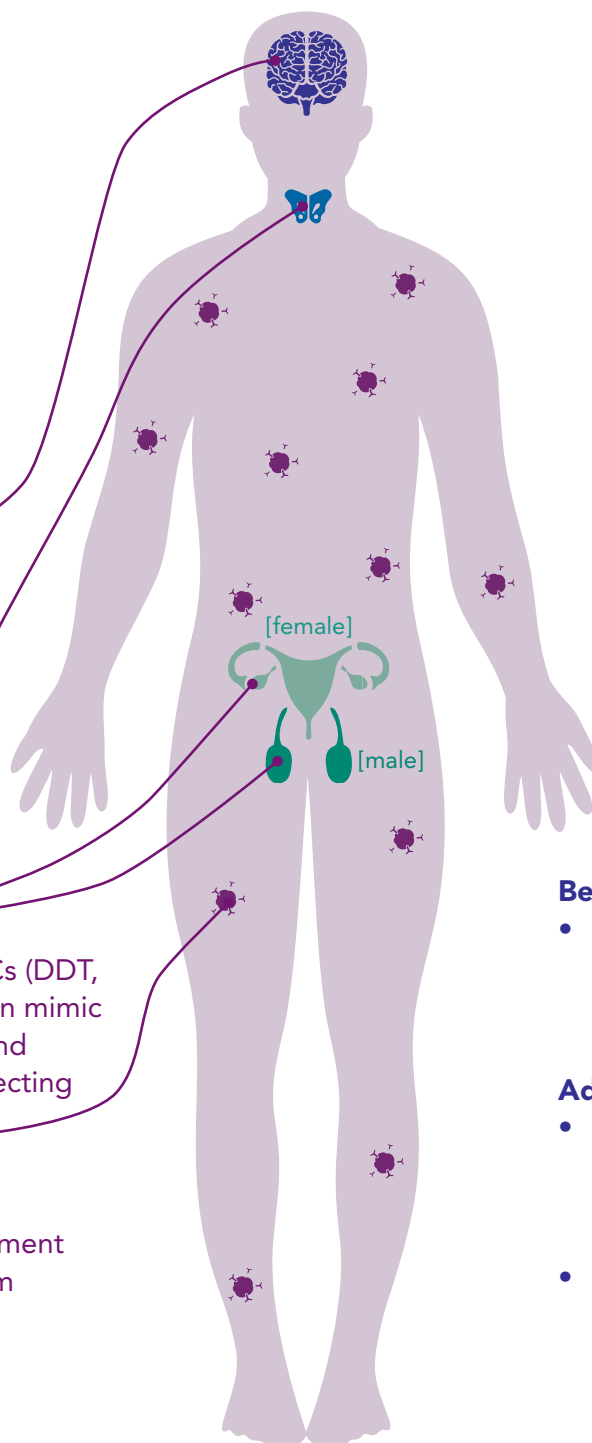
Endocrine, reproductive and/or neurological problems occur more frequently in humans with higher amounts of EDCs in their bodies. Health impact of low-level EDC exposure is still being researched.

Before birth

- Interferes with fetal growth and development while the body's organs and tissues are still developing

Adolescence, adulthood

- Affects sexual development, decreases fertility, causes diseases of male and female reproductive systems
- Increased risk of diabetes, obesity, and certain types of cancer



WHO

regulates EDCs?

The federal government

- The Toxic Substances Control Act passed in 1976
- In 1996, Congress passed the Food Quality Protection Act and the Safe Drinking Water Act Amendments
- Current chemical screening programs are inadequate for finding endocrine disruptor effects
- Researchers are still working to define the relationship between the dose (low/high) of EDCs and how the body responds to it

You have questions. We have answers.

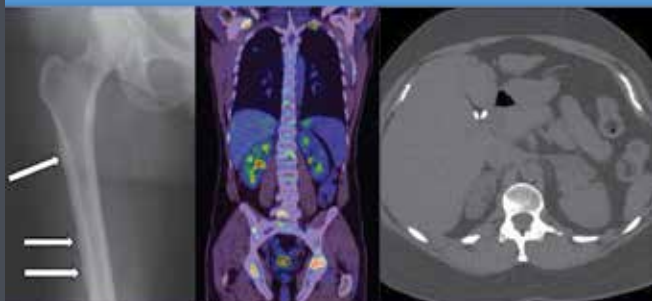
The Hormone Health Network is your trusted source for endocrine patient education. Our free, online resources are available at hormone.org.

Additional editing by Andrea Gore, PhD, University of Texas at Austin

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