ENDO 2024 was a triumph in Boston, once again proving why it’s the most prestigious endocrinology conference in the world. Endocrine News was there for every minute of this remarkable event to bring you an issue full of highlights.

- **SMALL TALK AND SMART TALK:** Just a sample of some of the scientific breakthroughs presented at a variety of sessions over the course of ENDO 2024.

- **ENDOCRINE ALLIANCE:** New international guideline-writing partnership between the Endocrine Society and the European Society of Endocrinology debuts at ENDO 2024.

- **FIRST IMPRESSIONS:** First-time ENDO attendees share their experiences, their surprises, favorite sessions, and where they found new inspiration.

- **IN THE LOOP:** After a live session of the “Endocrine Feedback Loop” podcast at ENDO 2024, host Chase Hendrickson, MD, MPH, discusses the importance of a forum that educates and enlightens.
JES is adding more content in obesity and obeso gens research, including:

Genetic Associations
Hormones Related to Obesity
Obesity Disparities
Obesity-related Conditions

JES is also adding more content in areas including:

Osteoporosis, Bone, and Mineral
Neuroendocrinology
Reproductive Endocrinology

Cancer
Endocrine Disrupting Chemicals
Diabetes

The Editors welcome inquiries and submissions
Contact JES at publications@endocrine.org
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hilst ENDO is always the major in-person event that brings the whole endocrine community together, with this being epitomized at ENDO 2024, the Society is hard at work preparing an impressive slate of meetings this fall.

In September, members can look forward to our ever-popular Endocrine Board Review (EBR) and Clinical Endocrinology Update (CEU), both of which will be held virtually. Following these are two entirely new meetings: an in-person conference on steroid hormones and receptors (October 15 – 18), and a virtual summit on the use of artificial intelligence (AI) in healthcare (November 8 – 9).

I’m proud to be part of an organization that never rests to provide our members with the best educational experiences possible. Below are some details on these events.

EBR 2024, September 6 – 8, is an online learning program for fellows, practicing endocrinologists, and other healthcare professionals preparing for the American Board of Internal Medicine’s (ABIM), Endocrinology, Diabetes, and Metabolism Certification Exam. Led by experts in each topical area, participants are guided through the intensive program using the Endocrine Board Review 16th Edition (2024) with 220 clinical case questions based on the previous year’s exam content. Topics include case studies affecting adrenal, bone and calcium, diabetes, female reproduction, lipids and obesity, male reproduction, and pituitary.

The program is so effective that the Society guarantees a passing score, or participants receive free registration for EBR 2025! (Learn more at: ebr2024.endocrine.org.)
**CEU 2024, September 19 – 21,** provides cutting-edge knowledge for clinicians on how to treat endocrine conditions using the latest clinical guidelines and breakthrough therapies. The first day includes topics such as diabetes prevention, growth hormone replacement updates, and vertebral fragility fracture management. Day two delves into safe exercise strategies for diabetes patients, hyperthyroidism, and the role of genetics in obesity. Day three discusses osteoporosis management, nutrition integration into healthcare, and treatments for erectile dysfunction.

CEU 2024’s six hours of content across 36 sessions is certified for 27 AMA PRA Category 1 Credits™ and 6.75 ABIM MOC Points. Recordings will be available online within 72 hours after the meeting. (Learn more at: ceu2024.endocrine.org.)

**Society Launches Two New Meetings**

In addition to these events, the Society is excited to offer two new meetings of interest to our research members and those who want to learn more about AI in healthcare.

The **1st International Conference on Steroid Hormones and Receptors (SHR 2024),** October 15 – 18, 2024, takes place at the University of New Mexico Comprehensive Cancer Center, in Albuquerque, N.M. The meeting is designed to explore advances in steroid hormone and receptor functions, both rapid and genomic, in various aspects of biology and medicine, and in both normal physiology and pathophysiology. Attendees will include leading scientists, researchers, physicians, post-doctoral trainees, and students working in various disciplines of steroid hormone and receptor biology and medicine. (Learn more at: www.endocrine.org/meetings-and-events/shr-2024.)

The **Artificial Intelligence (AI) in Healthcare Virtual Summit, November 8 – 9,** is designed for healthcare providers, professionals, researchers, technologists, industry stakeholders, and educators. The summit will explore the potential of AI to revolutionize patient care and shape the future of medicine. (Learn more at: www.endocrine.org/meetings-and-events/ai-summit.)

**Online Learning vs. In-person Learning**

We have been asked what drives the format of Society meetings.

As in recent years, EBR 2024 and CEU 2024 once again will take place entirely online. The same holds true for the AI Virtual Summit. For meetings of this type with focused learning, the format offers several distinct advantages, and even following the end of pandemic-era advantages, many of us have grown accustomed to virtual education.

“I’m proud to be part of an organization that never rests to provide our members with the best educational experiences possible.”

Virtual meetings allow for many more colleagues from around the world to participate, accepting that for some the time difference of some sessions may be inconvenient. For example, CEU 2023 drew nearly 1,070 attendees from more than 30 countries. By contrast, our last in-person CEU meetings, held in 2019 in Miami, Fla., and Seattle, Wash., drew several hundred participants in total. Similar attendance spikes were seen for the more U.S.-focused EBR after it went virtual.

In contrast, whilst we all recognize the hurdles, expense, and carbon impact of traveling to meetings across the globe, we also all recognize the value of meeting our colleagues face to face, and the networking opportunities and rich exchanges that can only arise from that format. It is for these reasons that our meeting on steroid hormones and receptors will be in person, as will **ENDO 2025** in San Francisco next July.

So, whether virtually or in person, I look forward to connecting this fall with many of my fabulous colleagues from across the table or across world.

> John Newell-Price, MD, PhD, FRCP  
> President, Endocrine Society
For those of you keeping count, this is the third time we've devoted an issue to highlights from ENDO, so it looks like this will be an ongoing issue each year. And I’m just fine with that. I hope you are, too! Honestly, there was just so much happening at ENDO 2024 in Boston, that one issue might not contain it all. [Editor’s Note: It won’t!]

On page 12, Senior Editor Derek Bagley spent some time wrangling some of the late-breaking studies presented at the meeting with a wrap-up called “Small Talk and Smart Talk: Lessons Learned at ENDO 2024.” Let’s face it, when the biggest endocrinology conference in the world takes place, it’s a challenging task to narrow the focus down to just a handful of studies, but Derek did a great job focusing on research about a new post-surgical headband to help those patients with Cushing’s; how telemedicine is leveling the playing field for so many people with endocrine disorders; the impact of the stress from living in violent neighborhoods on Black men with lung cancer; and even methods that endocrinologists can address medical misinformation through an effective social media strategy. Of course, this story doesn’t even scratch the surface of the information presented over the course of ENDO 2024 … but it’s a good start!

You might already be aware that the Endocrine Society and the European Society of Endocrinology have entered into a multi-year agreement to co-author a series of practice guidelines. It is hoped that the “European Society of Endocrinology and Endocrine Society Joint Clinical Guideline: Diagnosis and Therapy of Glucocorticoid-induced Adrenal Insufficiency” will better prepare endocrinologists to take the lead on a therapy used in virtually every medical discipline. Writer Eric Seaborg goes into detail about the guideline in “Endocrine Alliance,” on page 34. “Glucocorticoid-induced adrenal insufficiency necessitates careful education and management, and in the rare cases of adrenal crisis, prompt diagnosis and therapy,” the guideline notes. And this joint guideline provides a major step forward in providing the evidence-based
advice needed for the many medical specialists prescribing glucocorticoids to achieve these goals, Seaborg writes.

For me, ENDO 2024 in Boston was my NINTH in-person annual conference, so it’s hard to remember my very first event (it was ENDO 2013 in San Francisco!). However, for some of our newer members, ENDO 2024 was their first time at an Endocrine Society annual conference. We’ve gotten into the habit of quizzing some of our first-time attendees about their experiences and impressions of their first ENDO meeting as part of the wrap-up, but this year it’s its own feature. In “First Impressions: First-Time ENDO 2024 Attendees Share Their Experiences” on page 26, I got the chance to reach out to six attendees who told me what they thought of ENDO 2024, especially what they learned that they can use every day and what they found surprising about the meeting. Their responses are always endearing and sometimes eye-opening … even to a seasoned veteran like me!

In 2020, the Endocrine Society debuted the “Endocrine Feedback Loop” podcast hosted by Chase Hendrickson, MD, MPH. However, during ENDO 2024 there was an in-person version of the podcast broadcast live from Boston that Hendrickson hosted. We learn more about the podcast when Derek and Hendrickson have a Q&A for “In the Loop” on page 22, where the podcaster explains that the show is more than simply a “new and improved” journal club — although that was the inspiration — but it is a vehicle that strives to educate and inform, enlighten, and even inspire. And Hendrickson even finds himself getting educated by these podcasts: “I learn an incredible amount during each episode,” he says. “As a general endocrinologist, I have a broad knowledge base in endocrinology but not one that is as deep as a subspecialist. So, I am always in awe of our regular contributors and guest experts, who bring an incredible depth of knowledge, experience, and insight to these recordings.”

But as I alluded to at the top of this column, even though this issue is devoted to ENDO 2024, this won’t be the last time you see some of the amazing science presented in Boston on our pages. You can look forward to major features based on ENDO sessions in upcoming issues! See you next month!

— Mark A. Newman, Executive Editor, Endocrine News
Fresh off of a successful ENDO 2024 in Boston in June, the Endocrine Society announced it is merging with the Association of Program Directors in Endocrinology, Diabetes, and Metabolism (APDEM).

The APDEM represents the academic leaders of more than 135 training programs that prepare fellows for clinical and research careers in endocrinology and metabolism.

“The Endocrine Society and APDEM share a commitment to investing in and nurturing the endocrinology workforce,” says Endocrine Society President John Newell-Price, MD, PhD, FRCP. “Together, we offer a unified voice to support and advocate for clinical practitioners, endocrine researchers, and trainees through all stages of their careers. We are grateful to the Endocrine Society’s Past-President Stephen Hammes, MD, PhD, and APDEM Past-President Odelia Cooper, MD, for their leadership and strategic vision in overseeing the merger.”

For more than 25 years, the organizations have partnered together to serve the APDEM’s community of endocrine program directors and the next generation of endocrinologists. The Endocrine Society has functioned as the APDEM’s association manager since 1998.

The next stage of the evolving relationship will allow the combined organization to increase efficiencies and fulfill a shared commitment to supporting the endocrinology workforce. The APDEM will maintain its independent identity, governing council, and committee structure as a division of the Endocrine Society.
“By strengthening our relationship, we will be able to connect with larger audiences and strengthen the pipeline of people entering the endocrine field,” says APDEM Council President Matthew J. Levine, MD. “As a unified organization, we look forward to being able to achieve far more than we could before.”

The organizations have a strong record of working together on important issues impacting education and preparation of the future workforce. This merger represents a continuation of that preexisting relationship.

“As we implement operational changes over the coming months to effectively integrate the APDEM into the Endocrine Society, the changes will enhance our members’ experience,” Levine says.

The Endocrine Society and the APDEM’s new relationship will be aligned with similar organizations serving other medical subspecialties. Eighteen of the 20 American Board of Internal Medicine’s (ABIM) subspecialty parent organizations directly manage their corresponding fellowship programs.

“The advancement of our partnership comes at a crucial time,” Newell-Price says. “The endocrine field is facing a workforce shortage needed to treat the rapidly growing population with endocrine conditions such as diabetes, obesity, thyroid conditions, and osteoporosis. For our field to thrive, the larger endocrine community needs to unite to address these issues and to recruit more of our students and trainees to become our colleagues.”

For our field to thrive, the larger endocrine community needs to unite to address these issues and to recruit more of our students and trainees to become our colleagues.

The APDEM Reception at ENDO 2024 in Boston was a chance for the members of the organization to celebrate the year’s successes while also finding time to socialize on the EXPO floor while everyone convened for the largest endocrinology conference in the world.
Boys and girls may equally have multiple pituitary hormone deficiencies across all levels of peak growth hormone values, according to a study recently published in the Society for Endocrinology’s Clinical Endocrinology.

The paper, by Rohan K. Henry, MD, MS, et al., outlines reported biases that have long been published regarding the male predominance in patients referred to pediatric endocrinology clinics, those who undergo growth hormone provocative testing, and ultimately those who are diagnosed with growth hormone deficiency (GHD).

Henry, an attending physician in the Section of Endocrinology at the Nationwide Children’s Hospital, in Columbus, Ohio, and associate professor at the Ohio State University College of Medicine, says that he has been in clinical practice for more than a decade, and he has noticed that patients referred to their clinics are predominantly male. He says the literature is also replete with publications that attest to the predominantly male distribution of patients receiving growth hormone supplementation for indications of growth hormone deficiency and non-growth hormone deficient states.

“Though some of these articles tackle the origins of the male sex predominance of patients referred to endocrine clinics, those who undergo growth hormone provocative testing (which is often performed to confirm the clinical diagnosis of GHD) and those who are ultimately diagnosed with GHD, there has been a gap in the literature as the authors of the currently published papers have not attempted to try to minimize the biases so that a more realistic sex distribution regarding GHD can be obtained,” Henry says.

Henry goes on to say that unlike some conditions that do have a biological basis for male/female predilection, such as the female predominance of auto-immune disease, it seems biologically implausible that those impacted by GHD should be primarily male. “As such, we sought to look at the diagnosis of GHD under different frameworks, which, though used in clinical practice, namely the peak growth hormone level obtained during provocative testing which is sometimes used to indicate GHD severity that could be deemed as an arbitrary designation,” he says. “Whereas the others, such as the presence of multiple hormonal deficiencies and abnormalities on pituitary gland magnetic resonance imaging, could indicate an organic etiology as the basis for GHD.”

Henry tells Endocrine News that there are three main biases that impact the sex distribution of patients attending the endocrinology clinic for growth evaluation: selection bias, in which parents are more concerned with the height of boys than girls; referral bias, as more male children are referred for growth concerns; and provider bias, where there’s a predominantly male referral pattern and it has been shown that more diagnostic tests are performed in evaluating boys as compared to girls for short stature. “It has also been shown that more boys than girls receive provocative tests for GHD,” he says. “While these biases cannot be prevented, to obtain the true sex distribution of GHD, they need to be minimized from a methodological standpoint in any study which attempts to address the gap in the literature regarding the true sex distribution of GHD.”

For this study, the researchers use three different frameworks, two of which were designed to minimize the male sex bias. These frameworks involve an examination of cases of GHD based on: 1) peak growth hormone values; 2) the presence...
of isolated GHD vs. multiple pituitary hormone deficiencies; and 3) the presence of anatomical abnormalities of the pituitary gland on magnetic resonance imaging. “It is noteworthy that when the sex distribution in pediatric GHD cases was examined using frameworks 2 and 3, the historically reported male sex distribution was not present,” Henry says.

A retrospective chart review was conducted that looked as to whether there were sex differences in those referred to the endocrinology clinics, those who underwent growth hormone provocation testing, and those who were diagnosed with GHD. In all these instances, there was a male predominance (p < 0.001). It also looked as to whether there are sex differences based on GHD severity using peak growth hormone values as a surrogate.

The results showed that there was a difference in peak GH values used as a surrogate for GHD severity and sex, and there was no difference in the frequency of GHD between the sexes when abnormalities existed in pituitary magnetic resonance imaging. “So, with using the latter two frameworks, there is minimization of the biases which results from framework 1 in which GHD is idiopathic,” Henry says.

One of the implications of these findings is that girls who are diagnosed with GHD may present later for care; fewer girls will be diagnosed with GHD compared to boys. “This could mean that treatment may be delayed, which could be detrimental especially to those who need to have their medication replaced with growth hormone in addition to other hormonal supplementation,” Henry says. “Moreover, it has been shown previously that girls, especially underrepresented girls, may be diagnosed later with conditions which are associated with the etiology of short stature.”

“Despite the well-known male predominance in pediatric endocrinology clinic referrals for short stature, those who undergo provocation testing for GHD, and those ultimately diagnosed with GHD, there is unlikely to be a true sex difference in patients diagnosed with more permanent or organic causes of GHD, such as those with multiple pituitary hormonal deficiencies and also with abnormalities pituitary magnetic resonance imaging,” Henry continues. “In addition, the male predominance in GHD may reflect an overdiagnosis of idiopathic GHD in boys, and this may exist due to current limitations in accuracy surrounding the diagnosis coupled with the biases which result in more males accessing medical care for short stature evaluations.”

“...
2024 Endocrine Board Review/Clinical Endocrinology Update

**EBR 2024**
Endocrine Board Review (EBR) is an intensive online learning program for fellows, practicing endocrinologists, and other healthcare professionals preparing for the American Board of Internal Medicine’s (ABIM), Endocrinology, Diabetes, and Metabolism Certification Exam.

In use for more than a decade, EBR stands out as a leading program for invaluable insights directly from medical experts involved in developing the exam. These specialists understand the exam’s nuances and will share essential strategies for success. EBR features case-based questions aligned with the ABIM blueprint, complemented by highly effective tools to bolster your confidence as you gear up for your board exam.

You will receive the latest EBR 16th edition book and access to our interactive practice exam sessions on August 5, 2024. Additionally, participants will have the opportunity to interact with our faculty during the Topical Live Q&A Sessions on September 6 – 8.

Join us for an immersive review of endocrinology to advance your knowledge and succeed in your board certification exam.

https://ebr2024.endocrine.org/

**CEU 2024**
Join endocrinologists and other healthcare professionals for updates on how to treat various endocrine conditions based on the latest expert guidelines in hormone care. With recent breakthroughs in different areas of the ever-evolving field of endocrinology, staying abreast of innovative practices is essential for optimal patient treatment.

Clinical Endocrinology Update (CEU) 2024 provides a convenient solution for busy professionals by delivering a first-rate education they can immediately implement into their practice. For over a decade, our program has been led by renowned endocrinologists, offering a case-based agenda and evidence-based disease management strategies to equip practitioners with the tools they need to address daily clinical challenges.

CEU is virtual, ensuring accessibility through our online platform. Our expert faculty will cover important endocrinology topics, including adrenal, calcium and bone, diabetes, pituitary, obesity and lipids, female reproduction, male reproduction, transgender care, and thyroid.

With Meet the Professor sessions and a symposium filled with expert insights, this program offers a valuable learning experience for endocrinologists worldwide. Do not miss this opportunity to enhance your knowledge and skills in hormone care. Join us online, and stay ahead in the field of endocrinology!

https://ceu2024.endocrine.org/

**ADCES24**
New Orleans, Louisiana
August 9 – 12, 2024
The Association of Diabetes Care & Education Specialists (ADCES) Annual Conference is the premier diabetes care and educational event of the year. More than 3,000 diabetes care and education specialists and other healthcare professionals are expected to participate at ADCES24 in New Orleans, La. Connect, collaborate, and educate yourself and others on the latest in diabetes care and education.

https://www.diabeteseducator.org/home

**ASBMR 2024**
Toronto, Ontario, Canada
September 27 – 30, 2024
The ASBMR Annual Meeting boasts nearly 100 education sessions and 1,100 poster presentations in four information-filled days. The conference includes hands-on workshops focused on the latest technologies and research tools using model data sets, Meet-the-Professor sessions, the ASBMR Discovery Hall, an exhibition hall that provides attendees with a truly immersive experience, with access to new science, new knowledge, new tools, and new contacts all in one location.

https://www.asbmr.org/annual-meeting
Neuroscience 2024
Chicago, Illinois
October 5 – 9, 2024
Each year, scientists from around the world congregate to discover new ideas, share their research, and experience the best the field has to offer. Attend so you can present research, network with scientists, attend sessions and events, and browse the exhibit hall. Join the nearly half a million neuroscientists from around the world who have propelled their careers by presenting an abstract at an SfN annual meeting — the premier global neuroscience event.
https://www.sfn.org/meetings/neuroscience-2024

American Thyroid Association
2024 Annual Meeting
Chicago, Illinois
October 30 – November 4, 2024
The ATA Annual Meeting is the world’s preeminent event for those interested in thyroid diseases and disorders and provides an opportunity for peer-to-peer learning and collaboration through lectures, interactive discussions, meet-the-professor sessions, and abstracts. This year, the ATA will celebrate its centennial anniversary with a culmination of the celebration and the largest gathering of thyroidologists in the world. Whether you’re an endocrinologist, a surgeon, an advanced practice provider, a fellow in training, or a medical student, the topics covered during the meeting will provide in-depth information about thyroid diseases and disorders. With a diverse program planned, attendees can customize their experience by attending sessions that are most important to their professional development.
https://www.thyroid.org/

ObesityWeek 2024
San Antonio, Texas
November 3 – 6, 2024
The preeminent international conference for obesity researchers and clinicians, ObesityWeek® is home to the latest developments in evidence-based obesity science: cutting-edge basic and clinical research, state-of-the-art obesity treatment and prevention, and the latest efforts in advocacy and public policy. Overcoming obesity requires multidisciplinary approaches. This is the conference that encompasses the full spectrum of obesity science: from basic science research to translational research and clinical application, to public policy; from diet, exercise, lifestyle, and psychology to medical and surgical interventions; from pediatric to geriatric to underserved populations.
https://obesityweek.org/
In a 1993 article for the New York Times, titled, “Why Cheers Proved So Intoxicating,” Bill Carter recounts the story of how brothers Glen and Les Charles, fresh off their success writing for Taxi, came up with another idea for a workplace comedy along with their longtime collaborator, director James Burrows.

“They] thought they could devise another workplace comedy — perhaps in a more inviting locale,” Carter writes. “That was 1981. A year later, the invitation was extended to viewers: Come visit a basement bar in Boston, and listen to small talk and smart talk among an odd lot group of patrons. The bar, and the show, would be called Cheers.”
Small talk and smart talk, where everybody knows your name. ENDO 2024 in Boston was another round of just that: plenty of catching up with colleagues simply to ask how they’ve been or invite them to dinner. The Boston Convention and Exhibition Center was filled with smiles and hugs and even a dog park.

But the main event was definitely the smart talk — sharing findings and unveiling breakthroughs. Conversations about endocrinologists’ role in the modern climate — countering misinformation or addressing health disparities. The following is only a small sample of those proceedings.

Headband Eases Surgical Recovery for Cushing’s Patients

Researchers introduced a headband that tracks brain activity while patients with Cushing’s meditate, lessening pain and improving physical functioning after surgery.

The headband, called MUSE-2, uses electroencephalogram (EEG) sensors to measure brain activity and provides audio biofeedback while a person meditates.

The researchers wanted to study meditation in patients recovering from curative surgery for Cushing’s disease because meditation has been reported to enhance postsurgical recovery in patients with other conditions, says researcher Jasmine Saini, MBBS, of the Mayo Clinic in Rochester, Minn. “With little known about the interventions that can help patients experiencing glucocorticoid withdrawal syndrome, our group is the first to explore meditation to enhance post-surgical recovery,” she says.

The study included two groups of patients recovering from surgery. The intervention group of 27 patients was offered a MUSE headband with instructions to meditate for at least 10 minutes per day for three months. The comparison group of 81 patients did not use the headband. Three months after surgery, patients using the MUSE headbands reported significant improvements in physical functioning and body pain compared with the comparison group.
“Despite a small sample size and short follow-up, results demonstrating improvement in body pain and physical functioning domains in the MUSE cohort are promising,” Saini says. “We are motivated to study biofeedback meditation’s impact on quality of life in a longer follow-up. With our preliminary results, we are hopeful this device can be used to alleviate symptoms of glucocorticoid withdrawal.”

The research was supported by the Olin Family Gift, Recordati, and the Mayo Clinic. The MUSE-2 devices were donated by the MUSE company.

Telemedicine: A Great Equalizer for Endocrine Care

Since the COVID-19 pandemic, telemedicine has grown throughout the country, and its implementation has been a boon for patients with type 2 diabetes and heart disease living in rural areas or lower socioeconomic neighborhoods.

These patients, of course, could benefit from an endocrinologist’s care, but access is limited by a shortage of endocrinologists as well.
as patient-level barriers including lack of transportation, mobility challenges, and long travel times to the nearest endocrinology clinic, according to study co-author Margaret Zupa, MD, of the University of Pittsburgh School of Medicine in Pittsburgh, Penn. "Telemedicine can help patients overcome many of these barriers and can enhance access to endocrinology care for these patients," she says.

The researchers analyzed electronic medical records for 9,546 adults who had type 2 diabetes and cardiovascular disease and were seen between January 2018 and June 2022 in a single large integrated health system. The study compared two periods: pre-telemedicine (January 1, 2018 to March 15, 2020) and post-telemedicine (March 16, 2020 to June 30, 2022).

In total, 1,725 patients received endocrinology care during the study period. The study found that before telemedicine, patients more likely to receive endocrinology care were those who lived a shorter distance to endocrinology clinic, in more walkable neighborhoods with higher neighborhood socioeconomic status, than those who were younger, non-White, with more comorbidities.

“After widespread use of telemedicine, travel distance to endocrinology clinic, race, and neighborhood socioeconomic status had less impact on endocrinology care access compared to the pre-telemedicine period, while younger age had a stronger relationship with receipt of this care,” Zupa says. “The findings suggest telemedicine can help make
Using Social Media to Combat Medical Misinformation

In 2024, it can sometimes be hard to tell who’s lying on the Internet. Those lies can spread or some truth might be misinterpreted, and soon the Endocrine Society is having to hold a virtual press conference about why the TikTok trend of “hormone balancing” isn’t really a thing.

As such, it’s becoming increasingly clear that dispelling misinformation and disseminating actual facts — especially medical ones — are a vital part of healthcare. In a session titled, “Expanding Your Digital Reach,” Jenni Glenn Gingery, the Endocrine Society’s director of communications and media relations, told the audience just that: One of the pitfalls of social media is misinformation. “As experts, you’re in a position to combat that,” she said.

Joshua Joseph, MD, MPH, professor of internal medicine and the endowed professor for research in internal medicine in the Division of Endocrinology, Diabetes, and Metabolism at The Ohio State University Wexner Medical Center, and prolific user of social media himself, echoed those sentiments. “People need to know what you’re doing,” he told the audience. “You’re experts in what you do.”

Joseph also gave the audience tips on how to effectively communicate on social media, starting by asking yourself who influences you and whom you want to influence. He also stressed using lay or “weekend” language. “Post and interact like you would talk to your grandmother,” he said.

Joy Y. Wu, MD, PhD, chief of the Division of Endocrinology at Stanford University School of Medicine in California, another champion for social media, also shared some tips and gave examples from her own social media accounts on how to use these platforms successfully. “Twitter is great for education, serendipitous career opportunities, or even just to cheer people up,” she said. “The biggest thing you can use Twitter for is advocacy.”

Violent Neighborhoods Linked to Aggressive Lung Cancer in Black Men

Exposure to increased neighborhood violence has the power to change the glucocorticoid receptor (GR) for cortisol, which may influence the aggressiveness of lung cancer.

“This research uncovers a previously unknown link between exposure to neighborhood violence, GR, and lung tumor aggressiveness that can help us understand and fix the lung cancer health disparity seen in Black men,” says Hannah Heath, BS, a graduate research assistant at the University of Illinois at Urbana – Champaign in Urbana, Ill.

For this study conducted in Chicago, Heath and the research team found that Black men were more likely to live in neighborhoods with high levels of violent crime and have greater cortisol levels in their hair. This chronic stress, Heath explains, compelled the researchers to investigate how the GR impacted gene expression that regulates how aggressive a tumor will grow.
They collected lung tumor and healthy lung tissue samples from 15 Black and non-Black patients living in Chicago. Residential ZIP codes and police record data were used to determine which patients were living in neighborhoods with high, mid, and low levels of violent crime.

Among the tests performed, Heath and colleagues performed Cleavage Under Targets & Release Using Nuclease (CUT&RUN), a new technology that can be used to pinpoint regions of DNA that GR binds to.

“We found that genes correlated with exposure to neighborhood violence were associated with pathways involved in cortisol signaling and increased tumor
Thousands of attendees from around the world attended ENDO 2024 in Boston, as the throngs surged upon entering the Boston Convention and Expo Center for the four-day event.
Once again, **ENDO 2024** played host to a menagerie of pups at the Bark Park, where attendees could take a break and play and pet area dogs that were available for adoption.

“aggressiveness,” Heath says. “When we looked at the spatial expression of these cortisol-signaling and tumor aggressiveness genes, we found regions within tumor samples from high-violence neighborhoods that had elevated expression of these genes.”

They did not find these regions among patients with tumors who lived in low-violence neighborhoods. Furthermore, exposure to neighborhood violence led to the GR binding in regions of DNA that promotes a more aggressive lung tumor — an area it does not typically bind to.

“We hope this research will lead to larger studies that will ultimately be used to guide the addition of the neighborhood environment as a lung cancer screening eligibility parameter,” Heath says. “Currently, these parameters heavily focus on smoking habits. However, because Black men smoke less, they are often not eligible for screening, resulting in Black men being screened less and diagnosed later than White men.”

**Cheers** obviously took its name from what most English-speaking people say during a toast. (Koreans say “geonbae;” Mexicans typically say, “Salud.”) So, to belabor this point only a little further, I think it’s fair here to make a toast to **ENDO 2024**, to the year of endocrinology to come, and to **ENDO 2025** in San Francisco. Hope to see you all there for the next round of smiles and hugs and dogs. And, of course, all the smart talk again. Cheers 😁
Signs of ENDO, future (left) and present (right) welcome Boston attendees ... and remind them about ENDO 2025 in San Francisco!

Every year, the hundreds of posters are one of the most popular attractions at ENDO, and this year was no different as attendees browsed the posters as the presenters discussed their research with interested colleagues.

When the Endocrine Society debuted the “Endocrine Feedback Loop” podcast back in 2020, it quickly took on a life of its own as host and creator Chase Hendrickson, MD, MPH, explains to Endocrine News. More than simply a new and improved journal club, the podcast seeks to educate, inform, and enlighten both listeners and the hosts as well.
In 2020, the Endocrine Society debuted its monthly journals club podcast, "Endocrine Feedback Loop", a members-only benefit, with episodes that feature expert educators and topical specialists discussing and dissecting articles from the Society’s journals. The podcast is now freely available on all of the standard podcast platforms.

Host Chase Hendrickson, MD, MPH, practices general endocrinology at the Vanderbilt University Medical Center where he is the executive medical director for the Medicine Patient Care Center at VUMC and formerly an associate program director for the endocrinology fellowship program. His interests include endocrine education, teaching inferential methods, and quality improvement. However, during ENDO 2024 in Boston, Hendrickson recorded an episode of the podcast before a live audience where he was joined by Ghada El-Hajj Fuleihan, MD, from the American University of Beirut, and Amal Shibli-Rahhal, MD, from University of Iowa Carver College of Medicine, where they discussed a recent article from The Journal of Clinical Endocrinology & Metabolism (JCEM) entitled “Bisphosphonate Use and Risk of Atypical Femoral Fractures: A Danish Case-Cohort Study With Blinded Radiographic Review” published in January 2024.

Hendrickson spoke to Endocrine News about the origins of the podcast, his affinity for journal clubs, and the iterative nature of teaching and learning that comes out of these discussions — a literal feedback loop of education.

Endocrine News: First off, tell me a little about the origins of “Endocrine Feedback Loop” and how you landed the hosting gig.

CHASE D. HENDRICKSON: I have always enjoyed participating in journal clubs. About five years ago, I began to consider whether that could be done on a larger scale via a podcast with the idea of targeting an audience of all endocrinologists and not just fellows. At the time, Alan Dalkin at the University of Virginia was visiting our group at Vanderbilt University. As he had worked with the Endocrine Society on education initiatives in the past, I discussed my idea with him. He liked it and was instrumental in helping me pitch the idea to the Endocrine Society. Given my interest in the work, I volunteered to run the project and be the host of the podcast itself.

EN: Can you walk me through a typical podcast, from picking a subject to the final product?

CDH: Our team is made up of 12 “regular contributors” who typically volunteer to participate for a three-year term. They each sign up for one month during the podcast’s year-long season. A few weeks before each regular contributor’s assigned month, I reach out to start the process of selecting an article to review. If the regular contributor has an area of expertise within endocrinology, we typically select an article in that field from either JCEM or the Journal of the Endocrine Society (JES). We choose articles that are likely to change or at least inform clinical care. Once we select an article, we decide on a guest expert to invite to participate in that episode, basing the invitation on the topic(s) covered in the article. The regular contributor and I then each independently analyze the article, identifying key points of the article we want to review and any areas where we have concerns or disagree with the
authors’ conclusions. We draft a discussion guide to help with the recording session and then send it along to the guest expert for further refinement. The final version of that guide keeps us on the same page during the podcast recording, which we do over Zoom. The whole time, the producers of the podcast keep the logistics organized, and they put a lot of work in after the recording to get the episode ready to release later in the month.

EN: The podcast series is modeled after journal clubs found at educational institutions. Can you speak a little more about that decision? Was that something that came organically?

CDH: My love for journal clubs developed during my own fellowship at Dartmouth. My program director Rich Comi conducted weekly journal clubs, which were a highlight of my training. At the same time, I did an MPH at Dartmouth, which gave me a deeper understanding of biomedical research and biostatistics. I run the journal club for the fellows here at Vanderbilt and enjoy doing that. We spend a significant amount of time reviewing study designs as the key to critically analyzing the articles we discuss. I try to do brief versions of that in the Methodology sections of each of our podcasts.

EN: What has been your favorite episode?

CDH: I doubt I could pick a favorite episode! However, the episodes that we recorded at ENDO 2023 and ENDO 2024 were great fun, as I got to be in the same room as our regular contributors and guest experts and involve fellows from other institutions in the process.

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Ghada El-Hajj Fuleihan, MD, from the American University of Beirut (left), and Amal Shibli-Rahhal, MD, from University of Iowa Carver College of Medicine participated in the “Endocrine Feedback Loop” podcast recorded before a live audience at ENDO 2024.
EN: Or to put it another way, as the series description reads, the podcast “seeks to provide endocrinologists in all stages of their careers with supplemental insight into hot topic issues and study designs.” I assume that goes for the host as well. Have there been any surprises or eureka moments for you during a podcast?

CDH: I learn an incredible amount during each episode. As a general endocrinologist, I have a broad knowledge base in endocrinology but not one that is as deep as a subspecialist. So, I am always in awe of our regular contributors and guest experts, who bring an incredible depth of knowledge, experience, and insight to these recordings. My job is the easy one in that I only have to come up with the questions that endocrinologists, me included, would have about an article. I then simply ask that question of the rest of the team and sit back and learn along with our listeners as they give such great answers.

EN: Can you talk about what the reception to the podcast has been?

CDH: The podcast’s reception has been encouraging. While we are still trying to get the word out to folks, listeners have been kind in their response and feedback, which has been nice to hear.

EN: You were also the program director for the endocrinology fellowship program at Vanderbilt, with an interest in education. Do you see this podcast as another teaching venue of sorts?

CDH: Until earlier this academic year, I was an associate program director for Vanderbilt’s fellowship program. That work meant a lot to me, as teaching fellows ranks high on the list of the work I value. Though the type of teaching we do on the podcast is quite different in terms of methods and audience, I do see it as educational in nature.

EN: On that note, you’re also involved with the Society’s recruitment efforts to help support the endocrinology pipeline. Has this podcast been a vehicle to reach potential future endocrinologists as well?

CDH: For any potential future endocrinologists, I hope that exposure to the podcast would help convince them to join our profession. By discussing these articles, we naturally cover exciting advancements, diagnostic and management challenges, and the impact we have on patients in endocrinology.

EN: Do you have any advice for endocrinologists who would like to have their insight featured on a future episode?

CDH: I review all of the articles published in JCEM and JES for consideration for inclusion in an episode of the podcast. So, if an author is interested in having work featured on the podcast, then the first step is to get the work published in one of the Society’s journals! We are interested in any and all feedback, including suggestions on articles to review, and those can be sent to podcast@endocrine.org.
Once again, *Endocrine News* chats with a group of members whose trip to Boston made quite an impression on them when they experienced their very first ENDO. We find out what they thought about their first experience at ENDO 2024, what surprised them the most, their favorite sessions, and why they would recommend it to their colleagues.
A s attendees crowded into the Boston Convention and Expo Center for ENDO 2024, June 1 to 4, the sights were familiar: smiling faces not seen since last year in Chicago; peels of joy and laughter as friends and colleagues from around the world spotted each other; eyes glued to smart phones as everyone quickly realized that the ENDO 2024 phone app was, once again, a must-have to help them navigate the hundreds of sessions, speakers, posters, presentations, workshops, exhibits, and so much more.

Since so many endocrinologists around the world consider the Endocrine Society their professional home, ENDO 2024 felt like a “homecoming” of sorts, as colleagues from around the world were reunited in corridors, session rooms, the ENDO floor — especially at the Endocrine Society booth, which was abuzz with activity throughout the conference!

However, with every homecoming there is a “freshman class,” many of whom used ENDO 2024 as their first impressions of not only the event, but what they can expect from the Endocrine Society in the future. For many, an ENDO experience can be a deciding factor on the future of their careers, the course of their research, as well as the connections they make.

We reached out to a few of these newcomers to get their impressions of ENDO 2024, why they decided to come, what they learned while they were in Boston with over 7,000 of their colleagues, and even what they would...
The integration of basic science, clinical research, and public health into holistic healthcare is noteworthy. The organization of the program was fantastic, the genuine enthusiasm of the presenters, especially the poster presentations of early-stage researchers, was exceptional.

“I was due to participate in ENDO 2020, then was obviously really disappointed when it was cancelled due to the pandemic. I wanted to come because it’s the premier endocrinology meeting in the world, and the best place to present my research to a global audience.”

Endocrine News: What made you decide to come to ENDO 2024?

Agbaje: The extensive publicity of our previous research published in the Society’s *Journal of Clinical Endocrinology & Metabolism* by the Endocrine Society media team was a decisive factor. Incidentally, an abstract submitted for ENDO 2024 was accepted as an oral presentation, granted an outstanding abstract award, and selected for a press conference. This almost seemed a red-carpet invitation to ENDO 2024, for which I am grateful.

Boyle: I was due to participate in ENDO 2020, then was obviously really disappointed when it was cancelled due to the pandemic. I wanted to come because it’s the premier endocrinology meeting...
in the world, and the best place to present my research to a
global audience.

**Chlebek:** I had always heard wonderful things about ENDO,
and I recently expanded my research to investigate the effects
of obesity on the skeleton, so I wanted to learn more about
obesity and metabolic diseases.

**Hadad:** ENDO is a great place to network and connect with
current and future colleagues. As part of my continued medical
education, I decided to come to ENDO to learn, connect, and
meet with all the different people in this beautiful specialty.

**Mani:** It’s one of the largest endocrine conferences, and I
felt I would learn a lot coming here, especially about newer
treatments available in the adult world, which we could offer to
our young adult patients. The fact that it was in Boston was an
additional bonus, of course.

**Norena:** I was always curious about what ENDO was like.
Fellows and attendings had been talking about the upcoming
meeting for many months since I started my fellowship at
Stanford. I decided that being a first-year endocrinology
fellow was a great opportunity to attend the meeting, and I
put my efforts into preparing a few abstracts to present. In
fact, I ended up getting two abstracts accepted, with one being nominated for the Presidential Poster Competition and for a rapid-fire presentation.

EN: What really surprised you about the ENDO experience?

Agbaje: The integration of basic science, clinical research, and public health into holistic healthcare is noteworthy. The organization of the program was fantastic, the genuine enthusiasm of the presenters, especially the poster presentations of early-stage researchers, was exceptional. It was a great experience interacting with fellow researchers, meeting the Endocrine Society media and editorial team in person. [Thank you, Mark Newman, Jenni Gingery, Aaron Lohr, and Colleen Williams, for the reception.]

Boyle: Although the meeting was huge, it still felt friendly. I was impressed by the senior leaders within the Endocrine Society, who were incredibly approachable and made themselves available to first-time attendees. They were also very generous with their time when it came to engaging with more junior members. I felt the organizing committee struck the right balance between the big plenary sessions and basic science pathways.

Chlebek: I was genuinely surprised by how welcoming and friendly the entire ENDO community was. I immediately felt like I belonged.

Hadad: What really surprised me about the ENDO experience is the breadth and depth of knowledge that is provided to all attendees. Also, opening borders and welcoming international endocrinologists to share their science and knowledge was amazing.

Mani: The number and variety of people, to be honest. Also, I did not expect a whole session specifically for international medical graduates (IMGs) or an LGBTQIA+ reception.

Norena: I was surprised by the immense diversity of attendance from all over the world. I had never seen an academic meeting as diverse. I even had the chance to connect with colleagues from my home country, Colombia, and meet in person many colleagues from the U.S. and India that I had previously met only virtually or through social media. Additionally, the diversity of the conferences was impressive, with many options in the topics I wanted to attend.
**EN: What session or sessions really “wowed” you at ENDO 2024?**

**Agbaje:** Many of the sessions were fantastic with good presenter/audience interaction. I attended pediatric endocrinology’s oral abstract and rapid-fire sessions. I also attended a few symposiums including the last symposium (Youth-Onset Diabetes Mellitus and Cardiovascular Disease Risk) of **ENDO 2024** just in time to catch a flight back to Europe. Yet, the symposium hall was nearly at full capacity on the last day and the last hour of **ENDO 2024**!

**Boyle:** The quality of the science was so high across the board that it’s difficult to choose! I feel **ENDO** does posters better than any other meeting — the poster sessions were really well attended, with lots of good discussions, and, in my case, I was delighted our poster led to a new collaboration, too. I also really enjoyed the “Rising Stars Power Talks” and “Clinical Pearls from JCEM Case Reports.”

**Chlebek:** The NIDDK Early Investigator Symposium was fantastic. The speakers were all studying very distinct topics, but each speaker really wowed the audience, including me, and gave us a great overview of their current work.

**Hadad:** The [“Endocrine Society and American Association of Endocrine Surgeons Joint Presidential Session: MACS: To Treat or Not to Treat”] session with William F. Young, MD, MSc, and Martin Fassnacht, MD, really wowed me. Two world leaders in the field of endocrinology and adrenals were amazing to witness.

**Mani:** I really enjoyed the pre-menopausal osteoporosis symposium and the Meet the Professor talks. The session for IMGs that discussed the nuances we face was another one that stood out. The thyroid eye disease exhibit was another standout.

**Norena:** The “Artificial Intelligence in Health and Biomedical Research” session was truly impressive and eye-opening about what is coming to the field of medicine in the upcoming years.

**EN: Did anything you saw or heard at ENDO 2024 have an impact on your future career aspirations?**
Agbaje: I am optimistic that there is some information that could serve as useful nuggets to share with mentees, especially insights gained from the professional development workshop, such as strategies on effective work/life balance, developing research ideas, successful grant writing, and so much more.

Boyle: I’m very grateful to the Endocrine Society for awarding me a place at the Early Career Forum this year. It was a fantastic day with inspiring speakers, and I got a lot out of it. It was also brilliant to have that additional protected time to network with early-career colleagues across the pond!

Chlebek: Several talks and posters at ENDO influenced the way I have been thinking about my own research projects and have inspired me to try new things in the lab.

Hadad: Attending the ENDO 2024 Early Career Forum really helped me get a better look at what I want for my future career. This definitely gave me a better understanding of the future I would like for myself and helped shape me into becoming the best endocrinologist I can be.

Mani: I liked the sessions on bone health a lot and feel like I’d like to do more of this in future.

Norena: I was very fortunate to be accepted into the Early Career Forum this year, and its impact has been enormous for my career. I gained multiple skills to improve my CV, enhance my contract negotiation abilities, and develop assertive communication. This is already making a significant impact as I immerse myself in interviews for potential jobs after I finish my training.

EN: Did you learn anything at ENDO 2024 that you can use daily?

Agbaje: There are lots of good suggestions that could be applied in the future. For example, skills in science communication, translational research, policy, and advocacy toward improving health for all.

Boyle: As an aspiring bariatric physician, I’m already using what I learned in the numerous obesity sessions at ENDO 2024 in my daily practice and sharing this learning with my colleagues in the
U.K. I also found the interactive sessions introducing the new international consensus guidelines on glucocorticoid-induced adrenal insufficiency and vitamin D very informative.

**Hadad:** All sessions were extremely helpful, and I have learned from every lecture I attended and learned things that I can apply in my daily practice in the clinic.

**Mani:** Oh yes, multiple things. Two that stand out are what I learned about the new medications out there for thyroid eye disease, which I can talk more about to the young adults with Graves disease. The new medication that is a GH receptor analogue pill used for partial growth hormone deficiency is one I can see having to use a lot in future (if Phase III trial shows the same effect).

**Norena:** The new vitamin D guidelines are definitely playing a role already in changing the frequency and indications for checking vitamin D levels on my clinic days. I also learned better approaches for managing dyslipidemias, obesity, diabetes, and adrenal disorders.

**EN:** What would you say to one of your colleagues who was on the fence about attending next year’s ENDO?

**Agbaje:** Clinicians are extremely busy with patient care, however, at ENDO there is an opportunity to hear the latest research that could improve clinical practice. It is also possible to directly ask colleagues questions after their talk and meet them in person to discuss challenges and new ideas. Everyone can give a presentation, which means a little discovery in clinical practice could be shared at ENDO. I would encourage colleagues to attend as well as submit an abstract because your presentation could inspire other participants to undertake larger research projects and make scientific discoveries. The ENDO media team are incredibly ready to extensively disseminate your research ideas, findings, and publications, enhancing the international appeal of your work. Of course, there are also several awards and grants that could be won at ENDO. In a nutshell, ENDO enables the forging of crucial networks, enriching oneself with new ideas and information that could result in significant scientific breakthroughs, and healthcare improvement.

**Boyle:** To go! Without any hesitation I would urge colleagues to experience ENDO (and ideally to present, too). Aside from the science, the overall administration of the event was the best I’ve seen in my career, so I know prospective delegates wouldn’t be disappointed.

**Chlebek:** Most of my colleagues work in bone or orthopedic tissues, and for that reason I would strongly recommend that they attend next year’s ENDO! I learned so much about other organ systems and crosstalk with musculoskeletal organs that completely changed the way I think about these disease states and their influence on bone.

**Hadad:** DEFINITELY ATTEND ENDO 2025!!!

**Mani:** It’s a great learning and networking experience for both pediatric and adult endocrine fellows. Also, [ENDO 2025 is] in San Francisco, and no one should give up an opportunity to visit there!

**Norena:** ENDO is a fantastic place where you can learn while connecting with amazing people. There is a huge diversity of topics, ensuring that there is something for everyone’s interests. I left ENDO with new endocrinology knowledge, new friends, and even new job offers! I definitely recommend this meeting to anyone interested in the endocrinology field, regardless of how early or advanced you are in your career. 😊
Endocrine Society Past-President Stephen Hammes, MD, PhD, (right) introduces the panel at ENDO 2024 for the release of “European Society of Endocrinology and Endocrine Society Joint Clinical Guideline: Diagnosis and Therapy of Glucocorticoid-induced Adrenal Insufficiency.” Seated (l to r) are members of the guideline writing committee: Olaf Dekkers, MD, Anand Vaidya, MD, MMSc; PhD; Irina Bancos, MD; Tobias Else, MD; and Felix Beuschlein, MD.
While at **ENDO 2024** in Boston, the Endocrine Society and European Society of Endocrinology together released the first in a series of guidelines co-authored by the societies. The “European Society of Endocrinology and Endocrine Society Joint Clinical Guideline: Diagnosis and Therapy of Glucocorticoid-induced Adrenal Insufficiency” will better prepare endocrinologists to take the lead on a therapy used in virtually every medical discipline.

A wide variety of medical specialties prescribe long-term glucocorticoid therapy for its anti-inflammatory or immunosuppressive benefits, but it inevitably results in suppression of the hypothalamic-pituitary-adrenal (HPA) axis that can lead to adverse effects.

Endocrinologists have now weighed in with guidance on glucocorticoid use with the publication of the “European Society of Endocrinology and Endocrine Society Joint Clinical Guideline: Diagnosis and Therapy of Glucocorticoid-induced Adrenal Insufficiency.”

Committee Writing Chair Felix Beuschlein, MD, discusses some of the important components of the newly released guideline at **ENDO 2024** in Boston in June. This is only the first guideline of a longstanding partnership between the Endocrine Society and the European Society of Endocrinology.

Olaf M. Dekkers, PhD, spoke to the audience at the **ENDO 2024** session regarding the conclusions of the committee that created the new guidelines, noting that every recommendation required consensus.
“It was high time for this first joint guideline,” says Felix Beuschlein, chair of the guideline committee and professor in the department of endocrinology at the University of Zurich.

Both societies see this first joint guideline as the initial step in more future collaboration. It was released to an enthusiastic reception in rooms full of interested attendees at an ESE meeting in Stockholm and ENDO 2024 in Boston.

### Widespread Use

The literature review done in conjunction with the guideline confirmed that some 1% of the global population use chronic glucocorticoid therapy. This number is enormous but is “more of a realization than a surprise,” says guideline co-chair, Tobias Else, MD, an endocrinologist at the University of Michigan. “Glucocorticoids are used by many subspecialties, like rheumatology, dermatology, and pulmonology, you name it.”

Yet, even low-dose glucocorticoid use is associated with increasing the risks of cardiovascular disease, severe infections, hypertension, diabetes, osteoporosis, and fractures, the guideline notes. The widespread use and accompanying risks reinforce the need for every physician to have the resources to manage these drugs, from primary care to many subspecialties, Else says. “We provide this guidance not only for endocrinologists but also for other subspecialty colleagues. We provide guidance on how to keep our patients safe, how to get patients off glucocorticoids, and how to recognize the problems that can occur during this process, such as glucocorticoid withdrawal and adrenal insufficiency,” Else says.

### Patient Self-Care

In addition to providing a resource for physicians, the guideline emphasizes the need for clinicians to educate patients and provide “up-to-date and appropriate information about different endocrine aspects of glucocorticoid therapy.”

Self-management is a critical skill for patients to learn in order to be active in their own care. Patients who know that they should increase their dosage when they are under stress, for example, when they have a fever or diarrhea, can actively decrease the likelihood of adrenal crisis, Beuschlein says.

To support this effort, the two societies are preparing educational material aimed at patients, with an online brochure already available at the ESE website: (https://www.ese-hormones.org/media/ov4hechi/ese-patient-leaflet_glucocorticoid-therapy.pdf).

### When to Taper

The guideline also recognizes that one of the most important questions clinicians face is how to get patients off glucocorticoids in a way that avoids withdrawal symptoms and adrenal crisis. It suggests that it is not necessary to taper them in patients who have been taking them for fewer than three to four weeks. These patients can simply stop without a need for laboratory testing of the HPA effects.

For patients treated longer term, the guideline suggests switching from longer-acting glucocorticoids (such
as dexamethasone or betamethasone) to short-acting ones (such as hydrocortisone or prednisone) whenever possible because the longer-acting drugs are more likely to cause HPA axis suppression.

In patients who have been on long-term glucocorticoid therapy but no longer need it, the dose should be tapered down until the physiologic daily dose of about 4 – 6 mg of prednisone or equivalent is achieved. As the dose is tapered, patients should be monitored for symptoms of glucocorticoid withdrawal syndrome, including joint or muscle pain, weakness, fatigue, sleep disturbance, and mood changes. Patients with severe cases of glucocorticoid withdrawal syndrome should have their dose temporarily increased to the most recent dose that prevented the withdrawal.

Glucocorticoid withdrawal syndrome can occur when the dose is being reduced but is still within supraphysiologic range. As the dose approaches the physiologic daily dose, clinicians should monitor for clinical signs of glucocorticoid-induced adrenal insufficiency, the symptoms of which are similar to those of withdrawal.

“In most instances, the adrenal cortex will recover and produce adequate levels of cortisol,” the guideline notes, but the time to full recovery of the HPA axis varies greatly among individuals.

Else says that in most cases it is enough to taper the dose and monitor the patient without the need for laboratory tests.

The guideline recommends that “if confirmation of recovery of the HPA axis is desired, we recommend morning cortisol as the first test [with] the value considered as a continuum, with higher values more indicative of HPA axis recovery.”

**Different Testing Units**

An interesting conundrum of writing a joint European-American guideline is reconciling the different testing units used for cortisol values, Beuschlein says. The guidelines suggest that a cortisol test result greater than 300 nmol/L or 10 μg/dL indicates recovery of the HPA axis, so glucocorticoids can be stopped safely. If the level is below these thresholds, the glucocorticoid dose should be continued and the test repeated in weeks to months, depending on the levels.

Beuschlein says that the committee was aware that these thresholds do not convert to the exact same amounts: “We don’t really have exact numbers.
Although the conversion of 300 nmol/L does not equal 10 μg/dL, it is in the correct range, so the committee decided to go with numbers that people remember easily."

The guideline suggests that patients who do not reach an acceptable level of HPA axis recovery after a year of receiving a physiologic daily dose equivalent should be referred to an endocrinology specialist.

Among these patients whose HPA axis has not rebounded — those with glucocorticoid-induced adrenal insufficiency — treatment should continue with an eye to avoiding adrenal crisis. “Education on stress and emergency dosing can prevent symptoms of adrenal insufficiency and hospitalizations for adrenal crises,” the guideline says. “Oral glucocorticoids should be used in case of minor stress and when there are no signs of hemodynamic instability or prolonged vomiting or diarrhea.”

“Glucocorticoid-induced adrenal insufficiency necessitates careful education and management, and in the rare cases of adrenal crisis, prompt diagnosis and therapy,” the guideline notes. And this joint guideline provides a major step forward in providing the evidence-based advice needed for the many medical specialists prescribing glucocorticoids to achieve these goals.

Members of the guideline-writing committee included: Felix Beuschlein, MD (chair); Tobias Else, MD (co-chair); Irina Bancos, MD; Stefanie Hahner, PhD; Oksana Hamidi, DO; Leonie van Hulsteijn, MD; Eystein S. Husebye, PhD; Niki Karavitaki, MSc, PhD, FRCP; Alessandro Prete, PhD; Anand Vaidya, MD, MMSc; Christine Yedinak, DNP, FNP, MN; and Olaf M. Dekkers, MD, PhD (methodologist).
In July, the House Appropriations Committee advanced several funding bills, including the Labor, Health, and Human Services (L-HHS) appropriations bill, which governs funding for public health agencies such as the National Institutes of Health (NIH) and the Centers for Disease Control and Prevention (CDC).

The House bill is detrimental to endocrinology. It slashes funding for the Department of Health and Human Services and includes policy riders that would eliminate Title X funding, restrict access to women’s reproductive healthcare, and restrict access to gender-affirming care. Appropriators also included language proposing to restructure the NIH by consolidating the current 27 Institutes and Centers to 15, adopted from a proposal from Representative Cathy McMorris Rodgers (R-WA), chair of the House Energy and Commerce Committee. However, the proposal is not clear on how research portfolios would be organized in the new structure.

Recognizing the need for a more thoughtful approach to NIH reform, the Endocrine Society led a sign-on letter with 223 organizational signatures to the leaders of the House Appropriations Committee to oppose the restructuring in this bill and call for a bipartisan, bicameral process and include input from key stakeholders. Despite attempts by some lawmakers to oppose cuts to funding and programs that would benefit human health and question the radical restructuring of the NIH among other things, the bill advanced out of committee and was scheduled to be considered by the full House on July 29.

The U.S. Senate is expected to take up its version of the bill in early August, but as this issue of Endocrine News went to print, the Senate had not released a detailed bill with funding levels for the NIH. We expect the Senate proposal will be significantly more generous than the House, approaching the "caps" set by the Fiscal Responsibility Act (FRA), with the potential for additional emergency supplemental funds.

Protecting the NIH and funding for public health and biomedical research is a top priority for the Endocrine Society. We will continue to engage with the House and Senate to advocate for our priorities, including the report language in a final bill that adequately preserves and protects public health. We will also provide detailed comments to Rep. Rodgers on the proposal to restructure the NIH. We sincerely thank our members who acted to ensure congressional awareness of our research priorities. In the coming months, Endocrine Society members and Government and Public Affairs staff will visit Capitol Hill, virtually and in person through our participation in the Rally for Medical Research, to reinforce the importance of endocrine research and why NIH funding should be protected. Our advocacy efforts will also involve sharing members’ perspectives and priorities on NIH reform.

Federal Research Funding in Jeopardy as Congress Proposes Massive Restructuring of the NIH

Take Action

It is critical that all representatives and senators hear from the research community about this legislation. Please visit: endocrine.org/advocacy/take-action to join our on-line campaign urging Congress to protect NIH funding. This will take one minute of your time, but it will have a huge impact.

Stay tuned for updates on funding and NIH reform as the process continues. Visit the Society’s website to learn how you can make your voice heard and help protect endocrine research and public health.
Revised Version of TROA Passes House Ways and Means Committee

On June 27, 2024, the House Ways and Means Committee passed a revised version of the Treat and Reduce Obesity Act (TROA), legislation that would allow Medicare coverage of anti-obesity medications (AOMs), which currently is prohibited under law.

The version that passed would only allow Medicare beneficiaries to receive coverage of AOMs if they were previously receiving AOM coverage on a non-Medicare plan in the year before enrolling onto Medicare. During the mark-up, key concerns were expressed by members of the committee about the new version of TROA and the impact it could have on health equity, while other members expressed optimism that these concerns could be addressed as this bill moves through the legislative process.

Some committee members also expressed concern about the rising price of anti-obesity medications citing the low cost of these medications in other countries. The Society is concerned about changes that were made to the legislation because it would limit the number of beneficiaries who would be eligible for coverage. Fewer than 4,000 beneficiaries per year would be eligible for coverage under the new bill, which would leave behind many people who need access to these medications. This is a drastic change to the original TROA legislation that would have provided broad Medicare coverage of AOMs for beneficiaries with obesity. Consequently, the Society has not endorsed this revised version of the legislation but is working with congressional offices to broaden eligibility.

Prior to committee consideration of the legislation, the Endocrine Society released a podcast interview with Congressman Raul Ruiz (D-CA), who is one of the sponsors of TROA. During our podcast, Ruiz talked about his background, his experience in treating obesity and its comorbidities, and the legislative action for TROA. Ruiz also talked about the importance of contacting congressional representatives and urging them to address the obesity epidemic. You can listen to the podcast on the Endocrine News podcast page on our website: https://www.endocrine.org/podcast/enp85-treat-and-reduce-obesity-act.
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