

JANUARY 2015

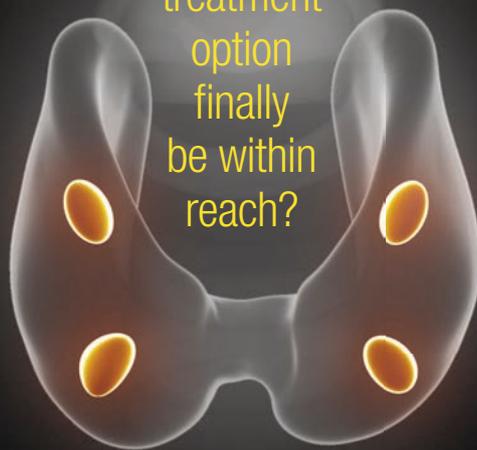
THE LEADING MAGAZINE FOR ENDOCRINOLOGISTS

ENDOCRINE news

HYPOPARATHYROIDISM: THE TREATMENT PARADOX

A new study reveals that hypoparathyroid patients experience more distress from this disorder than previously realized.

Could a new treatment option finally be within reach?



**DIABETES & DRUG ABUSE:
A Confounding Treatment Challenge**

**NURSE'S AID:
Simple Steps to a Happy Nursing Staff**

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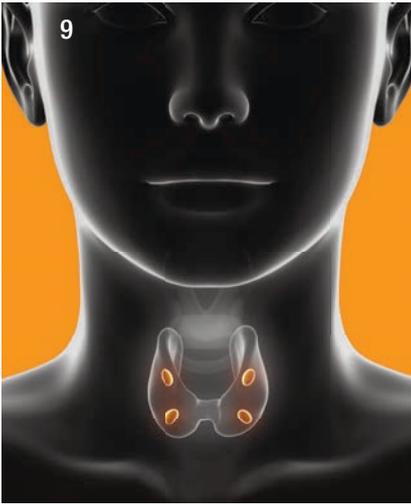
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References: **1.** Alexander EK, Kennedy GC, Baloch ZW, Cibas ES, Chudova D, Diggans J, et al. Preoperative diagnosis of benign thyroid nodules with indeterminate cytology. *N Engl J Med.* 2012;367:705-715; **2.** Alexander, Schorr M, Klopper J, Kim C, Sipos J, Nabhan F, Parker C, Steward DL, Mandel SJ, Haugen BR. Multi-center experience with the Afirma Gene Expression Classifier. *J Clin Endocrinol Metab.* 2014; 99(1):119-25; **3.** Duick DS, Klopper J, Diggans JC, et al. The impact of benign gene expression classifier test results on the endocrinologist-patient decision to operate on patients with thyroid nodules with indeterminate FNA cytopathology. *Thyroid.* 2012;10:996-1001.

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Hormone Science to Health

ENDO 2015 Will See Several New Innovations



Richard J. Santen, MD

ENDO 2015 is only a few weeks away and I am excited to share the world-class scientific program with all of you. You will notice more than just a change in the timing of the meeting as we have introduced several innovative new programs to address your professional development needs.

The plenary speakers this year will be outstanding. Just to mention one, David Allis recently won the 2015 Breakthrough

Prize in Life Sciences for his foundational research on the unexpected regulation of gene activation by modifications to proteins that package DNA, highly innovative work with implications for many diseases including neuroendocrine cancer. A \$3 million cash award accompanies the Breakthrough Prize, making it the richest prize in the life sciences, *roughly double the Nobel Prize*.

Attendees will have a unique opportunity to gain insight into the inner workings of the Food and Drug Administration (FDA) at the special scientific session “Safety and Efficacy of Diabetes Drugs: Steering between Scylla and Charybdis” presented by Janet Woodcock, MD, director of the Center for Drug Evaluation and Research (CDER) at the FDA. Woodcock is a leader in the movement to modernize drug manufacturing and regulation, and move medical discoveries from the lab to consumers more efficiently.

One of my greatest concerns is the increasing difficulty researchers, especially the next generation, experience in obtaining funding for their research. I enthusiastically recommend that researchers attend the series of “Meet the Program Director” sessions, which will feature representatives from the Eunice Kennedy Shriver National Institute of Child Health and Human Development, National Institute of Diabetes and Digestive and Kidney Diseases, National Institute of Environmental Health Sciences, and National Institute on Minority Health and Health Disparities.

One of the challenges clinicians face in their professional lives is meeting their maintenance of certification requirements. The Endocrine Society has taken a thoughtful approach to ensuring that members meet these requirements through high-quality products that will generate meaningful improvements to clinical skills. The new ESAP™ Live series is an excellent example of this, where attendees can attend live sessions featuring presentations by the authors of the ESAP book.

A new feature of the annual meeting is the “Meet the Editors In Chief” sessions. The editors in chief of *Endocrinology*, *Molecular Endocrinology*, *Hormones & Cancer*, *The Journal of Clinical Endocrinology & Metabolism (JCEM)*, and *Endocrine Reviews* will give guidance on ways to increase the likelihood that your manuscript will be accepted and share their perspectives on the future of scientific journal publishing.

As data collection has become more technologically sophisticated, its interpretation has become correspondingly more complex. The “Research Conduct: Doing Science the Right Way” session will explore both the common pitfalls and best practices in data analysis.

Impressive gains in our understanding of endocrinology were made in 2014, and R. Paul Robertson, MD, editor in chief of *JCEM* has brought together the authors of 10 of the most excellent articles for the “Best of *JCEM* 2014.” If you would like to catch up on the state of endocrinology with many of its leaders, you will find this session invaluable.

The meeting is always very busy, but remember that some of the brightest and most innovative minds in every endocrine discipline present posters and oral sessions. This is where the next generation of endocrine leaders showcase their work, and it is important to provide strong support for this group.

The Endocrine Science Socials are another new feature created to facilitate networking. Taking place immediately following the afternoon symposia on March 5, 6, and 7, these events provide the opportunity to informally discuss science with a group of your colleagues who have interests closely related to yours.

Note that the deadlines for late-breaking abstracts and early registration are in mid-January. I would encourage you and your colleagues to register now to take advantage of the reduced rates and to submit your late-breaking abstracts if you have not done so already. If you have any questions or comments, feel free to contact me at president@endocrine.org. I look forward to meeting you all at **ENDO 2015!** EN

Richard J. Santen, MD
President, Endocrine Society

JANUARY 2015

ENDOCRINE news

THE LEADING MAGAZINE FOR ENDOCRINOLOGISTS

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

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

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We kick off 2015 with a cover story on a relatively rare disorder that causes a disproportionately large number of burdens on the patient: Hypoparathyroidism. Statistics from the Hypoparathyroidism Association show that roughly 100,000 people in the U.S. suffer from this affliction and have a wide range of side effects including job loss, hospital visits, and general negative impacts on their quality of life for an average of 13 hours a day. Since this disorder is so rare, there is a perceived empathy deficit among physicians.

"The more accurate portrayal of the problem here is that because hypoparathyroidism is a rare disease, most clinicians, including many endocrinologists, have no real direct experience caring for these patients," Tamara J. Vokes, MD, professor, University of Chicago Department of Medicine and director, Osteoporosis and Metabolic Bone Disease Clinic, Chicago, tells Kelly Horvath in "Hypoparathyroidism: The Treatment Paradox" on page 9.

A different sort of treatment challenge is discussed by Glenda Fauntleroy in "Breaking the Habit" on page 12 as she broaches the topic of treating patients who are battling diabetes and drug abuse. To nobody's surprise, the likelihood of poor glycemic control is significantly increased among drug users, but Susan Herzlinger Botein, MD, at the Joslin Diabetes Center in Boston says it's important to not scold the patient for his or her addiction. "My general approach is to not focus on a value judgment of the drug use because that's neither here nor there but to look hard at the way it's affecting their diabetes because that's why they're seeing me," she says.

Full disclosure time: My mother was a registered nurse so I have an extremely biased view of nurses and the nursing profession. In a word, I think they're awesome. You probably do, too; that's why we've included an article that gives some examples on keeping your nurses happy called "What Nurses Want" (p. 16). The good news is that it's much easier than you think it is. The better news is that you're probably already doing what you need to be doing to make sure your nurses are satisfied working with you.

For anyone spending their days and nights in the lab conducting research, we have some very relevant pointers for the care and feeding of your lab animals — literally, in this case — courtesy of "Animal Kingdom" by Melissa Mapes on page 18. From the best ways to acquire them to proper ways to euthanize them, the article is a great primer on the care for these littlest lab assistants.

I hope you had a great holiday season and a happy new year, and I look forward to seeing many of you at **ENDO 2015** in San Diego. If you haven't registered, be sure to go to www.endocrine.org/endo-2015 today. **EN**

Mark A. Newman,
Editor, *Endocrine News*



Mark A. Newman

By Derek Bagley

UNLIGANDED THYROID HORMONE RECEPTOR May Play Role in Development

A novel animal study has uncovered clues to embryo developmental timing and growth rates. The study, recently published in *Endocrinology*, should prompt further research and improve the understanding on the role of the thyroid hormone (T3) signaling pathway during early development, according to lead author Yun-Bo Shi, PhD, of the Eunice Kennedy Shriver National Institute Child Health and Human Development.

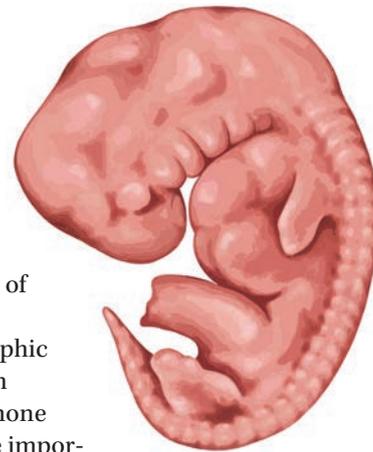
T3 affects adult metabolism and postembryonic development in vertebrates by binding to thyroid hormone receptors (TRs) to regulate gene expression. Of the two TR genes, TR α and TR β , TR α is more ubiquitously expressed. The authors wrote, “During development, TR α expression appears earlier than T3 synthesis and secretion into the plasma. This and the ability of TRs to regulate gene expression both in the presence and absence of T3 have implicated a role of unliganded TR during vertebrate development.” The researchers also noted that it is difficult to study the role of unliganded TR during development in mammals due to the difficulty to manipulate the uterus-enclosed, late-stage embryos.

Since it was recently shown that transcriptional activator like effector nucleases (TALENs) can be used to knockout/knockdown genes in amphibians and zebrafish, the investigators used the amphibian *Xenopus tropicalis* (tadpole) to study how unliganded TR affects its development. That animal’s embryogenesis produces a free feeding tadpole in the absence of T3. “Subsequently,” the authors wrote, “as endogenous T3 becomes available, the tadpole is transformed into a frog in a metamorphic process that changes essential every organ/tissue of the animal.”

The scientists designed TALENS to mutate the TR α gene in the tadpoles and found that knockdown of TR α enhances tadpole growth in premetamorphic tadpoles, likely through increased growth hormone gene expression. “More importantly,” the authors wrote, “the knockdown also accelerates animal development, with the knockdown animals initiating metamorphosis at a younger age and with a smaller body size. On the other hand, such tadpoles are resistant to exogenous T3 treatment and have delayed natural metamorphosis.”

Shi and his team concluded that their studies have not only directly demonstrated a critical role of endogenous TR α in mediating the metamorphic effect of T3 but also revealed novel functions of unliganded TR α during postembryonic development — regulating both tadpole growth rate and the timing of metamorphosis. The authors wrote that “mammalian development likely also utilizes unliganded TR, especially during early embryogenesis when T3 levels are low, to coordinate organ development and maturation, similar to premetamorphic tadpole development.”

“Given the conservation in vertebrate development,” Shi says, “our findings suggest that it is very likely that unliganded TR will affect mammalian embryo growth and development during the early stages when there is little or no circulating T3.”



Time-Restricted Feeding May Prevent Metabolic Diseases

Confining access to food to a set time may prevent metabolic diseases, a recent animal study published in the journal *Cell* has shown.

Researchers led by Satchidananda Panda, PhD, of the Salk Institute for Biological Studies, say that novel interventions are needed to treat

obesity, since current therapeutics are limited and offer only modest improvements. “Lifestyle interventions,” they wrote, “including changes in diet, reduced caloric intake, and increased exercise, have been the first-line therapy in efforts to combat obesity and metabolic diseases. However, these lifestyle changes require constant attention to nutrient quality and quantity and physical activity.” Panda and his team note that success with lifestyle

interventions has been limited to a small number of individuals.

The investigators, therefore, set out to study the effects of time-restricted feeding (TRF) “against different nutritional challenges including high-fat, high-fructose, and high-fat-plus-high-fructose diets, all of which have been shown to cause dysmetabolism.” They subjected 392 12-week-old wild-type mice to different feeding regimens to evaluate TRF’s effectiveness against different diet types, eating patterns, and existing obesity. Diets were high in fructose or fat or both, but the mice were either fed within a nine-hour window or allowed to eat ad libitum feeding (ALF). The calories consumed for all mice were equal, but the TRF mice gained less weight over a 12-week period.

The researchers then wanted to

test longer durations of TRF and its effectiveness on preventing weight gain, so they allowed mice access to food for nine, 12, or 15 hours. Food consumption was again equivalent, but longer daily feeding times “resulted in larger increases in body weight” (26% gain for nine-hour TRF versus 43% gain for 15-hour TRF). Mice fed ad libitum (FA) gained 65% under these conditions.

TRF was even shown to be effective against the occasional slip-up. The mice alternated between five days of TRF (weekdays) and two days of (ALF) (weekends) for 12 weeks (5T2A). “The legacy effect of TRF over this time scale was remarkable,” the authors wrote, “with only 29% body weight gain for 5T2A mice compared to 61% weight gain for FA mice.” TRF also promoted weight loss and weight stabilization in the

obese mice once they were switched to TRF. The subset of FA mice that were switched to TRF showed modest weight loss and maintained that weight until the end of the study.

Finally, TRF had far-reaching effects on glucose and protein metabolism. “ALF mice showed constitutively higher activation of the gluconeogenesis pathway, a characteristic of insulin resistance,” the authors wrote. “All mice on TRF were protected against insulin resistance. Irrespective of adiposity, when TRF mice were challenged with a glucose bolus they were able to restore normoglycemia much faster than ALF mice.”

Panda and his team concluded that TRF shows great potential in counteracting human obesity and the metabolic disorders that go with it.

Exercise Regimens Offer Little Benefit for One in Five People with T2D

As many as one in five people with type 2 diabetes (T2D) do not see any improvement in blood sugar management when they engage in a supervised exercise regimen, according to a new scientific review published in the *Journal of Clinical Endocrinology & Metabolism*.

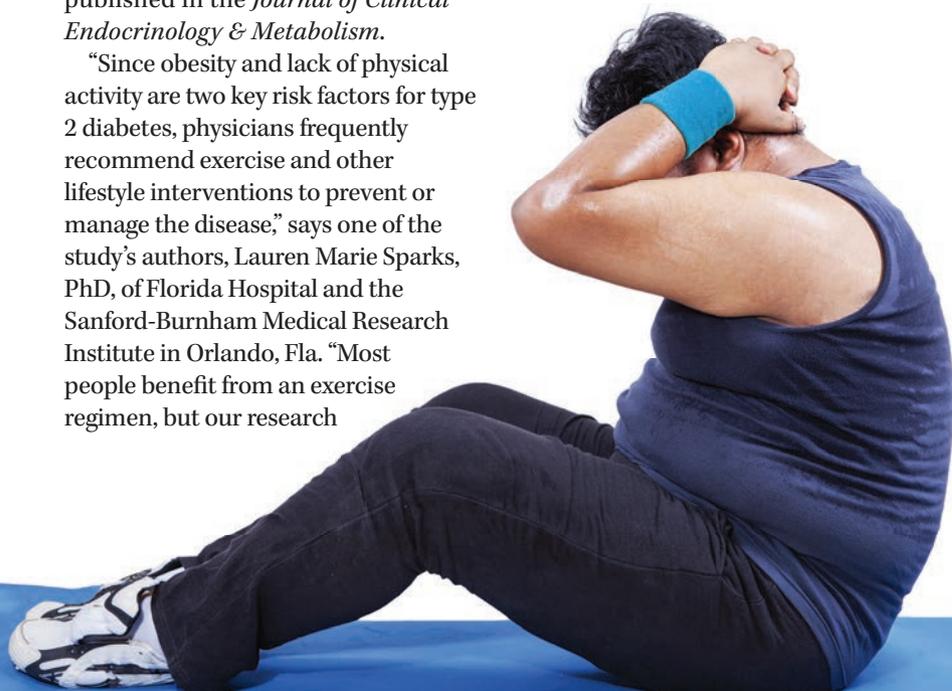
“Since obesity and lack of physical activity are two key risk factors for type 2 diabetes, physicians frequently recommend exercise and other lifestyle interventions to prevent or manage the disease,” says one of the study’s authors, Lauren Marie Sparks, PhD, of Florida Hospital and the Sanford-Burnham Medical Research Institute in Orlando, Fla. “Most people benefit from an exercise regimen, but our research

indicates that a significant minority of individuals with type 2 diabetes do not experience the same improvements in metabolism due to their genes.”

The researchers examined clinical studies in which people with T2D

participated in exercise regimens, as well as animal and genetic studies on the topic. They found that around 15% – 20% of individuals with T2D did not see any improvement in their blood sugar control, insulin sensitivity, or muscle mitochondrial density. Genetic and animal studies indicate this resistance to exercise is encoded in DNA and can be handed down through generations.

“More research is needed to determine which people with or at risk of developing T2D will respond to an exercise program and which will not,” Sparks says. “Genetic and epigenetic patterns could hold the key to differentiating between the two groups. With that information in hand, we can target specific interventions and treatments to the individuals who will benefit most and identify novel treatment approaches to help those who do not respond to exercise.”



PROSTATE CANCER PATIENTS Not Getting Needed Bisphosphonates



A research letter recently published in the *Journal of the American Medical Association* claimed that too few prostate cancer patients are being prescribed bisphosphonates, even though those drugs are needed to temper the increased risk of bone loss and fracture due to androgen-deprivation therapy (ADT).

The study, led by Shabbir Alibhai, MD, MSc, of the University Health Network in Toronto, analyzed a Canadian database of 35,487 men ages 66 and older who were

diagnosed with prostate cancer between January 1, 1995 and December 31, 2012 who had undergone orchiectomy or received at least six months of ADT. They then looked through drug database claims for any bisphosphonate claim within 12 months of ADT initiation and separated the cohort into three groups: all nonusers of bisphosphonates, those with prior osteoporosis, and those with prior fragility fracture.

The investigators found that bisphosphonate claims among all nonusers increased from 0.35 per 100 persons in 1996–1997 to 3.4 per 100 persons in 2010–2012. “Even among those with prior osteoporosis or fragility fracture, rates remained low,” the authors wrote. Among all three groups, peak bisphosphonate claims occurred in 2007–2009, with a high of 11.89 per 100 persons in those with prior osteoporosis.

The researchers concluded that bisphosphonate prescription rates among men receiving ADT remained low throughout the study period, suggesting “limited awareness among clinicians regarding optimal bone health management.”

Fast FACTS About Hypoparathyroidism



Hypoparathyroidism affects about 100,000 people in the U.S.



67% of hypoparathyroidism patients experience joint or bone pain.



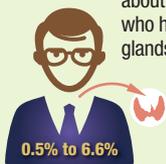
Currently, there is no FDA-approved treatment for hypoparathyroidism.



79% of hypoparathyroidism patients needed to be hospitalized or visit the emergency room because of their disorder.



61.5% of patients with hypoparathyroidism experience memory loss.



Hypoparathyroidism occurs in about 0.5% to 6.6% of people who have had their thyroid glands totally removed.



Only 18% of hypoparathyroidism patients are satisfied with their treatments' efficacy.



57% of patients with hypoparathyroidism experience sleep disturbances.



On average, hypoparathyroidism patients experience symptoms 13 hours per day.

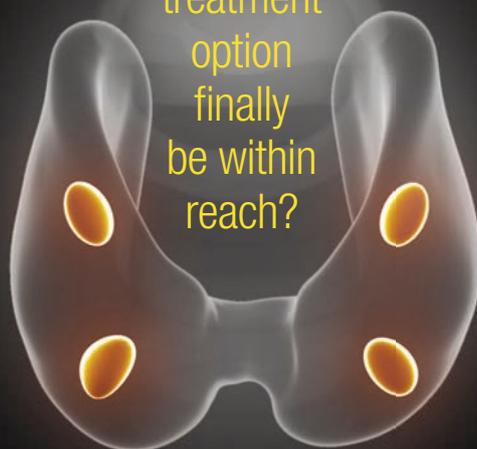


53% of hypoparathyroidism patients report depression.

HYPOPARATHYROIDISM: THE TREATMENT PARADOX

A new study reveals that hypoparathyroid patients experience more distress from this disorder than previously realized.

Could a new treatment option finally be within reach?



By Kelly Horvath

Although relatively rare, hypoparathyroidism carries a disproportionately large burden of comorbidity among the approximately 58,700 people living with insufficient or absent levels of parathyroid hormone (PTH) in the U.S. In the recent “Understanding the Burden of Illness Associated with Hypoparathyroidism (PARADOX Study),” researchers led by Bart L. Clarke, MD, associate professor Mayo Clinic College of Medicine, Rochester, Minn., assessed patient self-reports of the symptoms they experienced. The 374 study participants were members of the Hypoparathyroidism Association who responded to an online questionnaire and who met inclusion criteria. Respondents averaged age 49 years and had lived with their condition for an average of 13 years. Most were female (85%) and had developed hypoparathyroidism postsurgically (78%).

The study findings startled researchers in terms of the magnitude of reported symptoms. “What we’re hearing from patients is that, in general, having this condition had a pretty significant impact on their quality of life,” Clarke says. “Basically, there was a lot more symptomatology than we have classically been taught that hypoparathyroidism can cause. In a global sense, that was the biggest surprise to me.” Symptoms clinicians would expect include what low calcium would cause, such as muscle cramps, tingling, and paresthesias. But what was reported went well beyond these classic symptoms, including what Clarke says his patients referred to as “brain fog,” which impacted their ability to focus, remember, learn and retain information, and hold a job.

Importantly, these unexpected but very commonly reported symptoms persist despite treatment. The current therapy (used for the last 50 years) involves replacing the calcium and vitamin D that

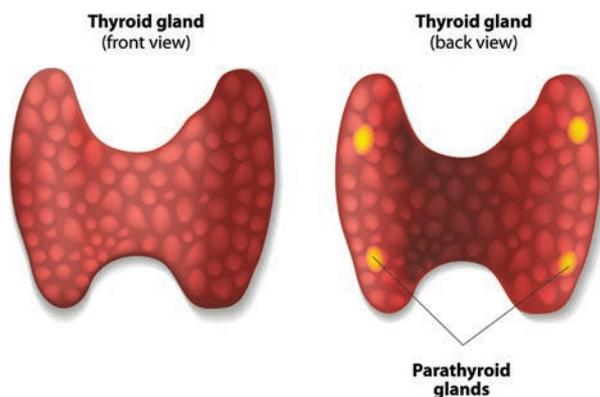
low/absent PTH causes. “Theoretically, at least, that should take care of their symptoms,” Clarke says. “But despite getting the best treatment that we have, these patients are telling us they are not very functional in their day-to-day life. It impacted relationships with family; it impacted intimacy with partners; it impacted their ability to exercise and any number of normal functions. Symptoms that we thought would get better with treatment did not.”

This might be because replacing calcium and vitamin D do not address the underlying cause of hypoparathyroidism. Although this treatment will prevent seizures and cardiac rhythm disturbances, some patients are more severely affected, or they might have other conditions complicating the picture. In the latter case, the interaction between the comorbid conditions and the hypoparathyroidism may aggravate certain symptoms, such as depression and anxiety. In the former case, patients are taken aback by how difficult managing their condition is. Clarke says his patients report dramatic quality-of-life differences, such as experiencing 16 or 17 symptoms a day for 13 hours a day, every day.

So-called “Empathy Gap”

“To some degree this is a problem of patients complaining of symptoms but not being heard,” Clarke says. Because some of the survey findings were not symptoms that endocrinologists would customarily attribute to low calcium, they might not think hypoparathyroidism is the cause and refer their patients elsewhere. As a result, patients walk away feeling that their care providers are unsympathetic. Some PARADOX researchers call this potential problem an “empathy gap.”

Others consider it more of a “failure of understanding the challenges of living with hypoparathyroidism.” Tamara J. Vokes, MD, professor, University of Chicago Department of Medicine, and director,



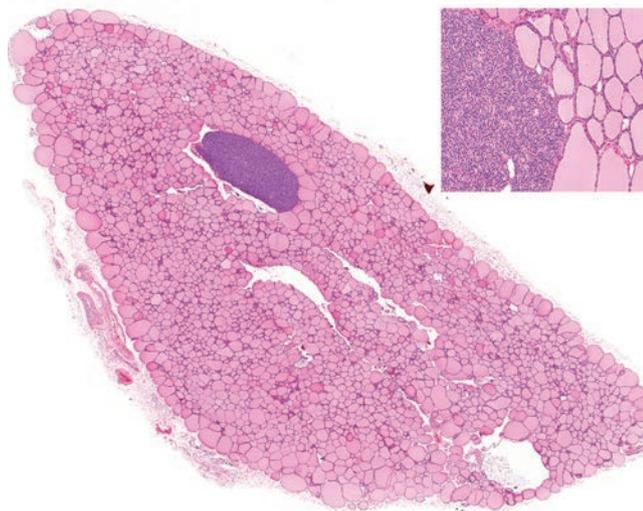
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— Bart L. Clarke, MD,
associate professor Mayo
Clinic College of Medicine,
Rochester, Minn.

AT-A-GLANCE

- At least 38 physical, emotional, and cognitive symptoms were associated with living with hypoparathyroidism according to the PARADOX study.
- Of 374 patients surveyed, 20% experienced employment loss, 45% felt significant negative impact on their quality of life and well-being, 79% had hospital visits, and 85% were unable to perform activities of daily living.
- Even with currently accepted treatment regimens, patients with hypoparathyroidism reported experiencing an average of 10 related symptoms for an average of 13 hours a day.

Osteoporosis and Metabolic Bone Disease Clinic, testified at the U.S. Food and Drug Administration hearing for approval of PTH1-84, a possible bioengineered replacement for the endogenous hormone that hypoparathyroid patients lack, on behalf of NPS Pharmaceuticals, Inc., the company that developed the drug. “The more accurate portrayal of the problem here is that because hypoparathyroidism is a rare disease, most clinicians, including many endocrinologists, have no real direct experience caring for these patients. Although it is perceived as relatively easy to treat because it involves just oral supplements of calcium and active vitamin D, I think what physicians fail to understand is that this is not



Normal healthy thyroid gland with embedded parathyroid gland (darker area). The inset shows the magnified view of the thyroid and parathyroid gland.

so easy,” Vokes says. Because the patient must *constantly* take the supplements to avoid the very unpleasant consequences of low calcium — what patients call “crashing” — this dependence can interfere with their lives. “And, I think even more than that, we’re asking these patients to stay at a calcium level that is at or just below the lower limit of normal. I don’t think any of us would be comfortable at that level. We’re asking them to be in a nonphysiologic range,” she says.

What’s Next?

Although the PARADOX study has certain limitations, even within these limitations, it has underscored the need for new therapies to adequately treat hypoparathyroidism. One such limitation was the self-reported nature of data both because it cannot be verified and because it is neither objective nor necessarily balanced. “It asked patients to volunteer and express their symptoms, so you’re more likely to get the worst cases,” Vokes says. Another study limitation was the absence of a healthy, age-matched control group, which would help determine whether the incidence of a given symptom (e.g., depression) was higher in the hypoparathyroid group than in the control. “But, even though painting a dramatic picture clearly stands to benefit the [pharmaceutical] industry, the fact that these patient self-reports were not prompted by the industry, suggests that they are believable,” Clarke says.

Both researchers agree that current symptom control in hypoparathyroidism is far less than acceptable and that new therapies are therefore needed. According to Vokes, “The PTH replacement attempt has been going on so many years because of the hope that it will allow these patients to a) not depend on exogenous supplements — they could take an injection or two a day and then be able to go about their day just like a normal person would — and b) then perhaps we can allow them to have a little bit higher calcium without causing hypercalciuria and soft tissue calcifications.”

“We’re hoping that PTH1-84 will make a big difference for some of these patients,” Clarke says. In the three-year clinical trial (six-month initial period, then 30-month follow-up) of the drug, patients reported feeling 80% better on treatment than before treatment. “Having heard both sides — the conventionally treated and the experimental drug-treated — it sure seems to me that PTH does a lot of things we do not give it credit for,” Clarke continues. “Replacing the missing hormone is probably a good thing in general. If you don’t give it at all, you can bet that there’s going to be a lot of symptoms that are not fully dealt with or treated. We need a hormone replacement to help patients feel a lot better than they do now.”

The FDA ruling for approval of PTH1-84 was scheduled to take place in October 2014 but has been delayed until January 2015. Again, says Vokes, the problem is really failing to understand the challenge of the existing disease treatment. “Calcium supplementation does not allow these patients to go about their business normally,” she says. “Asking them to be in a nonphysiologic state fails to understand the discomfort they will experience as a result.” **EN**

“The more accurate portrayal of the problem here is that because hypoparathyroidism is a rare disease, most clinicians, including many endocrinologists, have no real direct experience caring for these patients.”

— Tamara J. Vokes, MD, professor, University of Chicago Department of Medicine, and director, Osteoporosis and Metabolic Bone Disease Clinic, Chicago

BREAKING THE HABIT

For patients living with diabetes, maintaining a plan of diabetes medication, proper diet, and physical activity prescribed by their physicians is a constant daily struggle. When the patient is also addicted to drugs, the struggle becomes intensely more difficult.

By Glenda Fauntleroy

AT-A-GLANCE

- Drug use by diabetes patients can lead to “potentially life-threatening metabolic complications.”
- The likelihood of having poor glycemic control is increased among drug users.
- Treating patients with these substance addictions proves challenging for physicians.

Reports in 2012 estimated that 23.9 million Americans (9.2% of the population) over age 12 had used an illicit drug or abused a prescription medication in the past month, according to the National Institute on Drug Abuse. Marijuana was the most commonly used substance, and its popularity has recently increased.

With the number of people using drugs, those with diabetes are clearly not immune — some research has suggested the prevalence of use may be even higher.

An *Internal Medicine Journal* study in 2012 revealed that of the 504 people with type 1 diabetes who responded to an anonymous survey, 388 (77%) had used recreational drugs at least once and 237 (47%) had used drugs within the last year. Among the study participants who used drugs, 24% reported daily use and 68% used three or more drugs. The most common drugs were marijuana, Ecstasy, and speed.

“We believe the prevalence estimate based on an anonymous survey may be more reflective of what happens in real life,” says lead author and endocrinologist, Paul Lee, MBBS, from the Garvan Institute of Medical Research in Sydney, Australia.

“Regardless of what the true prevalence is, the key message of the study is that drug use does occur and may lead to potentially life-threatening metabolic complications,” he adds.

A Complicating Habit

The likelihood of having poor glycemic control is increased among drug users. Drug users are more likely to forget to take their insulin dose, forget to eat as scheduled, and underreport their



“Take insulin, a drug with a narrow therapeutic margin. **We still prescribe it to drug and alcohol addicted people despite the fact that there are real risks with this medication that are magnified in people who may spend a significant amount of time stuporous, underfed or erratically fed, and broke. It is the right thing to do, but it is riskier.**”

— Paul R. Chelminski, MD, associate professor of medicine, University of North Carolina, Chapel Hill

glucose levels. Research has also identified recurrent diabetic ketoacidosis (DKA) as another risk factor of drug use.

Another study in the April 2013 issue of *Acta Diabetologica* investigated adult diabetes patients in a Spanish hospital. Over four years, in 152 patients, there were 253 episodes of DKA. A drug screening was done in 40% of these episodes, and 20.6% showed substance abuse — mostly cocaine and marijuana. Of those patients who consumed drugs, 70% were admitted to the hospital more than once.

“There is a truism that drug and alcohol dependence complicates the treatment of any chronic disease, just as it complicates obtaining and maintaining employment, marriage, family dynamics, etc., in the non-medical world,” says Paul R. Chelminski, MD, associate professor of medicine at the University of North Carolina at Chapel Hill.

Chelminski says treatment of drug-abusing diabetes



patients is “remarkably inconsistent across specialties.” Drug and alcohol abusers, for instance, are disqualified from receiving bariatric surgery.

“This may seem reasonable, except for the fact that these patients are eligible and receive a variety of other non-emergent medical and surgical interventions designed to enhance their function and quality of life,” he adds. “For example, joint replacements, bypass surgery...are commonly done in people regardless of their substance abuse status. The ostensible argument is that they will do less well with the follow-up regimen of bariatric surgery, but I have never seen any science to support this.”

“For medical interventions, things may seem different, but are they really?” Chelminski adds. “Take insulin, a drug with a narrow therapeutic margin. We still prescribe it to drug and alcohol addicted people despite the fact that there are real risks with this medication that are magnified in people who may spend a significant amount of time stuporous, underfed or erratically fed, and broke. It is the right thing to do, but it is riskier.”

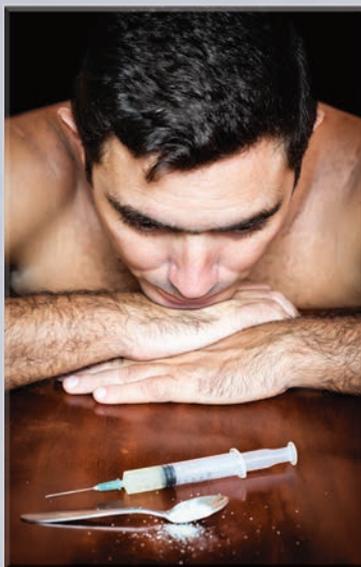
Diabetes Care vs. Drug Counseling

There’s no doubt that this patient population provides challenges for treating physicians. Susan Herzlinger Botein, MD, of the Joslin Diabetes Center, Boston, Mass., says that she’s been especially surprised by the number of her patients in their 60s who still use marijuana every night to sleep. She does, however, draw a distinction between them and her heavier users.

“I’d say the only problem in [using marijuana to sleep] is when there’s a lot of snacking afterwards and not necessarily an appropriate use of medication for the snacks,” she explains. “People can get hyper- or hypoglycemic depending on their reaction to it. For example, when someone eats an entire bag of gummy bears and then thinks, ‘Oh no,’ and takes too much insulin in response. So that’s just the kind of habitual, low-dose marijuana use that I put in a separate category.”

Patients who are heavier smokers prove a tougher challenge to manage, Herzlinger Botein says.

“I’ve seen in a number of younger men who use marijuana all day long, who are not working and are depressed,



“My general approach is to not focus on a value judgment of the drug use because that’s neither here nor there but to **look hard at the way it’s affecting their diabetes because that’s why they’re seeing me.**”

— Susan Herzlinger Botein, MD, Joslin Diabetes Center, Boston

I think [marijuana’s] effects on cognitive function start to manifest and there’s a lack of follow through on plans, particularly affecting type 1 diabetes to planning meals, planning insulin, checking blood sugar, that becomes much more spotty.”

Different Drugs, Different Hurdles

“There is a man we see in the hospital a lot and every time he uses cocaine, he gets very hyperglycemic and it causes some cardiac symptoms and he gets admitted,” Herzlinger Botein recalls. “He knows he does this and he keeps trying not to but then it happens again.”

She also spoke of a middle-aged man who had been an active heroin user who needs insulin. “He found that using a vial and syringes was a trigger for him [to shoot heroin] so switching him to pen needles helped tremendously.”

So are clinicians expected to be dual addiction counselors and convince their diabetes patients to quit drug use?

“We usually encourage patients to address their addiction issues but I don’t make that contingent on managing their care, their diabetes, because we don’t want them to, as I would say, drown in the complexity of their care,” says Chelminski. “I encourage them to think that they can do both, that they can overcome their addiction but they can manage their diabetes as well.”

Herzlinger Botein agrees. “My general approach is to not focus on a value judgment of the drug use because that’s neither here nor there, but to look hard at the way it’s affecting their diabetes because that’s why they’re seeing me.”

“Your time is a limited resource and we are not addiction specialists, but we can encourage people to optimize their health as much as possible and I really think that deep down inside, a lot of these patients are ashamed of their addiction or they’re, at the very least, not proud of it,” says Chelminski. “They know it’s a blemish on them and I don’t think it helps making people feel bad about themselves.” **EN**

— Fauntleroy is a Carmel, Ind. – based freelance writer and regular contributor to Endocrine News. She wrote about the endocrine impact of head injuries in the October issue.

THE ENDOCRINE SOCIETY IS PLEASED TO ANNOUNCE THE

2015 LAUREATE AWARDS WINNERS

FRED CONRAD KOCH LIFETIME ACHIEVEMENT AWARD

Andrzej Bartke, PhD

GERALD D. AURBACH AWARD FOR OUTSTANDING TRANSLATIONAL RESEARCH

Robert M. Neer, MD

INTERNATIONAL EXCELLENCE IN ENDOCRINOLOGY AWARD

Susan R. Davis, MBBS, FRACP, PhD

OUTSTANDING CLINICAL INVESTIGATOR AWARD

Shalender Bhasin, MD

OUTSTANDING CLINICAL PRACTITIONER

Susan A. Sherman, MD

OUTSTANDING EDUCATOR AWARD

Anne M. Etgen, PhD

OUTSTANDING INNOVATION AWARD

Bert W. O'Malley, MD

OUTSTANDING LEADERSHIP IN ENDOCRINOLOGY AWARD

Robert M. Carey, MACP, MD

OUTSTANDING MENTOR AWARD

Anne Klibanski, MD

OUTSTANDING PUBLIC SERVICE AWARD

Valeria Cunha Guimaraes, FACE, MD, PhD

OUTSTANDING SCHOLARLY PHYSICIAN AWARD

Douglas S. Ross, MD

RICHARD E. WEITZMAN OUTSTANDING EARLY CAREER INVESTIGATOR AWARD

Ajay Chawla, MD, PhD

ROY O. GREEP AWARD FOR OUTSTANDING RESEARCH

Gokhan S. Hotamisligil, MD, PHD

SIDNEY H. INGBAR AWARD FOR DISTINGUISHED SERVICE

Diane M. Robins, PhD

Awards will be presented at ENDO 2015: The 97th Annual Meeting & Expo in San Diego, CA | March 5 – 8, 2015.

What **NURSES** Want

Let's face it, without nurses your practice simply cannot function, much less thrive. Keeping your nurses happy should be at the top of your priority list, and it's simpler than you think.

By Kurt Ullman

Retaining nurses is an important part of running an office. Studies have suggested that the average cost of replacing an RN can run anywhere from \$22,000 to over \$64,000. When looked at in the context of an annual turnover rate between 8.4% and 13.9%, the cost to a practice can be significant. Keeping your current nursing staff happy and employed should be a priority for the practice.

One of the big drivers of nurse retention is job satisfaction or, more importantly, dissatisfaction. Studies have shown that low job satisfaction is the most frequently cited reason why nurses leave their current jobs.

To assess what makes for a good work environment, we talked to four nurses about their job expectations. Those we interviewed were employed in large and small practices across North America. One of the more important areas to these nurses was the trust and respect of their physician employers.

In Nurses We Trust

"Having the physician trust my reporting and suggestions for care is important to me," says Andrea Mossoney, RN, a staff nurse at Community Physician Network Diabetes and Endocrinology Care in Indianapolis, Indiana. "There should be a link with the doctor so they listen to you as far as what is going on with the patient. That really does have a substantial impact on job satisfaction."

Trust, in turn, leads to another important piece of

the retention puzzle: autonomy. As healthcare changes, and even outpatient settings are seeing more acute patients, this may become harder to accomplish for both the physician and the nurse.

"Healthcare in general has changed from more autonomy to less," notes Cathy Metzinger, RN, CDE, a diabetes/endocrine educator in a pediatric endocrine practice and immediate past-president of the Pediatric Endocrine Nursing Society (PENS). "As a nurse I can say that the doctors understand the pressures that are being put upon us as more and sicker patients come in through the door."

Two-Way Communication

Underlying this is the need for good communications between both parties. The interactions should be such that RN and MD alike are able to freely talk about concerns and be heard by the other. While there is no requirement that the doctor agrees with everything the nurse suggests, there should be an effort to explain why input wasn't followed.

"Communication has to go both ways," says Michelle Gurel, RN, BSN, a nurse at Massachusetts

General Hospital's Neuroendocrine Clinical Center in Boston. "The concept of good communication has to have a component of support from the higher echelons of the practice. In the very few times where I felt the communication was less than perfect, I have been able to get support from my administrator and director."

However, it shouldn't be just confined to talking about professional topics. Showing an interest in the person in addition to the nurse was also integral to a good work environment.

"The interpersonal interactions are an additional sign of respect," says Nicole Kirouac, RN, BN, a pediatric endocrine nurse clinician at Winnipeg Children's Hospital in Winnipeg, Manitoba. "Sometimes it can be as simple as saying, 'Hi, how are you?' The two-minute conversation that shows they care and that I am not just another person at another desk."

Learning Opportunities

For many, learning opportunities is another consideration in making a good work environment. In many ways this ability for personal and professional growth feeds back to the communication and trust aspects.

"It should be recognized that we are all continuing



"The interpersonal interactions are an additional sign of respect.

Sometimes it can be as simple as saying, 'Hi, how are you?'"

— Nicole Kirouac, RN, BN, a pediatric endocrine nurse clinician, Winnipeg Children's Hospital, Winnipeg, Manitoba

to learn and need the opportunity and ability to improve our knowledge base," notes Kirouac, who is also the current president of PENS. "This doesn't always have to be trips to conferences; it can be something as simple as making sure I see an important journal article."

Encouragement to take on responsibilities outside of the practice can also be seen as a retention tool. For example, Kirouac's employers allow her to be active in both the Canadian Pediatric Endocrine Nurses

group and the Pediatric Endocrine Nursing Society.

Basically this boils down to having respect for nurses and their professional contributions to the practice. A nurse's perception of respect has been shown to be predictive of satisfaction and his or her intent to leave the organization within the next 12 months.

"You want to feel that you are valued in your job," Metzinger says. "Every colleague I have spoken to says that when they feel respected, they are much more likely to feel comfortable in their position. Being valued can go a long way toward balancing out the increasing pressures from more and more work to do." **EN**

— Ullman, RN, MHA, is an Indiana-based freelance writer with nearly 30 years of experience. He wrote about mentoring in the September issue.

Transitions of Care

Taking a Patient from Pediatric to Adult Care Doesn't Have to be Difficult



The needs of a pediatric patient and adult patient with Type 1 Diabetes are different. Make the process of moving your patient to a new practice easier with Transitions of Care, an online resource center developed to prepare and guide you and your patients in the process of changing care teams.

Visit us online and discover how pediatric and adult endocrinologists can work together, along with their patients to provide a successful transition outcome.

Transitions of Care is provided by the Endocrine Society and a broad coalition of partnering organizations.

endocrinetransitions.org



This program is supported by educational grants from Lilly USA, LLC and Medtronic Diabetes.

ANIMAL KINGDOM

These basic rules for ethical experimentation will keep you, your research, and your laboratory animals safe.

By Melissa Mapes

From Pavlov's dogs to Dolly the cloned sheep, animals have played a notable role in scientific breakthroughs across the spectrum of research. Even the ancient Greeks gained important anatomical knowledge through the vivisection of goats and pigs. Although these discoveries have greatly benefitted mankind, the ethics of performing experiments on living creatures remains a subject of much controversy. Regulations and standards of care for animals in laboratories have significantly improved in recent decades, but scientists can help protect themselves, their colleagues, and the animals they work with by learning the laws and best practices.

The Animal Welfare Act

Legally, the use of animals in research must be avoided when other acceptable alternatives exist, but in many cases there are no other options. In experiments that necessitate animals, a number of minimally acceptable standards need to be considered, ranging from the type of dealer the animals are purchased from to the living conditions in the lab.

The Animal Welfare Act (AWA), signed into law by President Lyndon B. Johnson in 1966, remains the first and only federal law for the regulation of laboratory animals. Certain creatures, like rats, mice, livestock, and cold-blooded species, are excluded from the terms of the Act. It primarily focuses on the licensing and registration of animal dealers and the

development of committees to biannually assess the treatment of animals in a lab.

Random Sources

On the priority list of legislation, animal welfare did not carry enough public weight until *Life* magazine and

Sports Illustrated went to press with stories of criminal and degrading practices in the animal trade. In 1965, *Sports Illustrated* published an article about a family pet — a Dalmatian named Pepper — that was stolen from his home and sold to a hospital in the Bronx, N.Y., where he soon died during an experimental surgical procedure.

Several months later, *Life* came out with a piece titled "Concentration Camp for Dogs" that exposed horrific housing conditions at U.S. animal dealer facilities. These articles caused public outcry and led Congress to create and pass the AWA. They also illustrated the importance of finding a reputable supplier that maintains humane conditions and sources their animals through safe, legal means.

Currently, labs can purchase animals from "Class A" or "Class B" dealers. Class A dealers breed animals specifically for research, which are all born and raised on premises. Class B dealers are licensed to resell animals from "random sources" such as shelters or third-party breeders and tend to offer less assurance that the animals are well-cared for and sourced ethically.



Five Ways to Improve LAB ANIMAL WELFARE

- Only obtain animals through “Class A” dealers
- Conduct frequent evaluations with a qualified veterinarian
- Humanely euthanize diseased and dying animals
- Reference the proper guides for caring for each species
- Keep cages clean and ensure adequate space



Animal rights activist groups frown upon the use of Class B dealers due to the challenges in regulating their activities. Random source animals can cost as little as one-tenth the price of a Class A animal, but most institutions opt to spend the additional money.

Committees for Good Care

An important part of the AWA dictates that research institutions must establish a committee to ensure the proper care of laboratory animals that includes at least one licensed veterinarian and one third-party individual who is unaffiliated with the organization. Twice a year or more, the committee inspects the living conditions and general treatment of the animals. Any issues that are noted must be passed along to the institution for immediate correction.

If changes are not rapidly made, the committee is obligated to report the violations to the U.S. Department of Agriculture (USDA) and to any funding agencies, which may choose to revoke grants. In 2008, an amendment was added to the AWA that allows the USDA to fine institutions \$10,000 per animal per day for failure to adhere.

Additionally, scientists are required to consult with the committee before starting any experiment that may cause pain. Alternatives must be considered, and strict adherence to requirements for post-surgical care and the use of pain-relieving medication need to be followed for any applicable projects. If pain is unavoidable, the research has to be supported by specific research protocol and justified in writing.

Safe and Sanitary Conditions

The AWA is often criticized for its exclusion of some of the most common lab animals: rats and mice. These quintessential laboratory creatures appear far more often in experiments than the dogs, cats, primates, and other more protected species, making their care a top priority for many scientists despite their diminished status in the eyes of federal law.

Rats and mice, similar to people, thrive in an average temperature of 72°F and cycles of 12 to 14 hours of light

and 10 to 12 hours of darkness. They need frequent air changes and enough space to move around, which most researchers determine based on the animal's size and weight — the minimum being about 17 square inches. Bedding changes, proper humidity, and noise

control are all necessary for comfortable and sanitary conditions. Microisolator tops on cages are highly recommended to reduce allergens and the incidence of diseases that are transmissible by air.

Healthy and comfortable animals not only lead to more reliable research but also play an important factor in the safety of the people working with them. From the everyday lab rat to the spotted hyena, the unique requirements for care must be addressed to avoid potentially dangerous bites, diseases, and allergies.

A number of resources have been created to support the development and maintenance of quality lab animal programs. The Association for Assessment and Accreditation of Laboratory Animal Care International (AAALACI) relies on three different publications when evaluating the practices of institutions around the world: the 8th edition of the *Guide for the Care and Use of Laboratory Animals*, from the National Academy of Sciences; the *Guide for the Care and Use of Agricultural Animals in Research and Teaching*, from the Federation of Animal Science Societies; and the *European Convention for the Protection of Vertebrate Animals Used for Experimental and Other Scientific Purposes*, from the Council of Europe.

Details on the specifics of caring for a vast variety of species and other best practices can be found within the chapters of these guides. The relatively new science of laboratory animals continues to evolve, and by keeping abreast of these techniques and recommendations, institutions can ensure both a high degree of ethics and improved quality of research. **EN**

— Mapes is a Washington, D.C.-based freelance writer and a frequent contributor to Endocrine News. She wrote about the “Plan B” pill and overweight women in the August issue.



Society Hosts Key Diabetes Stakeholders, Senator Daschle to Discuss 2015 Outlook

On December 4, Endocrine Society hosted a meeting of the Diabetes Advocacy Alliance (DAA) to discuss recent legislative and regulatory advances in diabetes and how to achieve greater success through our col-

lective work. Former Senate Majority Leader, Tom Daschle (pictured), provided a unique perspective at this meeting on opportunities to affect change in the 114th Congress, remarking that Democrats and Republicans will likely be further polarized but that there are several potential areas for bipartisanship. These issues include the repeal of the flawed sustainable growth rate formula, reimbursement for telehealth, and extending coverage of the National Diabetes Prevention Program to the Medicare population. The Society looks forward to continuing to advocate on behalf of these important issues and in working with the DAA to affect change together.

Draft NIH Policy Promotes Use of Single IRB for Multi-Site Studies

On December 3, the National Institutes of Health (NIH) announced a draft policy for the “Use of a Single Institutional Review Board (IRB) for Multi-Site Research.” The new policy establishes the expectation that multi-site NIH-funded domestic studies will make use of a single IRB of record, rather than multiple local IRBs. Comments on the proposed policy will be collected by the NIH until January 29, 2015.

The Endocrine Society has consistently advocated for the use of single IRBs for multi-site studies in an

effort to increase efficiencies while maintaining high standards for the protection of human research subjects. The Society is enthusiastic about the proposed policy and will develop comments to ensure that the final policy remains broadly consistent with the Endocrine Society’s position statement on Central Institutional Review Boards. To ensure that the Society captures your perspective on the policy, we encourage interested members to submit their comments to Joseph Laakso, associate director for Science Policy at jlaakso@endocrine.org by January 22.

— Joe Laakso is associate director, Science Policy, for the Endocrine Society. For more information, go to: www.nih.gov/about/reporting-preclinical-research.htm.

NIH Proposes New Rule to Enforce ClinicalTrials.gov Reporting Requirements

Alarmed that the results of nearly a third of its funded clinical trials go unreported, the National Institutes of Health (NIH) has proposed new policies and requirements for the registration of NIH-funded clinical trials and subsequent reporting of clinical trial data on the clinicaltrials.gov website.

The new policy would require that all NIH-funded awardees conducting clinical trials are expected to ensure that their NIH-funded clinical trials are registered and summary results, including adverse event information, are submitted to **ClinicalTrials.gov** in accord with the timelines that will be set forth at ClinicalTrials.gov. Investigators who fail to comply with the new rule may face strict enforcement actions, including loss of funds or grant termination as appropriate.

The Endocrine Society supports the goal of ensuring that data from clinical trials achieve the maximum benefit to society while minimizing administrative burdens on researchers. The Society will provide feedback to the NIH on the proposed rule and continue to keep members informed as the new policies are implemented. For more



information on the new regulations and opportunities to comment, please see the Clinical Trials Registration and Results Submission docket at regulations.gov. If you have any thoughts or concerns regarding the new policy that the Endocrine Society should include in formal comments, please send your input to Joseph Laakso, associate director for Science Policy at jlaakso@endocrine.org.

Congress Passes Funding Bill; NIH Receives \$150 Million Increase

During an unusual weekend session, on December 13 the U.S. Senate finally passed a government funding bill for the remainder of the 2015 fiscal year passed earlier by the House of Representatives. High drama ensued in the Capitol as a small group of conservatives tried to block debate on the bill by raising concerns with President Obama's immigration policy, forcing a marathon weekend session. Ultimately, the bill passed included mostly flat funding for most health agencies, however, the National Institutes of Health (NIH) received an increase of \$150 million as a result of the increased advocacy from the research community. The Society thanks all members who contacted Congress; your voice was heard. A complete analysis of the legislation is available on endocrine.org. Below are highlights of importance to the Society:

National Institutes of Health (NIH) —

The bill provides \$30.3 billion, an increase of \$150 million in base funding and \$238 million in Ebola-related research.

National Diabetes Prevention Program (NDPP) —

The bill provides support for the NDPP that encourages collaboration among federal agencies, community-based organizations, employers, insurers, healthcare professionals, academia, and other stakeholders to prevent or delay the onset of type 2 diabetes among people in the United States.

Clinical Trials —

The agreement expects the NIH to review its policies and to make changes to ensure appropriate minority participation in clinical trials.

Commitment to New and Early-Stage Investigators —

The NIH is directed to develop a new approach with actionable steps to reduce the average age at which an investigator first obtains R01 funding. Further, the agreement requests the NIH review the grant success rates for early-stage investigators in their first two grant submissions to consider whether the grant applications submitted by all early-stage investigators should compete against other early-stage investigators instead of all submissions.

Women's Health Research —

The agreement supports the NIH's recent shift toward achieving balance between females and males in pre-clinical research and encourages the NIH to ensure this applies to experimental models used for basic science research and that both males and females are used to investigate diseases that affect men and women. It is recommended that the NIH expand its current policies to require NIH-funded investigators to prominently indicate the sex of their experimental model in their grant application and progress reports. Further, those investigators should be required to report, and when appropriate, analyze their data by sex as part of the grant progress reporting and in all published results derived from NIH funding. The NIH is encouraged to require investigators to use valid experimental design, including consideration of sex, as a biological variable in relevant research on animals, cells, and human subjects. The agreement also states that grant proposals that include adequate numbers of women and men be given priority in funding decisions, when appropriate. **EN**

Society Partners with European Endocrine Societies for EndoBridge in Turkey



The second annual meeting of EndoBridge was held in Antalya, Turkey, October 23 – 26, attracting over 400 delegates from 35 countries.

The first clinical update meeting of EndoBridge was launched in October 2013 by the Society of Endocrinology and Metabolism of Turkey (SEMT) in collaboration with the Endocrine Society. To host this year's EndoBridge meeting, SEMT, European Society of Endocrinology, and the Endocrine Society have joined forces for the first time. EndoBridge 2014 provided a comprehensive update across the full spectrum of endocrinology including diabetes and lipid disorders. The three-day program comprised 23 state-of-the-art lectures and 16 interactive case discussion sessions, which were simultaneously translated into Turkish, Russian, and Arabic.

EndoBridge, conceptualized by Bulent Yildiz, MD,

founding secretary of the initiative, takes a unique position with the vision of bridging the world of endocrinology. "We, as today's physicians, need hands-on informa-

tion about hormonal disorders to use in real-world settings and to help our patients achieve better health," Yildiz says. "Although context might differ, we all share many challenges of endocrinology across our countries. To this end, EndoBridge provides a forum to share and exchange experience among peers and the world's leading experts. I am excited and pleased to see that we are building up a bridge in the field of endocrinology and making a remarkable model of dialogue, understanding, and collaboration."

The third annual meeting of EndoBridge will take place in Antalya, Turkey, October 15 – 18, 2015. Further information can be found at www.endobridge.org. **EN**

New Reporting Tool Beneficial for Bone Healthcare Providers



In 2014 and every year moving forward, an increasing percentage of payments for Medicare and Medicaid will depend upon successful reporting of quality measures for every practicing clinician. To help you meet these requirements, the National Bone Health Alliance (NBHA) and the National Osteoporosis Foundation (NOF) have developed a new tool for those in the bone health field to successfully participate in the Physician Quality Reporting System (PQRS).

The NBHA and NOF Quality Improvement Registry (QIR) has been designated as a Qualified Clinical Data Registry (QCDR) by the Centers for Medicare & Medicaid Services (CMS) for PQRS reporting. QIR is the only QCDR focused exclusively on osteoporosis and post-fracture care. As an Endocrine Society member, you are eligible for a discount to use the QIR QCDR as well as personalized support to answer your questions and walk you through the reporting process.

Using the QIR QCDR helps protect your practice's income and keeps money in your practice so you can continue your focus on bone health. The QIR will allow you to submit for PQRS, Meaningful Use, and Maintenance of Certification as well as drive performance measurement,

benchmarking, population health management, and practice improvement.

Meeting PQRS quality reporting requirements will affect your bottom line. You will earn a 0.5% PQRS incentive payment this year and, more importantly avoid a 1% – 2% decrease in all Medicare reimbursements in 2015 and 2016. CMS is proposing to increase these incentives and penalties so the revenue at risk is expected to increase steadily each year. If you don't participate in PQRS reporting this year, you have potentially thousands of dollars at risk in 2016 and beyond.

Go to www.medconcert.com/FractureQIR to see how the registry works or contact Debbie Zeldow at Debbie.Zeldow@nbha.org or 202-721-6364 for further information.



NIDDK
information
network

New Research Resource from NIDDK

The NIDDK Information Network (dkNET; <http://dknet.org>) has been launched to better serve the needs of basic and clinical investigators in metabolic, digestive, and kidney disease by the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK). These resources will include data, materials, tools, and other services that will help advance the mission of the NIDDK.

Access to these research resources is generally provided by a database or Web portal, developed and hosted by many different projects, organizations, and individuals. While many of the large government-funded databases — maintained by agencies such as the European Bioinformatics Institute and National Center for Biotechnology Information — are well known to researchers, many more that have been developed by and for the biomedical research community are unknown or underutilized. At least part of the problem is the nature of dynamic databases, which are considered part of the “hidden” or “deep” Web, that is, content that is not easily accessed by search engines.

dkNET was created specifically to address the challenge of connecting researchers in metabolic and digestive diseases to research resources via these types of community databases and Web portals. dkNET functions as a “search engine for data,” searching across millions of database records contained in hundreds of biomedical databases developed and maintained by independent projects around the world. Through the novel data ingest process used in dkNET, additional data sources can easily be incorporated, allowing it to scale with the growth of digital data and the needs of the dkNET community.

Some of the highlights of dkNET are:

- A search portal to find community-vetted materials, data, and tools relevant to NIDDK and beyond;
- Personalized search and display of results;
- Community news and social networking; and
- Live help during “office hours” so you can find what you are looking for.

—Maryann Martone, PhD, and Jeffrey Grethe, PhD

Weigel Named Editor-in-Chief of *Hormones and Cancer*



Nancy Weigel, PhD, a professor at Baylor College of Medicine in Houston, Texas, has been named editor-in-chief of the Endocrine Society's journal *Hormones and Cancer*.

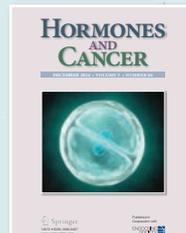
“It's an honor to take the helm of a journal dedicated to such a crucial health topic,” Weigel says. “*Hormones and Cancer* brings together breakthrough studies, both basic and clinical, to shed light on the causes and potential treatments of cancer. I am looking forward to maintaining and growing its reputation as a destination for the finest translational research on hormone-related cancers.”

Weigel's term as editor-in-chief began January 1. She has previously served as associate editor for the Society's journal, *Molecular Endocrinology*, and was an editorial board member for *Hormones and Cancer*, *Endocrinology*, *Steroids*, *Nuclear Receptor Signaling*, and the *Journal of Biological Chemistry*.

“The Society is thrilled to have Dr. Weigel on board as the next editor-in-chief of *Hormones and Cancer*,” says Barbara Byrd Keenan, executive director and CEO of the Endocrine Society. “She brings a wide breadth of knowledge and editorial experience that will facilitate continued excellence and future growth.”

In her own research, Weigel has investigated coactivators and androgen receptors in prostate cancer as well as vitamin D receptor target genes. She is chairwoman of the Society's Laureate Awards Committee and has served on the Society's Council as well as the Publications Core Committee. Weigel has been honored with the Society's Roy O. Greep Award for Outstanding Research and the Society of Women in Urology/Society for Basic Urology Research Award for Excellence in Urologic Research.

Hormones and Cancer combines basic research, epidemiology, and clinical studies to shed light on the emerging field of hormone-related cancers. The journal was founded in 2010 and is published on a bimonthly basis. It is produced in partnership with Springer, an international publisher of clinical and research books.



Event CALENDAR

JANUARY 23 – 17, 2015, SNOWMASS, COLO.

51st Annual Clinical Diabetes and Endocrinology Conference
www.njhealth.org/diabetes-conference

JANUARY 27 – FEBRUARY 1, 2015, BRECKINRIDGE, COLO.

Keystone Symposia on Systems Biology of Lipid Metabolism
www.keystonesymposia.org

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Society Headquarters Recognized for **Being Eco-Friendly**

The Endocrine Society was awarded a Gold LEED Certification for its new headquarters at 2055 L Street in Washington, D.C., by the U.S. Green Building Council. LEED, or Leadership in Energy & Environmental Design, is a green building certification program that recognizes best-in-class building strategies and practices and is recognized across the globe as the premier mark of achievement in green building.

To receive LEED certification, building projects must satisfy prerequisites and earn points to achieve different levels of certification. When the

Society first made plans to move their headquarters to DC, the organization's leadership identified LEED certification as a primary target.

Architects reviewed the Society's own statement on endocrine-disrupting chemicals (EDCs) and weeded out construction materials that contained materials disruptive to reproductive and other endocrine systems. Every effort was made, when known and reported, to avoid products with harmful ingredients, and in the case of paints, adhesives, some carpet materials, and others, the research available at the time was able to steer and inform the design team's specifications in new directions.

"Our members have shown that endocrine-disrupting chemicals pose a real threat to public health," says Endocrine Society CEO Barbara Byrd Keenan. "So, when we planned the construction of the new headquarters with an eye to LEED certification, we also were very mindful to avoid materials shown to contain EDCs."

The Society also earned points for choosing a location in an urban area with access to community amenities and public transportation, plentiful natural light, acoustical comfort using sound-absorptive materials, and prioritized use of low-VOC paints and adhesives, Greenguard certified furniture, CRI Green Label Plus carpeting, and other low-emission materials. **EN**



Barbara Byrd Keenan, CEO, and John Heberlein, Deputy Executive Director and COO, are presented with the LEED Gold award by Roger Sola-Sole, principal at OTJ Architects.

Society Publishes New Clinical Practice Guideline on **Paget's Disease**

The Endocrine Society has issued a Clinical Practice Guideline (CPG) for the diagnosis and treatment of Paget's disease of the bone, a condition where one or more bones in the body become oversized and weak.

The CPG, entitled *Paget's Disease of Bone: An Endocrine Society Clinical Practice Guideline*, appeared in the December 2014 issue of the *Journal of Clinical Endocrinology & Metabolism (JCEM)*.

About one million people nationwide have Paget's disease of the bone, according to the National

Institutes of Health's National Institute of Arthritis and Musculoskeletal and Skin Diseases. Among people who are older than 55 years, an estimated 2% to 3% have Paget's disease. The condition is rare in people who are younger than age 40.

"We've long known that bisphosphonates — a class of drugs often used to treat osteoporosis and other bone conditions — work well for treating Paget's disease," says Frederick R. Singer, MD, of the John Wayne Cancer Institute in Santa Monica, Calif., and chair of the task force that authored the guideline.

"One particular option — a one-time IV infusion of zoledronate — has emerged as the preferred option. The medication can put Paget's disease into remission for up to six years, and many patients prefer the one-time infusion to oral medications that can cause gastrointestinal side effects and must be taken over the course of several months."

The CPG recommends that people with active Paget's disease at risk of future complications be prescribed bisphosphonates. The Society suggests physicians consider the zoledronate infusion as the

FLARE

FUTURE LEADERS ADVANCING RESEARCH IN ENDOCRINOLOGY

Now Accepting FLARE Applications

The Society is now accepting applications for the Future Leaders Advancing Research in Endocrinology (FLARE) Program. FLARE is open to underrepresented minority senior graduate students and post-doctoral fellows who want the knowledge, skills, and network to become independent researchers. FLARE provides leadership and career development training, professional connections, and a year of committee service to awardees.

Visit www.endocrine.org/FLARE to learn more and apply by January 16, 2015.

Society Honored for Enhancing Washington, D.C.'s Economic Environment

The Endocrine Society was presented the Michael V. Hodge DC Revenue Bond Program Deal of the Year Award at the Washington, D.C. Economic Partnership (WDCEP) Annual Meeting on December 9.

The Hodge Award recognizes the year's top deal that has made a noteworthy contribution to DC's economic landscape. The Society received the honor for its purchase of a 34,000-square-foot office condominium at 2055 L Street, NW.

"We have been grateful to have support from District officials as we made this long-term investment in the Society's future, and the award is a tribute to our collaboration," says Endocrine Society CEO Barbara Byrd Keenan. "Being based in the District has advanced our role as a leader in the health and science policy sphere. We are pleased to be putting down roots in a location that makes it easy to interact with other notable healthcare, research, and nonprofit organizations."

The award was presented at the WDCEP's 2014 annual meeting and development showcase at the Walter E. Washington Convention Center. The Hodge Award is named after the former director of the DC Revenue Bond Program in the Office of Planning & Economic Development. The

program helps finance construction projects for nonprofit organizations and corporations. The Endocrine Society is the third organization to receive the honor since the WDCEP established the award in 2012.

The Society relocated its 90-plus employees to the District from Chevy Chase, Md., last February. [EN](#)



Endocrine Society COO John Heberlein (center) accepted the Michael V. Hodge Revenue Bond Deal of the Year Award on December 9 at the WDCEP's annual meeting. Presenting the award were WDCEP president and CEO Keith Sellars (left) and Will Liggins, director, DC Revenue Bond & Enterprise Zone Program.

first-line treatment unless there is a reason to avoid the treatment, such as reduced kidney function in the patient.

Recommendations from the CPG include:

- As part of the diagnostic process, plain radiographs should be taken of suspicious areas of the skeleton.
- Following a diagnosis, measurements of the patient's serum total alkaline phosphatase (ALP) levels, or a more specific bone marker when appropriate, should be performed to determine the extent of the damage.

- People who have both Paget's disease and abnormal liver function — either in the organ itself or the biliary tract — should undergo a measurement of a specific bone marker to assess response to treatment or, in an untreated patient, determine the disease's course.
- Since many patients do not report feeling pain when the disease activity recurs, patients should undergo testing for bone markers to determine if they are relapsing.

Other members of the Endocrine

Society task force that developed this CPG include: Henry G. Bone III of the Michigan Bone & Mineral Clinic in Detroit, Mich.; David J. Hosking of Nottingham City Hospital in Nottingham, U.K.; Kenneth W. Lyles of Duke University and VA Medical Centers in Durham, NC; Mohammad Hassan Murad of the Mayo Clinic in Rochester, Minn.; Ian R. Reid of the University of Auckland in Auckland, New Zealand; and Ethel S. Siris of Columbia University College of Physicians & Surgeons in New York, NY.

The CPG was co-sponsored by the European Society of Endocrinology.



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FROM THE ENDOCRINE SOCIETY

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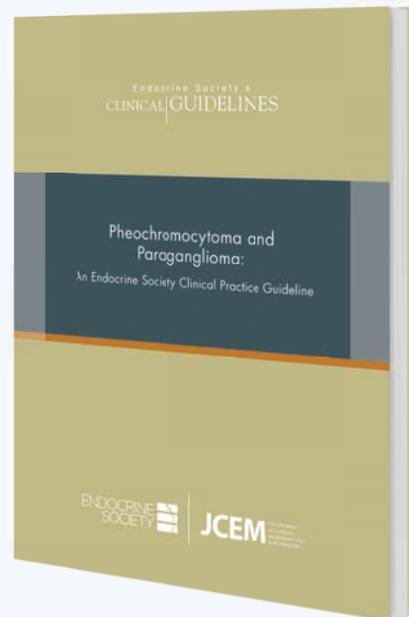
Get the latest scientific evidence and best practice advice with our guideline *Pheochromocytoma and Paraganglioma*.

Chaired by Dr. Jacques Lenders, *Pheochromocytoma and Paraganglioma* provides actionable recommendations for practicing physicians on biochemical testing for diagnosis, imaging studies, genetic testing, perioperative medical management, and surgery.

The Society's Clinical Practice Guidelines are developed by a team of experts, through a rigorous and multi-step, peer review process to ensure the highest quality, evidence-based recommendations.

To purchase a hard copy, visit endocrine.org/store.

Download a free copy of the guideline at endocrine.org/CPG.



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**Employed position available for
BC/BE Endocrinologist near the SC Coast.**

Outpatient Only! McLeod Health, a private, non-profit healthcare system, located in Florence, SC, is seeking a BC/BE Endocrinologist to join our Hospital. McLeod Regional Medical Center is a stable 565 bed, tertiary care facility. With a service area of 1.2 million people, the incoming physician will gain an established patient base in no time! The physician would work closely with our Hospitalist team, which has 18 physicians, as well as, our Diabetes Center. We also have a Pediatric Endocrinologist on staff. This is an employed position with

McLeod and offers paid malpractice, CME allowance, Base salary plus a production bonus, based on RVUs, also possible sign on bonus, relocation allowance and paid time off. Florence, SC has a population of 200,000 people and is located near major cities such as Charlotte, NC, and Charleston, SC. With our warm weather, we offer outdoor recreation, such as, golf, tennis, and water activities year round. If you are interested in practicing medicine with a nationally recognized, state of the art healthcare system in an economically robust area of the country, please contact Angela Stukes at astukes@mcleod-health.org or 843-777-7046.

Joe DiMaggio Children's Hospital Seeks Medical Director of Pediatric Endocrinology

About the Opportunity:

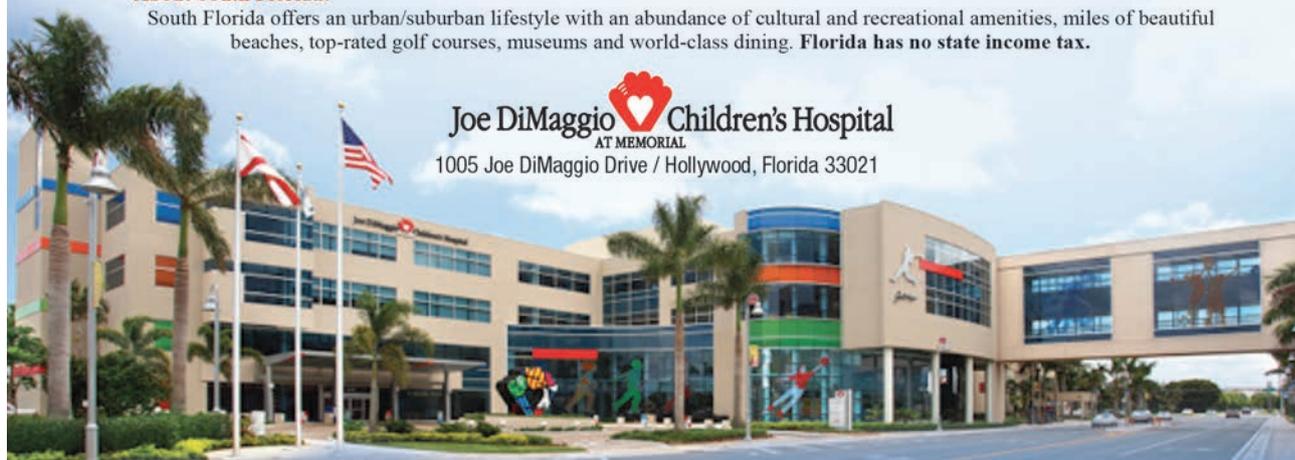
Joe DiMaggio Children's Hospital is seeking a medical leader to lead its dynamic pediatric endocrinology team. The desired candidate must be board-certified in pediatric endocrinology and should have pediatric endocrinology and medical leadership experience. The medical director will lead a successful team of 4 pediatric endocrinologists, 1 nurse practitioner, 2 certified diabetes educators and 1 registered dietitian. This team works collaboratively with our excellent in-house physician teams, including hospitalists, intensivists and neonatologists. Joe DiMaggio Children's Hospital also has the largest and most diverse group of pediatric specialists in the region. You will find a supportive clinical research environment with close interaction and staff support provided through the Office of Clinical Research, an experienced diabetes team with support for patients and families dealing with this chronic illness, and a dynamic general endocrinology practice with a diverse patient population.

About Joe DiMaggio Children's Hospital:

Joe DiMaggio Children's Hospital, a 204-bed facility, opened in 1992 and is located in Hollywood, Florida. This premier provider of tertiary-level pediatric care has a 64-bed Level II & III NICU, 22-bed PICU and 12-bed intermediate care unit. As South Florida's newest freestanding children's hospital, JDCH is redefining the pediatric healthcare experience. We combine cutting-edge excellence with a commitment to patient- and family-centered care. Thanks to exemplary medical expertise, advanced technology and exclusive pediatric programs, JDCH has earned the distinction of being the leading children's hospital in Broward and Palm Beach counties. JDCH is the only Level I Pediatric Trauma Center in South Broward County and is dedicated to the physical and emotional care of children. We're continuing to pioneer revolutionary programs that define the standard in pediatric care. To learn more, please visit JDCH.com.

About South Florida:

South Florida offers an urban/suburban lifestyle with an abundance of cultural and recreational amenities, miles of beautiful beaches, top-rated golf courses, museums and world-class dining. **Florida has no state income tax.**



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Visit hormone.org for more information.

IMPACT OF TRACKING FOR THOSE WITH A CHRONIC CONDITION



51%

changed overall approach to their own health or health of someone else



48%

led them to ask a doctor new questions or get a second opinion

A B C

43%

affected a decision about how to treat an illness/condition

TYPES OF WIRELESS HEALTH AND FITNESS TRACKERS

Device selection depends on your personal needs and preferences



Wearable Bands or Clips

Beyond classic pedometers—which still do the job well!—tracking technology has advanced and can even be worn as fashion accessories

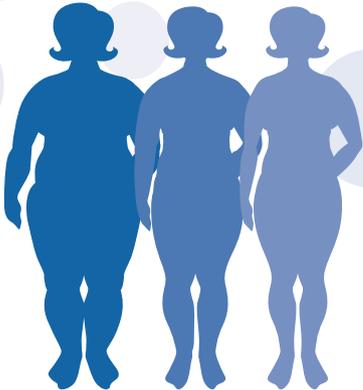
Cell Phones
Provide access to a variety of health apps to use on the go

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Hormone-related and more!

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- + Track goals
- + Identify unhealthy habits
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- + Calculate caloric intake
- + Measure food portions
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- + Sleep quality
- + Skin sweat & body temperature
- + Social support
- + Waterproof
- + Identify energy level patterns
- + Physical activity

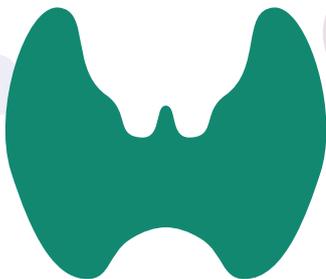
TRACKING HORMONAL ISSUES CAN ...



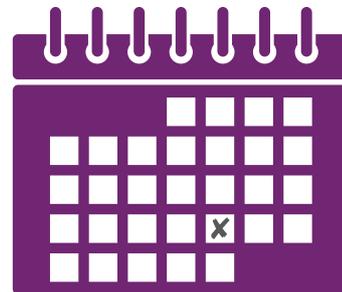
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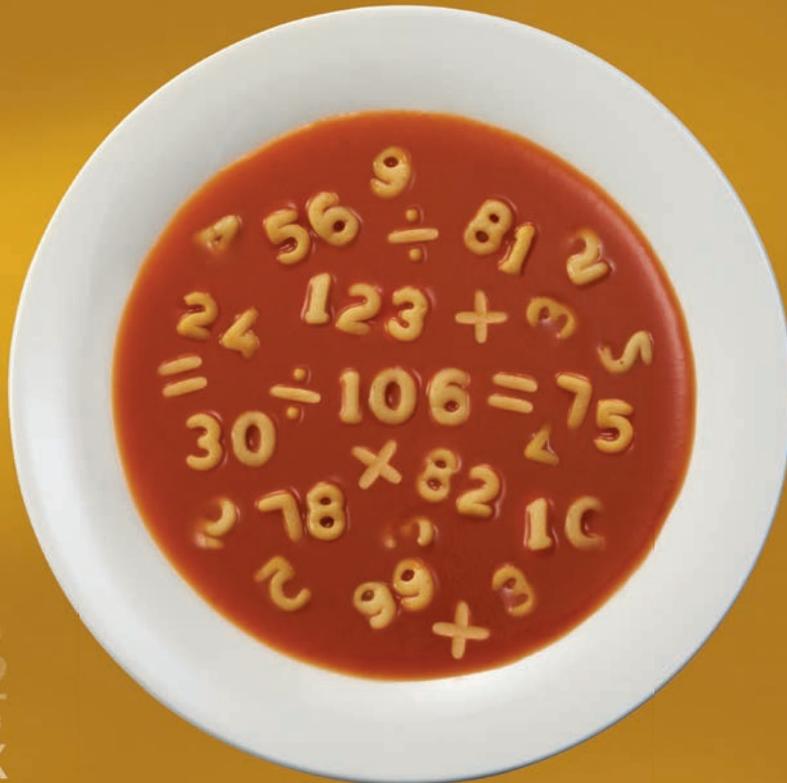
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48 = 90
70 100 42 28
31 ÷ 28 = 1.107
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