SUMMER 2018

Health Scene Ohio

A Publication of the State Medical Board of Ohio

Bright & Clear

Cataract surgery brings Patty Benedict's world back into focus

- Protecting your eyes from the sun
- Anesthesiologist assistants
- Trauma-informed care








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Patient sees the difference cataract surgery can make

Cover photo courtesy of Patty Benedict

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CityScene Media Group also publishes *CityScene Magazine*, *Discover Grove City*, *Dublin Life*, *Healthy New Albany Magazine*, *Pickerington Magazine*, *Westerville Magazine* and *Tri-Village Magazine*.

HealthScene Ohio is published quarterly. For advertising information, call 614-572-1240.

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Bright Future

Welcome to the summer 2018 edition of *HealthScene Ohio*. Much to the chagrin of Ohioans, the 2018 summer and winter seasons were lockstep, leaving room enough only for a couple weeks of mild springtime weather. While the warm weather and sunshine may be welcomed, extended periods of sunlight exposure carry with them a variety of risk factors.

When you're headed out to the beach or the pool, don't forget to grab the sunscreen, but also some ultraviolet (UV) protection for your eyes. When sunlight shines off water, sand or other highly reflective surfaces into your eyes, it can cause a very painful condition called photokeratitis. This is when the sun's UV rays burn the surface of your eye. We talked to an expert from The Ohio State University's Havener Eye Institute who opines on the risk factors, and mitigations, as they relate to summertime eye health.

In this edition of *HealthScene Ohio*, we will also take a look at a rapidly-growing field for allied medicine professionals: anesthesiologist assistants. With a 30 percent job growth expected across the country, these medical board licensees have the opportunity to play a critical role in patient's total health.

The patient's whole health, both mental and physical, also comes into focus in our article about trauma-informed care. We explore the impact that traumatic events – from growing up in unsafe environments to sexual assaults – can have on the patient/provider relationship and ability to achieve positive health outcomes. After all, that is the mission of the State Medical Board of Ohio: to protect and enhance the health and safety of the public through effective medical regulation.

On behalf of the State Medical Board of Ohio, we hope that the information provided within will further expand your knowledge base, ultimately leading to an even healthier and more active lifestyle.

Sincerely,
Robert P. Giacalone, R.Ph., JD
President, State Medical Board of Ohio

State Medical Board of Ohio

SUCCESS STORY

A New Outlook

Patient sees the difference cataract surgery can make

By Jenny Wise

If you have kids, you know what it's like to watch them grow. One day, you look at a photograph in amazement, and realize just how much they have changed over the years.

Dr. James Schumer, founder and medical director of ReVision LASIK and Cataract Surgery in Mansfield and Columbus, uses this same analogy when talking to his patients about their quality of vision after cataract surgery.

"When the lens inside of our eye begins to cloud, it occurs over years, and so it sneaks up on patients. They don't realize what they're missing, until overnight it's gone, and then it's like 'Oh, I can't believe (the difference).' That's the most common reaction that we get," says Schumer. "Our brains are so adaptive."

Impacting Patients

Schumer says that the best part of his job, aside from learning and sharing new forms of technology in ophthalmology, is seeing

people react to their newfound quality of sight. One patient in particular, Patty Benedict, 65, was blown away by the drastic difference in her vision after Schumer performed 3-D laser cataract surgery.


Dr. James Schumer

"Not only did the world come back into focus with clarity, but it is as if someone out there in the universe dialed up the dimmer switch on light. Everything is brighter," says Benedict. "I am amazed each day when I wake up to such a bright and clear world. My husband is getting sick of hearing about it!"

Benedict didn't wear eyeglasses until she was in her mid-40s, when she began using non-prescription glasses to read. Her vision continued to regress to the point where she eventually needed trifocals. With each passing year, Benedict's prescription changed and dissatisfaction with her vision grew.

"I was forced to move my head constantly in search of that 'sweet spot' in the three fields (of vision) that my lenses provided; the eyeglass frame interfered with my peripheral vision; and sometimes I stumbled and stubbed a toe or knocked into something with a knee because I misjudged the depth of my path, a hazard of looking through the wrong field of the trifocal," says Benedict. "Naturally, as I aged and cataracts began to form, light glare and general fading of clarity added to the problems. I decided to end the madness."

Working Smarter, Not Harder

The technological advancements in the last 20 years have significantly changed cataract surgery. Schumer says that it went from a risky, intensive procedure involving large incisions, multiple sutures and a difficult healing process, to a simpler, brief surgery typically with little recovery time. He added that when he completed his training in 1993, cataract surgery looked completely different and they couldn't even dream of the technology available today.

Schumer says he is proud to be an early adopter of new technology: ReVision was the second facility in the U.S. to invest in the 3-D surgery platform. Pair the 3-D features with a femtosecond laser, which has a pulse duration of 10 to the minus sixteenth of a second, and you get an accurate surgery that's minimally invasive.

"I usually use numbing drops only to numb the eye, there's no needle or shot injection. The incisions are made by a laser; they're so tiny there's no stiches and usually I don't even put a patch on the eye when we're done," says Schumer. "There are minimal restrictions that a patient has afterwards with the biggest being no swimming for a week. It's not because water is bad, I just don't want them getting into bugs and bacteria."

The 3-D surgical platform means that instead of having to bend forward and look through a microscope for the entire surgery, Schumer can sit upright in a chair and look at a flat screen monitor to guide the positioning of synthetic intra-ocular lenses. Patients can now choose from a variety of these lenses to correct nearsightedness, farsightedness and astigmatism.

Jenny Wise is an associate editor. Feedback welcome at jwise@cityscenemediagroup.com.

Photos courtesy of Patty Benedict and ReVision LASIK and Cataract Surgery


Rather than bending forward uncomfortably to look into a microscope, doctors now can sit upright to utilize a flat-screen monitor.

Types of Intra-Ocular Lenses

Standard Monofocal: A standard lens implant provides one set distance of focus (far, middle or near). Those with monofocal lens implants usually require eyeglasses after cataract surgery for a full range of vision.

Lifestyle Lens: There are a variety of premium lens options including lenses designed to flex like the eye's natural lens; multifocal lenses designed to see near, intermediate and distance; as well as toric lenses designed to treat astigmatism.

Seeing the Difference

Benedict and her husband Dan are active and enjoy traveling often, seeing their grandkids and appreciating nature's beauty. Since her eyeglasses got in the way of doing some of those more involved activities, Benedict opted to get multifocal lenses when she had her cataract surgery. Now she is free of frames and ready for just about anything.

"My husband and I are full-time RVers. We are all over the place, but we spend our summers in Mansfield to be close to our family and grandkids," says Benedict. "Any time that there is anything going on outdoors, I want to play the game; I want to be involved."

Beyond spending this summer walking and cycling on the Mansfield bike path with their grandkids, the Benedicts plan to explore some of the national parks out west this winter.

"This year we are planning to go to New Mexico. It's the land of enchantment. The scenery there is majestic," says Benedict.

The views are sure to be even more memorable with Benedict's improved sense of sight. She notes that seeing the world in a brighter light has heightened more than just her vision.

"When I wake up and the whole world is brighter, it does lift your mood and you have a heightened sense of joy for life," says Benedict. "I trusted Dr. Schumer with, besides life itself, one of the most precious things I possess: my eyes. I am so glad I did."

The sun is out, but are you taking time to protect your eyes?

By Rocco Falleti

More

Than Just Sunscreen

Suns Out, Rays Out

With the summer in full swing, much of our time is finally able to be spent outdoors doing a number of activities. Whether you are swimming, cutting the grass or hanging out at the ball park with friends and family, the sun may feel warm and welcoming, but there are plenty of dangers of which to remain cognizant.

"The biggest thing in the summertime is that ultraviolet radiation is much more common and intense," Dr. Matthew Ohr, of The Ohio State University's Havener Eye Institute, says.

Not Just for Looks

It starts with having appropriate eye protection. UVA and UVB rays are the utmost concern when it comes to the sun. Both are extremely damaging to the unprotected skin and eye.

There is a thorough list of criteria that sunglasses must meet to be deemed "100 percent UV protected" to block out UVA and UVB rays.

"It is not necessarily the price that makes them UV protective or better than others," Ohr says. "People will assume that all sunglasses are protective, even just by looking at the shade of the lens, you need to make sure that they are truly 100 percent UV protected."

But What are the Risks?

One of the largest risks as it pertains to unprotected eyes is the development of photokeratitis, which is essentially sunburn of the eyes. The UV light affects the surface of the cornea, which is the "clear dome" of the outer layer of the eye used to help filter light.

"Pain, redness and blurriness are common symptoms but long-term effects can lead to cataracts, pterygium, skin cancer or even macular degeneration," Ohr says. "You could never be too protective when it comes to UV protection."

Even on an overcast day, your eye is still exposed and at risk of damage from UV rays.

Other Dangers

While being out in the sun presents a multitude of dangers, other summertime activities can also affect your eye health.

"We tend to see a lot more injuries when it's nice out and people are outside doing things like outdoor projects," Ohr says.

Cutting the grass can cause small rocks, stones or sticks to become high-velocity projectiles that fly up and hit you in the eye. Something as simple as playing a sport should require protection for eyes says Ohr.

Swimming Safely

If you intend to be poolside the remainder of this summer, an often-overlooked aspect is individuals who wear contact lenses.

"It is definitely not recommended to wear contact lenses when you are coming into contact with water," Ohr says. "Contact lens users have an increased risk of swimming-related corneal infections and possibly permanent vision loss."

The FDA suggests not wearing contact lenses when coming into any type of contact with water.

"If pool water splashes on the contacts, wash them immediately with solution or get a pair of new ones," Ohr says.

Rocco Falleti is an assistant editor. Feedback welcome at feedback@cityscenemediagroup.com

Matthew Ohr's areas of specialization include vitreoretinal and corneal diseases. He diagnoses and manages eye conditions involving the retina, vitreous cornea and other structures. Retinal conditions that Dr. Ohr treats include retinal detachment, retinal vascular occlusive disease, diabetic retinopathy and others. Through early intervention and ongoing care, his team can prevent and manage many potentially blinding eye conditions. Dr. Ohr is especially interested in advanced imaging technologies, such as optical coherence tomography (OCT).

Cataracts

With all the added exposure to sunlight throughout the summer months, the possibility of developing cataracts increases.

Cataracts cause vision cloudiness within the natural lens of the eye. Telltale signs of this can include blurred vision, light sensitivity and seeing halos from headlights at night.

"Certainly, in the United States we have a great healthcare system and it is easy to catch these things before they become problematic," Ohr says. "Having dilated eye exams will help deal with and minimize those conditions."

Age plays a factor in developing cataracts. The CDC estimates that 15 million Americans age 65 or older have cataracts in one or both of their eyes.

"Not all cataracts are going to require surgery," Ohr says. "It ultimately depends on how the cataract is affecting the vision and whether or not it is causing other issues in the eye."

Traditional cataract surgery has been successful for quite some time. But new developments have focused around using lasers to perform parts of the surgery.

Femtosecond laser-assisted surgery is a relatively new procedure that shows promise, as compared with standard methods.

"Cataract surgery has been an evolution, to the point where we feel that it is a rather easy disease to treat and there is a great safety profile and great success," Ohr says. "Treatment continues to get better and better."

Life choices that can increase risks for cataracts:

- Smoking
- Drinking
- Diet (having high body mass index)
- Prolonged exposure to UV rays and diabetes also put you at a greater risk of developing cataracts.

I Feel Your Pain

Empathy and technical skills make anesthesiologist assistants an important resource for those going though painful procedures

By Evan Wehmeyer

Joel Baker broke his finger playing baseball as a kid. It took some intricate surgery to get his finger functioning normally again, but it turned out to be a quick and non-traumatic fix thanks to the anesthesia.

"They had to put me out because they put a pin in my finger," says Baker. "I just thought it was the coolest thing to be unaware of what was going on while they were repairing part of my body."

That experience help set Baker on the career path toward becoming an anesthesiologist assistant (AA).

"You get to help people on a daily basis and have an impact on people's lives," says Baker, who now works at OhioHealth Mansfield Hospital.

Anesthesiologist assistants are just one of the dozen categories of allied health professionals licensed by the State Medical Board of Ohio. AAs have multiple duties, including diagnostic studies such as blood draws, advanced life-support practices such as airway intubation and ventilatory support, and also local and regional anesthesia techniques.

Advances in drugs and procedures make it so few patients have to experience pain during an operation, which is why anesthetics, and specifically the position of anesthesiologist assistant, are becoming more prevalent.

One of the first interactions a patient may have with an AA is during the development and implementation of an anesthesia care plan.

"I do a preoperative interview of the patient including anything from allergies to medical history," says Baker. "Inside the operating room, I can assist the anesthesiologist with a number of procedures. That includes inserting breathing tubes, inserting spinal anesthesia (and) inserting epidural anesthesia."

In the early 1960s, the medical community realized a serious shortage of trained professionals within the field of anesthesiology. In response to this shortage, as well as to the growing complexity of anesthesia in surgeries, three anesthesiologists (Joachim S. Gravenstein, John E. Steinhaus and Perry P. Volpitto) reevaluated the educational requirements for both nurse anesthetists and physician anesthesiologists. Their study led to the concept of an anesthesia technologist, the precursor to the AA. The three doctors designed a new educational program with two goals in mind: first, to provide individuals the training to be a non-physician anesthesia provider with a premedical background; second, for all AAs to be under the direct supervision of an anesthesiologist.

Even today, these two goals are sustained. Ten percent of AAs ultimately

choose to attend medical school, and all AAs still are under the direct supervision of an anesthesiologist.

In 1969, Emory University, located in Atlanta, became the first institution to offer an accredited plan for an AA master's degree. Case Western Reserve University in Cleveland followed suit a year later in 1970. There are currently 12 programs offered throughout the United States with Indiana University School of Medicine in Indianapolis being the most recent to offer the program in 2017.

"I was a pre-med major at John Carrol University and then I went straight from John Carrol University to Case Western Reserve University up in Cleveland," Baker says. "Case Western is a 24-month program. We start off the first three months with anesthesia 'boot camp'– a crash course into the very basics of anesthesia."

AAs are currently able to work in 16 states (Alabama, Colorado, Florida, Georgia, Indiana, Kentucky, Michigan, Missouri, New Mexico, North Carolina, Ohio, Oklahoma, Texas, South Carolina, Vermont and Wisconsin) as well as Washington D.C. through either license and certification or through physician delegation. AAs are recognized by the federal government, allowing the ability to also work at all Veterans Health Administration Facilities.

There is a 30 percent growth expected in the field over the next decade as more states establish licensure for AAs. With a median salary of $98,000, the field holds promise for many of those interested in pursuing a career in medicine.

"Few people understand, and I didn't understand when I was going through pre-med, that this was a viable option instead of going to nursing school. It's not really well known," Baker says. "I think it needs to be known. It's a cool field."

Evan Wehmeyer is a contributing writer. Feedback welcome at feedback@cityscenemediagroup.com

Joel Mikus Baker is an Anesthesiology Assistant Specialist in Mansfield. He graduated with honors from Case Western Reserve University School Of Medicine in 2016. Having more than two years of diverse experiences, especially as an anesthesiologist assistant, Joel Mikus Baker affiliates with OhioHealth Mansfield Hospital, and cooperates with other doctors and specialists without joining any medical groups.

#MeToo

Movement highlights the importance of trauma-informed care

By Karen Morrison

The phones at U.S. sexual assault hotlines have been ringing in record numbers as the #MeToo social movement spurs victims to reach out for help. The number of calls to the hotline operated by the Rape, Abuse & Incest National Network (RAINN) surged 25 percent in November from a year earlier, and another 30 percent in December, according to RAINN (Reuters, January 17, 2018). Some sexual assault victims kept silent for decades, some were more recently traumatized. No matter the timeline, it is an important reminder that health care providers should approach patients with the mindset that there may be traumatic events impacting a person's health - both physical and mental.

"Most people think of hurricanes, war or mass shootings when they hear the word trauma. Trauma can be a single incident or an accumulation of stressors," says Kim Kehl, the Trauma-Informed Care (TIC) Project Coordinator for the Ohio Department of Mental Health and Addiction Services (OhioMHAS). "Trauma is different for everyone, but it always has lasting effects which are seen in reactions, responses and choices. Experiencing trauma has a direct correlation to unhealthy choices and increased chronic disease, and research verifies this."

With a master's degree in education, 19 years of experience with the Ohio Department of Developmental Disabilities and other leadership roles, Kehl brings a wealth of knowledge and experience to OhioMHAS. In his role, Kehl works under the leadership of the medical director to establish training, protocols and develop resources related to TIC.

"The goal is to help others understand the impact of trauma and how incorporating that into their delivery of services can result in better health outcomes," says Kehl.

Medical settings have started to incorporate trauma-informed care into their practices as well. Kehl says it is not only important to be informed about patients' backgrounds, but to be informed on the most sensitive way to collect information on their backgrounds. One modification is the development of shorter screening tools.

"If we are hitting patients with question after question when they arrive, it can do more damage. We would like to get to a single point of entry, which means the patient tells their story only once, to minimize the risk of retraumatization. If a patient is vulnerable and scared, all barriers go up," says Kehl.

How can you tell if someone has been negatively affected by something in their lives, which causes them to react in an unexpected way? For some, trauma is chronic and becomes the norm; resiliency develops and can minimize the effect of the trauma. For others, trauma results in adaptive behavior, which may be interpreted as agitation, paranoia, distrust or anger.

"It is important to establish a therapeutic relationship and an environment of safety," says Kehl. "Using a trauma-informed care approach may also result in less use of restraints and less misdiagnosis."

To create an environment that supports trauma-informed care, Kehl urges providers to keep in mind the basic principles of TIC:

- Safety
- Trustworthiness and transparency
- Peer support and mutual self-help
- Collaboration and mutuality
- Empowerment, voice and choice
- Cultural, historical and gender issues

As health care providers are asked to do more holistic care, addressing patients' physical and mental health, it is important to point out that the providers themselves can also fall victim.

"An emerging area is secondary or vicarious trauma," says Kehl.

Secondary traumatic stress is the emotional duress that results when an individual hears about the firsthand trauma experiences of another.

"Caregivers experience trauma over time due to the toll their responsibilities take on them. This is referred to as compassion fatigue. Also, first responders are often overlooked as being traumatized by some of their experiences," says Kehl.

TIC means that every part of an organization or program understands the impact of trauma on the individuals they serve, as well as on those whom they employ, and adopts a culture that considers and addresses this impact.

As part of the Creating Environments of Resiliency and Hope in Ohio Trauma-Informed Care Statewide Initiative, Kehl and his team support the implementation of trauma-informed care systems and trauma-specific services across Ohio's social services systems.

"This is really a workforce development issue. Having more empathy can change the organizations environment," says Kehl. "We all have an innate sense of looking out for each other, but sometimes professional field constraints do not allow us to do that. It is about empathy not sympathy."

For additional information on bringing TIC training to your workplace, resources throughout Ohio and continuing education videos, visit mha.ohio.gov/Initiatives/Trauma-Informed-Care.

Karen Morrison is on the communications team at the State Medical Board of Ohio. Feedback welcome at feedback@cityscenemediagroup.com.

Medicine that Moves to the Music

Dr. Francois Bethoux talks about integrating art and music into the medical field

By Lydia Freudenberg

When Dr. Francois Bethoux was younger, his brother was in a car crash. The accident resulted in severe brain damage, and Bethoux wanted to understand the medical aspects of the incident. He became intrigued by the concept of helping others and was inspired to pursue medicine.

"I got to spend a lot of time in the hospital and interacting with the health care providers," Bethoux says. "That's when I really consolidated my interest for becoming a doctor."

Born in Paris, Bethoux attended medical school in Lyon, France. After being encouraged by colleagues to study abroad, Bethoux completed a fellowship in neuroimmunology at the Cleveland Clinic and eventually realized he wanted to stay in Ohio.

Now the director of rehabilitation services at the Cleveland Clinic Mellen Center and the medical director of Cleveland Clinic's Arts & Medicine Institute, Bethoux focuses on neuro-rehabilitation and spasticity management. His passion: integrating music and art into the lives of patients.

His interest in implementing art into the medical field began almost a decade ago when his colleague introduced him to how music can help people with multiple sclerosis. Since then, his research focuses on this topic with MS patients, but his overall knowledge of combining art and medicine is impressive.

He notes the institute isn't just about providing immediate help to patients, though. Through more extensive programs with art and music therapy, patients with chronic conditions are exposed to multiple forms of interactive art and then encouraged to continue the form beyond the course.

"Slowly but surely we hope to build evidence that suggests that even after the program ends people are engaging in art-related activities that will provide some results and enhancements to their health," he says.

Plus, the results can improve more than mental health.

"If (patients) engage in an artistic activity, it often involves movement, and that indirectly can impact physical health," says Bethoux. "We know that if your mental health improves, your physical health may, too."

For Bethoux though, the medical world has only scratched the surface on integrating art into medicine. As the medical director of the institute, he hopes to explore more artistic options which one day could substitute for pharmaceuticals or medical procedures, which would ultimately save on consumer cost.

"The same way we would evaluate any treatment or any potential treatment, many aspects of the arts deserve to be studied in the same way," he says. "Wouldn't it be awesome to integrate something that exists all around us, which is the arts, and to really use it in a cognitive fashion to enhance our health or other people's health? I mean, the potential to save on health care cost is substantial."

As for Bethoux's personal research in using music to help people with MS, the results have been meaningful. Recently, Bethoux and his team conducted a rhythmic music study where they used beat-heavy tunes to help patients with MS walk easier.

One participant who could walk, but with some difficulty, told Bethoux that lessons from the study are helping his physical health.

"(The patient) said that since the study, he's been using music during his exercise workouts, and he found that having the music with the rhythm really enhances his workouts," Bethoux says. "He's basically continued to use (the music) as a health-promoting tool, which was exactly what I was intending."

Bethoux says the inspiring patient stories are endless, and it always makes him appreciate his career.

"When people have either a severe disease or a chronic disease … they may feel disconnected from the rest of the world," Bethoux says. "We have quite a few testimonials on how using the arts or being exposed to the arts helped (patients) feel more connected. And that to me is the most rewarding. The Cleveland Clinic's motto is 'Patients First,' so really, that's what gives us pride – knowing that we have an impact on people's lives."

Lydia Freudenberg is a contributing editor. Feedback welcome at feedback@cityscenemediagroup.com

Francois Bethoux, MD, completed his medical studies and residency in Lyon, France focusing on physical medicine and rehabilitation. After moving from his home country of France to the U.S., Bethoux completed a neuroimmunology fellowship at Cleveland Clinic's Mellen Center for Multiple Sclerosis Treatment and Research. He remained on staff there and now serves as the director of rehabilitation service. Bethoux is also the medical director of Cleveland Clinic Arts & Medicine Institute. His interests involve neuro-rehabilitation, spasticity management, and integrating art and music into the medical world.

The Write Advice

With Liz Anastasiadis

Watch Your Skin

Dr. Brian Gastman from the Cleveland Clinic discusses melanoma, a serious type of skin cancer

Melanoma is a skin disease that tends to go untreated because many people do not realize they have developed it. By informing people of the serious risks, there is the potential for skin cancer to be prevented.

Dr. Brian Gastman, the medical and surgical director for Cleveland Clinic's melanoma and high-risk skin cancer program, shares his expertise on melanoma and what it means and, more specifically, pregnancy-associated melanoma and how to help skin melanoma via plastic surgery procedures.

HealthScene Ohio: What are some common misconceptions about melanoma?

Dr. Brian Gastman: People think it is rarer than it actually is. About 70,000 people in the U.S. develop skin melanoma each year. Melanoma is the most common skin cancer in young adults. It's the leading cause of cancer death in women that are 25-30 years old. People think that melanoma and other skin cancers can easily be removed, but when it spreads, it can be very deadly. The liver, lungs, bones and brain can be affected by these metastases.

HSO: What are the symptoms of people who develop melanoma?

BG: Most people can develop dark spots, bumps and moles that change in size or color on their skin that can contain cancerous cells without them even being aware of it. To help with prevention, it is recommended that patients go to their general practitioner for a skin examination regularly, and if suspicious lesions are seen, they should visit a dermatologist.

HSO: What exactly is pregnancy-associated malignant melanoma (PAMM)?

BG: Melanoma is a serious case of skin cancer that anyone can develop. Skin melanoma is a problem in pregnancy and there is a risk of delayed detection. Skin changes, and the dark spots develop over time, even during pregnancy. When a pregnancy-associated melanoma develops, it is crucial to have prompt treatment; PAMM has a higher death rate than other melanomas.

HSO: How is the timing of PAMM diagnosis and treatment critical to the patient's survival?

BG: The timing is everything in every kind of cancer. If treated in its early stages, it will be easier to stop the spread. Since women who are pregnant oftentimes do not realize they have developed melanoma, they are usually found in their later stages, large and small tumors will have started to grow. The timing of diagnosis means everything for the patient's health and survival.

HSO: What are different kinds of treatment for melanoma and other skin cancers?

BG: The treatment depends on the stage and the type of cancer, as well as taking into consideration the individuality of each patient. The most common types of treatment are surgery, radiation and systemic therapies such as immunotherapy in cancers like melanoma and cutaneous squamous cell carcinoma.

HSO: How can plastic surgery act as treatment for melanoma and other skin cancers?

BG: As a surgeon and researcher, I can remove large tumors in melanoma, dissolve the tumor and study what's happening within the immune system without having to do contrived things. Because I am a scientist I can use my ability as a surgeon to get large tumor specimens for research. Larger specimens allow laboratories to break down the tumor into various components to study various aspects of it. Other labs have to take small tumors and artificially expand the cells to do research, which could greatly affect results. After removing the larger tumors, it can decrease the amount of metastasization.

HSO: What are your specialties? What is your focus concerning your patients?

BG: I do multiple types of surgeries but my specialty is mainly in the head and neck areas for cancer reconstruction and trauma. My main focus for my patients is their survival, prognosis, their overall quality of life and, when appropriate, their aesthetics and functionality, which go along with the quality of life.

HSO: How conscious should parents be of their children's exposure to UV rays?

BG: The most important thing is for parents to always check their children. If you rub your baby with tanning oil and place them on the beach to play with sandcastles, this is not healthy for the child. They need constant application of sunscreen so they don't burn. People see their children getting sunburnt and think it'll eventually be okay, but it's bad. They should not be getting sunburnt at all. When people get sunburn at a young age it makes them more likely to develop skin cancer as an adult.

HSO: Which individuals are most at risk for developing high-risk skin cancers?

BG: People that generally spend more time in the sun are more prone to developing skin cancer. People who have over 50 spots on their bodies are more prone to developing skin cancer. Ginger-haired people have a genetic mutation where their skin is more frail, and unable to deflect UV rays the same way as other-haired persons. If there are people in your family that have developed skin cancer, then you are more prone to developing it as an adult.

HSO: What are ways to be more conscious to the prevention of skin cancers that we can bring into our daily lives?

BG: Young adults are more prone to developing skin cancer; they can get sunburnt under their clothes, since the UV rays go right through the fabric. People should put on sunscreen as part of their daily routine when going outside. They also need to be cautious of what time they go outside; the sun in the morning will be completely different than in the afternoon or early evening, when UV rays peak.

Liz Anastasiadis is a contributing writer. Feedback welcome at feedback@cityscenemediagroup.com.

About the Expert

Dr. Brian Gastman completed his medical education at the University of Michigan and went on to the University of Pittsburgh for two distinct residencies in otolaryngology and plastic surgery. While there he was part of a NIH-funded T32 training grant, during which he developed his expertise in the basic research of cancer. In addition, Dr. Gastman completed fellowship training at Washington University in St. Louis, specializing in head and neck surgery and microsurgery. Currently, Dr. Gastman is a specialized plastic surgeon and director of melanoma surgery at the Cleveland Clinic.

Good Night, Sleep Right

Toledo physician knows when we're sleeping, and when we're awake

By Maria Lubanovic

We may know a lot about practicing daytime healthful habits, but what about when we are sleeping? Andre U. Aguillon, MD is making it his life's work to improve health by focusing on those hours of shut eye that can impact every waking minute of our health.

"I consider sleep medicine to be the final frontier or the last unknown of medicine because there is so much about sleep that we do not know about and our understanding of sleep continues to evolve," Aguillon says.

Aguillon is part of the team of board-certified sleep medicine physicians at the Regional Center for Sleep Medicine associated with the University of Toledo.

The foundation of knowledge is strong: Aguillon says getting restful sleep can have a profound impact on health; and he says there are simple changes the average person can make to support a better night's sleep.

"The key to good sleep is regularity; maintaining a consistent bedtime and wake time with an understanding of your own circadian rhythm," Aguillon says.

"Curtailing all sleep-incompatible activities is essential."

Aguillon says you shouldn't eat, watch TV, use your phone or do problem solving for at least an hour before going to bed. He says that exercising in the late afternoon to early evening can be beneficial, and that when you finally turn in for the night, you should make sure that your sleeping environment is dark, quiet and comfortable.

Sometimes, those healthy habits are not enough. Many individuals are affected by a sleep disorder. Undiagnosed sleep disorders can cause various physical and psychological problems if untreated. Lack of restful sleep can include a decrease in the following: attention, alertness, vigilance, memory, learning and concentration. It may also cause depressed mood, increased risk of accidents, and development of hypertension, cardiac disorders, diabetes, obesity, and altered immune system.

"Imagine the impact not only on one's individual health but also on the education system, the transportation industry and the overall workforce," Aguillon says.

To diagnose a sleep disorder, the doctor takes a complete medical history and the patients fill out sleep-related surveys. The most common diagnostic tool is a polysomnogram, or sleep study. This is when a patient sleeps overnight at a lab so that doctors can monitor their sleep patterns, heart rate, limb movements, breathing and blood oxygen level using non-invasive electrodes and sensors. This helps the doctor to narrow down what may be contributing to restless sleep.

Aguillon says it is important to be aware of your sleep patterns over the years. Even people who are very healthy can go through changes in their sleep cycles. As people get older, sleep efficiency, deep sleep and dream sleep tend to decline.

"Healthy older persons wake up from sleep more frequently than younger persons do," Aguillon says, "but they have no greater difficulty falling back to sleep. Also, older persons tend to go to bed earlier in the evening and wake up earlier in the morning than younger persons."

> **"The key to good sleep is regularity; maintaining a consistent bedtime and wake time with an understanding of your own circadian rhythm. Curtailing all sleep-incompatible activities is essential."**

Sleep apnea, insomnia and restless legs syndrome become more prevalent with age. Additionally, there are non-sleep related diseases that can develop as one grows older. Cardiovascular diseases, respiratory diseases, chronic pain conditions, dementia and menopause can all impact sleep quality. Individuals can also experience restless sleep as a side effect of medications they start taking.

While some devices are already commonly used to treat sleep disorders at all stages of life, such as the CPAP (Continuous Positive Airway Pressure) for sleep apnea, there are many new methods being developed. This is what most inspires Aguillion. Recently, he has used volume-assured pressure support therapy, a non-invasive ventilation method, to treat people with serious breathing issues like COPD and neuromuscular diseases.

"I am proud to say that our sleep center was one of the first in the nation and the first in our area to utilize this technology," Aguillon says. "We have been quite successful with this technology, improving quality of life and delaying the use of tracheotomy."

Aguillon's most recent research focuses on new methods for treating primary insomnia, which is insomnia not caused by a medical issue or substance-related issue. He says this condition is particularly challenging to treat because this type of disorder is not well understood, but Aguillion believes the key may lie in the neurotransmitters that are released at the end of the nerve fiber in the brain.

"What I would like to see being developed is a measurement of the concentration of the various sleep-promoting and wake-promoting neurotransmitters in the blood or cerebrospinal fluid," Aguillon says. "This would give us sleep clinicians a biochemical profile of the patient's sleep-wake and we can direct therapy toward the specific neurotransmitter excess or deficiency."

While the technology catches up with the theory, Aguillon continues his practice at the Regional Center for Sleep Medicine with colleagues who have various backgrounds and disciplines including internal medicine, pulmonary/critical care medicine, neurology and psychiatry. This team approach allows him to collaborate and address medical as well as psychosocial factors that affect sleep and total health.

Maria Lubanovic is a contributing writer. Feedback welcome at feedback@cityscenemediagroup.com.

Andre U. Aguillon, MD, DABSM is Board certified in internal medicine and sleep medicine. He received his medical degree from the University of Toledo College of Medicine where he also completed his residency and fellowship program. Dr. Aguillion currently practices with the the Regional Center for Sleep Medicine, affiliated with the University of Toledo College of Medicine, which is a comprehensive, multi-disciplinary sleep/wake disorders center, accredited by the American Academy of Sleep Medicine. He also serves as assistant professor among the faculty at the University of Toledo.

The Write Advice

With Evan Wehmeyer

Not Your Father's Vasectomy

Dr. Andre Gilbert talks about an alternative to traditional vasectomies

According to data generated by the National Survey of Family Growth, an estimated 175,000-354,000 vasectomies were performed annually from 1998-2002. If you're considering the procedure, you may want to explore a newer technique that involves no needles, no scalpel and no stitches. Dr. Andre Gilbert, member of the Board of Directors at the Findlay Surgery Center and former president of the Ohio Urological Society, answers questions about the no-needle/no-scalpel vasectomy procedure.

HealthScene Ohio: How new is the no-needle/no-scalpel vasectomy procedure?

Dr. Andre Gilbert: I would say it's been more than 15 years. I've been doing it here in Findlay for at least 10 years.

HSO: What were some of the more traditional approaches to this procedure?

AG: Well, the name says it. The difference with the no-needle is that I

don't use a needle to deploy the local anesthetic. We use a device that under pressure deploys the local anesthetic through the skin as well as numbing the vas deferens, the little tube that the sperm travels through in which we are aiming to intervene and interrupt that flow. By using this device, we don't have to use a needle, which is something that a lot of patients appreciate. Instead of a scalpel, we use small, pointy forceps that makes a small opening on the skin after the skin is numbed.

HSO: Can you briefly describe how the procedure is performed?

AG: The opening in the skin is approximately one-quarter of an inch, and through that opening we are able to identify and isolate the vas deferens. There are different ways to interrupt the flow of the sperm, some people just put a tie on the tube, I actually excise a segment of the tube. I use a cautery to burn the tube at both ends after I remove the segment. That's a way to impede the sperm's ability to travel. I use a small titanium clip at both ends of the tube and then when I put that back in the patient's body, I put some soft tissue at both ends. By doing that, I increase the chance of preventing a vasectomy from failing. If you think of a hose, if you remove a segment, now you have two pieces of the hose, they are no longer connected. The procedure takes about 10 minutes, give or take.

HSO: What is the average recovery time? Are there any post-op limitations?

AG: A lot of people are concerned about how much time off work they're going to have to take. We recommend to rest the following day and then they can go back to work the next day if they have a desk job. Now, if you work in the factory line and you do a lot of heavy lifting, we recommend to be on light duty for a week and then resume whatever you do. You have to be prudent and use common sense.

HSO: Why do some men choose to have this type of vasectomy over the traditional method?

AG: It's less traumatic and because of that there is less discomfort, less pain and faster recovery time. I'm surprised that more people don't do it.

HSO: What are some short- and long-term complications associated with vasectomies in general?

AG: The routine complications that you can have with any procedure like infection, pain and more swelling. Other than that, some people can have pain linger a little longer on the scrotum but that's pretty rare.

HSO: How common is it for men to have their vasectomy reversed?

AG: That's the reason why I meet them beforehand, because I want to make sure that they decided at the right time to have this done. But if I see a mature person with a wife and kids and established family, that's fine. Most people that have regrets about doing this have initiated a second family: they got divorced and remarried and want to have kids again.

Evan Wehmeyer is a contributing writer. Feedback welcome at feedback@cityscenemediagroup.com.

About the Expert

Dr. Andre Gilbert graduated in 1981 from the Medical School at Faculty of Medicine from ABC Foundation in São Paulo, Brazil, and received his Master's degree in urology from the Paulista Medical School in 1988. He completed his urology residency at the University of Cincinnati Medical Center in 1998 and has been practicing in Ohio ever since. He currently works at Blanchard Valley Urology Associates in Findlay.

The varying techniques employed in vasectomy to fulgurate, ligate and manage the vasal ends are associated with different failure rates. Representative failure rates are listed below [1]:

- Cautery (both ends) and fascial interruption: 1.2 percent or less
- Cautery (prostatic end only) and fascial interruption (clip): .02 to 2.4 percent
- Cautery of both ends and excision of a segment: 4.8 percent or less
- Ligation and fascial interruption: 16.7 percent or less
- Ligation and excision of segment: 1.5 to 29 percent
- Intraluminal needle cautery (vas not transected, no segment removed, rarely performed in North America): Less than 1 percent
- Recanalization is rare, occurring in approximately .2 percent of patients. It is defined as the presence of any spermatozoa after one or more previously azoospermic samples were properly collected and documents. It can occur at any time following vasectomy.

Courtesy of *American Family Physician*

Screening Saves Lives

Columbus-area physician travels the state for colon cancer awareness

By Chase Ray

Recently, the American Cancer Society updated its guidelines for colorectal cancer screenings to 45 years old. Previously, it was recommended that individuals of average risk begin screening at age 50. Even though colorectal cancer isn't the most talked about form of cancer, it's the third leading cause of cancer-related deaths in the U.S., especially in adults approaching their 40s and 50s.

Dr. Darrell Gray II, deputy director at the Center for Cancer Health Equity at The Ohio State University Comprehensive Cancer Center - James (OSUCCC-James), believes although this change will be met with controversy and spark new debate, it will have lasting benefits for all.

"It's a bold step by the American Cancer Society in response to the disturbing trend of an increase in colorectal cancer diagnoses and deaths among young adults," says Gray.

He admits the move has garnered both praise and controversy.

"Organizations such as Fight Colorectal Cancer, Colorectal Cancer Alliance and the American Gastroenterological Association support this guideline update," he says.

However, he also acknowledges many clinicians and researchers question whether the projected benefits of the guideline modification are inflated and if the potential risks are minimized, based on a model which assumes 100 percent patient screen compliance.

Gray wears myriad hats at the OSUCCC - James. In 2015 he and his colleagues created the Provider and Community Engagement (PACE) Program to provide low- and/or no-cost colonoscopies for uninsured and underinsured patients in central Ohio. Since the program's inception Gray and his team have screened more than 130 men and women who fall within the two aforementioned categories.

According to the American Cancer Society, there has been a 51 percent increase in colorectal cancer for people under the age of 50 since 1994. Gray and other

clinicians alike suspect that the sharp increase may be influenced by a combination of dietary, environmental, lifestyle and genetic factors.

"However, no one knows that exact answer yet and it's a race to figure it out," says Gray.

Gray is impassioned to share his knowledge with not only the local community, but on a state-wide level as well.

"Awareness is incredibly important because colorectal cancer is largely preventable and is curable when detected early," says Gray.

To raise awareness, the PACE program purchased, and installed permanently, a model named the Inflatable Colon. The name is just as it states – a giant 10-by-10-by-30 square foot mock colon – that, when fully inflated, allows individuals to see what the lower intestine looks like on a grand scale.

> **"Awareness is incredibly important because colorectal cancer is largely preventable and is curable when detected early."**

Darrell Gray, MD, MPH is a gastroenterologist specializing in the evaluation, management, and prevention of diseases involving the digestive tract.

Dr. Gray completed medical school at Howard University College of Medicine, residency in internal medicine at Duke University Medical Center, gastroenterology fellowship at Washington University in St. Louis and a master's of public health at Harvard T.H. Chan School of Public Health. Currently, he serves as an assistant professor of medicine, director of community engagement and equity in digestive health, medical director of endoscopy and gastroenterology services at University Hospital East and deputy director at the Center for Cancer Health Equity at the OSUCCC – James.

According to 2012 data from the Centers for Disease Control's Behavioral Risk Surveillance System, an estimated 53 percent of Ohioans 50 years of age and older indicate having had a colorectal cancer screening within the past five years.

"That is why I, along with a team of nurses, researchers, doctors, patient navigators, staff and volunteers, invest so much time in diverse communities across Ohio spreading the word about getting screened and do our best to navigate people beyond any barriers to doing so," Gray says.

Chase Ray is a contributing writer. Feedback welcome at feedback@cityscenemediagroup.com.

The Write Advice

With Nathan Collins

Food for Thought

Dr. Ivor Hill discusses under-recognized pediatric celiac disease

Celiac disease is an autoimmune disorder caused by an intolerance to gluten; gluten is the general name of the proteins found in wheat, rye, and barley and other grains. This under-recognized disease, particularly in children, damages the small intestine and affects the body's ability to absorb nutrients through the digestive tract.

Dr. Ivor Hill, the section chief of gastroenterology and director of the Celiac Disease Center at Nationwide Children's Hospital, answers questions regarding childhood celiac disease, what it means for the child and what steps parents need to take if they are concerned that their child may be suffering from the condition.

HealthScene Ohio: Has celiac disease always been as common as it is today?

Dr. Ivor Hill: It probably has been as common but was previously under-recognized. There is a greater recognition on the part of health care providers of the variable clinical manifestations that occur in celiac disease. In the past two decades, physicians have become much more aware of the condition and, hence, test patients more readily for the condition.

HSO: In what ways do the symptoms of celiac disease differ from adult celiac disease?

IH: Young children tend to have more gastrointestinal-type symptoms such as diarrhea, abdominal pain, bloating and weight loss. Older children tend to initially have more non-GI symptoms such as growth failure, fatigue, anemia as is more commonly seen in adults.

HSO: How is celiac disease in children most commonly identified?

IH: It first requires clinical suspicion based on symptoms or having a condition that places the child at increased risk for celiac disease (such as a positive family history or an associated autoimmune condition such as diabetes). Children then undergo a blood test to look for specific antibodies found in celiac disease. If this test is positive then an intestinal biopsy is recommended to confirm the diagnosis.

HSO: What are the initial steps for parents after a child is diagnosed with celiac disease?

IH: Ideally the parents should be referred to a dietitian with specialized knowledge who can then educate the family on how to implement a gluten-free diet. Treatment requires strict adherence to a gluten-free diet for the rest of the patient's life.

HSO: Is childhood celiac disease curable?

IH: There is no cure for celiac disease. However, adherence to a strict gluten-free diet in most cases will result in resolution of the symptoms and complete healing of the intestinal damage that occurs with active celiac disease.

HSO: Is there any long-term damage on the ability for the body to absorb nutrients like fats, proteins and vitamins?

IH: Malabsorption of nutrients can occur with active celiac disease but will resolve when the intestinal mucosa heals on a gluten-free diet.

HSO: What role do genetics play? If a parent has celiac disease, what is the likelihood that their child will develop the condition?

IH: There is a genetic component to celiac disease. Celiac disease occurs in about 1 percent of the general population. When you have a first-degree relative with celiac disease (e.g., a parent or sibling) the risk for the condition in other members of the family increases to between 10 to 20 percent.

HSO: Are there certain environmental triggers that will lead to the development of childhood celiac disease or is it purely genetic?

IH: To get celiac disease one has to have the genes that predispose to the condition and, in addition, one has to ingest foods that contain gluten (found in wheat, barley and rye).

HSO: Are there resources which parents of positively diagnosed children utilize outside of the medical setting?

IH: There are a number of support groups that are very beneficial as well as some reliable websites such as gikids.org and the Celiac Disease Foundation's website celiac.org.

Nathan Collins is an editor. Feedback welcome at ncollins@cityscenemediagroup.com.

"To get celiac disease one has to have the genes that predispose to the condition and in addition one has to ingest foods that contain gluten (found in wheat, barley and rye)."

About the Expert

Ivor Hill, MD, MB, ChB, is section chief of gastroenterology and director of the Celiac Disease Center at Nationwide Children's Hospital. He is also professor of clinical pediatrics at The Ohio State University College of Medicine.

One of the leading clinicians and researchers in childhood celiac disease, Dr. Hill has been instrumental in raising awareness of the disease in the United States. Notably, he was the chair of the North American Society for Pediatric Gastroenterology, Hepatology and Nutrition committee that developed the first evidence-based guidelines on diagnosis and treatment of celiac disease in children. This has resulted in many more people with celiac disease now being identified and treated appropriately. He has published more than 110 papers in peer-reviewed scientific journals and 41 chapters in medical books.

Prenatal, Post-op

In utero operations give babies a fighting chance even before their first breath

By David Allen

Nearly half way through a traditional 40-week pregnancy, doctors can better understand the anatomy and health profile of a fetus, allowing for a comprehensive evaluation of the baby's health. It is around this point in a pregnancy when an *in utero* surgical procedure, operating on a baby while in the womb, may be performed to assist the fetus. In rare circumstances, *in utero* surgery needs to be done to help a baby survive through delivery. In many cases prenatal surgery can stop progressive damage, while also keeping the baby *in utero* long enough to grow and continue developing.

Paul Kingma, MD, PhD, is the neonatal director for the Cincinnati Fetal Center, part of Cincinnati Children's Hospital Medical Center. Since 2004, doctors at the center have performed more than 1,500 fetal surgical procedures. Kingma says there are many reasons this line of high-risk work is rewarding.

"Helping families through difficult times either by treating their infant in the womb or having a specialized team ready at the time of delivery and, in some cases, just helping the family understand why and cope with the fact that their infant is suffering," says Kingma.

Kingma believes he was destined to be a physician. His father was a physician and he always admired the impact his father had on his patients. However, while in school, Kingma found a passion beyond clinical practice; he was inspired by the possibility of also making research a focus of his career. "I love the challenge and creativity of identifying and finding ways to answer research questions and ultimately improve the way we take care of patients," Kingma says.

"My curiosity in academic medicine and research began during my last years

of college and was fully ignited during my research as a medical student with Neil Osheroff at Vanderbilt University," says Kingma."Neil was instrumental in showing me how research is very satisfying both creatively and knowing that you are doing something that has the potential to help people."

Kingma outlines three primary research areas: tracheal esophageal (TE) development, congenital diaphragmatic hernias and premature infant lung injury.

"My first goal is to develop effective clinical management strategies to predict, prevent and treat complications in infants with TE defects," says Kingma.

Normally the trachea and the esophagus are not connected in any way. Very early in the development of a fetus a single tube will divide to form the esophagus and the trachea. For an unknown reason, sometimes the esophagus and trachea do not separate properly, and a fistula connecting the two forms, a birth defect that can become deadly if the baby cannot breathe or swallow food properly.

Kingma is utilizing several high-tech tools to research and correct TE defects. Cincinnati Children's Hospital Medical Center recently installed the first and only MRI located within a neonatal intensive care unit in North America. This unique resource provides him with a powerful new opportunity to study the formation and progression of tracheal esophageal defects in fetuses and newborns.

Another essential technology advance for *in utero* research and surgery has been the fetoscope, according to Kingma. A fetoscope is a tiny endoscope that is put in the mother during a fetal operation to help surgeons see and treat the fetus. It has reduced the need to make a large, open incision through the mother's abdomen and uterus to operate on the baby. Thanks to this invention, several *in utero* surgeries can be done with a less invasive scope including repairing spina bifida and helping lung growth in congenital diaphragmatic hernias (CDH).

CDH means the baby's intestines and abdominal organs herniate into the chest through a hole in the diaphragm area, not allowing the lungs to properly develop and expand in the womb, in many cases, leading to respiratory distress and possibly even death after the infant is born.

"My goal (in this area) is improve our understanding of the diagnosis, pathophysiology and treatment of infants with congenital diaphragmatic hernia," Kingma says.

His published studies include the evaluation of CDH using prenatal MRI and the clinical care of these infants. Kingma is now researching different ventilation strategies and how they can reduce the impact of CDH.

"My laboratory began a collaboration with Dr. Jason Woods and the Center for Pulmonary Imaging Research. Through this collaboration we have developed novel neonatal MRI techniques that allow us to evaluate the critical aspects of the premature infant cardiopulmonary system including lung growth, lung inflammation, lung performance on mechanical ventilation, airway structure and stability, pulmonary vascularity and pulmonary hypertension, and cardiac function," Kingma says.

The final goal of Kingma's research is to improve his understanding of the molecular pathogenesis of neonatal lung injury in bronchopulmonary dysplasia. He is currently working with a major biotechnology company to develop a treatment that improves the function of surfactant, a protein and lipid coating made naturally in healthy lungs during the late stages of pregnancy that allows the lungs to stretch. In premature infants that are born prior to the normal production of surfactant, the lungs fail to work properly, they could not expand to allow oxygen to get inside. A special component of surfactant, surfactant protein D, is especially important as it is responsible for fighting off toxins, decreasing inflammation and improving lung function. It also plays a role in lubricating the lung and preventing it from collapse.

The most inspiring part of Kingma's work is being able to apply it to high-risk pregnancies to improve outcomes.

"We need to improve our ability to identify infants that will benefit from fetal surgery," he says. "We also need to decrease the risk to the fetus, mainly the risk of premature delivery."

Using the information collected during research can help physicians better understand not only which *in utero* intervention methods work best to help babies thrive, but also detect which fetuses may need the interventions the most.

David Allen is a contributing writer. Feedback welcome at feedback@cityscenemediagroup.com.

Paul S. Kingma, MD, PhD, serves as an attending physician in the Cincinnati Children's NICU and as neonatal director of the Cincinnati Fetal Center and co-director of the Cincinnati Bronchopulmonary Dysplasia Center. Dr. Kingma leads several basic science and translational research projects. After he received his undergraduate degree at Calvin College, Michigan, Dr. Kingman attended and graduated from Vanderbilt University with a medical degree as well as a PhD. He completed his residency and a fellowship at Cincinnati Children's Hospital Medical Center. Dr. Kingman's research has been published in several journals including *Pediatrics*, *Journal of Pediatrics*, *American Journal of Respiratory and Critical Care Medicine*, *Journal of Perinatology* and *Journal of Pediatric Surgery*.

"We need to improve our ability to identify infants that will benefit from fetal surgery. We also need to decrease the risk to the fetus, mainly the risk of premature delivery."

The Write Advice

With Maria Lubanovic

The Sound of Success

Cincinnati doctor dedicates life's work to help those who had once lived in silence

Hearing aids have gotten so small and so powerful, they are now barely noticeable. Advances in technology are not just helping external aids to improve hearing, though. New internal implants have been developed to replace damaged or missing auditory nerves.

Dr. Ravi N. Samy is a otolaryngologist at the University of Cincinnati Gardner Neuroscience Institute and the Program Director of the Neurotology Fellowship at the UC College of Medicine. His research focuses on neurofibromatosis type 2: tumors which develop along the nerve that carries information from the inner ear to the brain. Samy shares his findings and experience in this edition of Write Advice.

HealthScene Ohio: What is the difference between hearing aids, cochlear implants and auditory brainstem implants?

Dr. Ravi Samy: When we hear, sound travels into the ear, through the cochlea, along the cochlear nerve to the brainstem and then to a higher center of thinking and learning. A hearing aid is an external device that amplifies sound before it goes into the ear. The cochlear implant is an electrode that goes into the inner ear (cochlea) and directly stimulates the auditory nerve. An auditory brainstem implant (ABI) is like a cochlear implant, the difference is that it goes into the brainstem.

HSO: What determines if a patient needs a cochlear implant verses an auditory brainstem implant?

RS: If the cochlea nerve is gone or the cochlea is unusable, then I can't put in the cochlear implant, so I do a brainstem implant. An ABI acts as the nerve for hearing. A microphone and processor sit behind the ear to pick up sound. This sound is sent to a decoding chip under the skin and the electrodes attached to the brainstem alert the brain to sounds. It is most often used on patients with destroyed auditory nerves, like neurofibromatosis type 2 (NF2) patients, a disease that causes tumors in the ears.

HSO: Which procedure is more common, cochlear implant or brainstem implant?

RS: Worldwide, there are about 300,000 cochlear implants that have been done. Cochlear implants were FDA approved in 1984 for adults and 1989 for children. ABI was approved in 2000. Worldwide there are only about 600 to 900 ABIs. It tells you just the magnitude of difference; ABI is such a rare thing. The majority of patients that know about ABI will have NF2.

HSO: Why isn't ABI done more often?

RS: For patients who still have an auditory nerve, cochlear implants are a better option. ABI is a challenge because it not only has to be the right surgical team, it also has to be the right patient with the right level of of motivation and family support. The patient has to understand that this is a device that has the ability to improve lip-reading skills and has the ability to improve sound awareness, but it's never going to be complete and normal hearing.

HSO: You stated that ABI is most often performed on people who develop a tumor that damages the auditory nerve, but are there other patients who may benefit from this same procedure?

RS: We're now trying to put more into pediatric patients because some kids are born without cochlear nerves. We're starting to see success in younger kids. If they don't have cochlear nerves, maybe the brainstem implant can get them to hear again.

Most adults that are candidates for ABI are NF2 patients, but we also have patients with meningitis. We try to get cochlear implants in as soon as possible but sometimes meningitis has a reaction that causes bone and scar formation within the cochleae. If you wait too long, you can't get the cochlear implants in at all, so we must replace them with a brainstem implant instead.

HSO: What are some of the risks of this surgery?

RS: Anything you are putting around the brain or the brainstem has a rare (1%)risk of stroke, seizures, or meningitis. You have to be careful that the patients understand the risk-benefit ratio, and if it's worth it. They are not guaranteed to hear perfectly with implants. I think the data in the pediatric population is better than the adult population, because the brain of a child is still growing and responding.

HSO: How long is the recovery time for patients?

RS: Usually, the hospital stay is about three days, one day in the ICU, but we technically activate the device with our

audiologists about a month post-op. We will also tell the patients no heavy lifting, no straining, no nose-blowing for a solid month after surgery.

A lot of recovery is up to the patient. Implants are not like putting on a hearing aid or putting on glasses. They need to follow up with their audiologist and do the training and auditory therapy. The more time patients spend learning to work with these new devices, the better they will do.

HSO: What's the next research frontier for hearing implants?

RS: I think that there are still areas fruitful for research. Even though ABIs started in 1979, it's still not a result that is comparable or near as good as cochlear implants. For example, an adult with a cochlear implant can typically talk on the phone again, but very few adults with an ABI can do that. However, we're seeing better results with the kids: some children may be able to talk on the phone over time.

We're understanding that a lot of the battle is lost or won at the brain and its neuroplasticity (the brain's ability to reorganize itself by forming new neural connections). That's probably why kids are doing better than adults. We are trying to see if different neurosurgical approaches to placing the ABI are helpful and impact the neuroplasticity.

Maria Lubanovic is a contributing writer. Feedback welcome at feedback@cityscenemediagroup.com.

About the Expert

Dr. Ravi N. Samy has been a otolaryngologist at the University of Cincinnati Gardner Neuroscience Institute and the program director of the Neurotology Fellowship at the UC College of Medicine since 2005. He is also the director of the Adult Cochlear Implantation Program at the University of Cincinnati Medical Center as well as an associate professor of otolaryngology at the college. After graduating from Duke University magna cum laude with a bachelor's degree in zoology, Dr. Samy attended the Duke University School of Medicine until his graduation in 1995. He completed his resident training at Stanford University School of Medicine and spent two years at the University of Iowa as a neurotology fellow.

LegislativeUpdate

Keep up with the latest state legislative initiatives in health.

Health Professionals

HB 75
Representative Theresa Charters Gavarone H.D. 3, Representative Derek Merrin H.D. 47

Professional Licensure – Armed Forces

This bill requires an expedited process to grant a professional license to an individual who is on active duty as a member of the armed forces of the United States, or is the spouse of such an individual, and holds a valid license in another state.

HB 131
Representative Theresa Gavarone H.D. 3, Representative William Reineke H.D. 88

Physical Therapy Laws

This bill modifies the laws governing the practice of physical therapy.

HB 146
Representative Larry Householder H.D. 72

Coroners Editing Death Certificates

This bill allows a coroner to change the cause, manner, and mode of death in a filed death certificate only after a hearing in the court of common pleas.

HB 191
Representative Anne Gonzales H.D. 19

Registered Nurse Anesthetists

This bill makes changes to the practice of certified registered nurse anesthetists.

HB 273
Representative Theresa Gavarone H.D. 3

Physician Certification

This bill prohibits a physician from being required to secure a maintenance of certification as a condition of obtaining licensure, reimbursement, or employment or obtaining admitting privileges or surgical privileges at a hospital or health care facility.

HB 326
Representative Bill Seitz H.D. 30, Representative Theresa Gavarone H.D. 3

Psychotropics – Drug Addiction Treatment

This bill authorizes certain pyschologists to prescribe psychotropic and other drugs for treatment of drug addiction and mental illness.

SB16
Senator Charleta B. Tavares S.D. 15

Health Care Cultural Competency

This bill requires certain health care professionals to complete instruction in cultural competency.

SB55
Senator Michael J. Skindell S.D. 23

Nurse – Patient Ratios

This bill establishes minimum ratios of direct-care registered nurses to patients in hospitals. The bill also specifies rights of registered nurses working in hospitals, and prohibits retaliatory actions by hospitals against registered nurses.

Health Care Coverage

HB 72
Representative Terry Johnson H.D. 90, Representative Nickie J. Antonio H.D. 13

Step Therapy Protocols

This bill adopts requirements related to step therapy protocols implemented by health plan issuers and the Department of Medicaid.

HB 156
Representative Kirk Schuring H.D. 48

Vision Insurance Limitations

This bill makes changes regarding limitations imposed by health insurers on vision care services.

HB 184
Representative Theresa Gavarone H.D. 3, Representative Anthony DeVitis H.D. 36

Authorize Teledentistry Services

This bill authorizes dental services through teledentistry, requiring a proposal for the creation of a primary care dental student component of the Choose Ohio First Scholarship Program. The bill also makes changes to the laws governing the practice of dentistry and dental hygiene.

HB 286
Representative Sarah LaTourette H.D. 76

Palliative Care Programs

This bill creates the Palliative Care and Quality of Life Interdisciplinary Council,

establishing the Palliative Care Consumer and Professional Information and Education Program, and requires health care facilities to identify patients and residents who could benefit from palliative care.

HB 479
Representative Scott Lipps H.D. 62, Representative Thomas West H.D. 49

Pharmacy Drug Transparency

This bill makes changes to the practices of pharmacy benefit managers, pharmacists, and the disclosure to the patients of drug price information.

SB 121
Senator John Eklund S.D. 18

Mammography Insurance Requirements

This bill includes tomosynthesis as part of the required screening mammography benefits under health insurance policies.

SB126
Senator Charleta B. Tavares S.D. 15

Conversion Therapy Ban – Minors

This bill prohibits certain health care professionals from engaging in conversion therapy when treating minor patients.

Prescription Drugs/ Controlled Substances

HB 73
Representative Jeffrey Rezabek H.D. 43, Representative Kyle Koehler H.D. 79

Prohibit Dextromethorphan Sale

The bill prohibits the sale of dextromethorphan without a prescription to persons under age 18.

HB 101
Representative Derek Merrin H.D. 47

Epinephrine Accessibility Act

This bill authorizes an epinephrine autoinjector substitution when a prescription is filled or refilled. The bill also authorizes epinephrine to be dispensed without a prescription under a physician-established protocol, and to declare the act the "Epinephrine Accessibility Act."

HB 117
Representative Stephen Huffman H.D. 80, Representative Andrew O. Brenner H.D.67

Opioid Therapy for Drug Offenders

This bill establishes a statewide pilot program for the provision of long-acting opioid antagonist therapy for offenders convicted of an opioid-related offense who will be released from confinement on supervised release. This bill specifies that the therapy is to be provided during both their confinement and their supervised release.

HB 231
Representative Tim Ginter H.D. 5, Representative Robert Sprague H.D. 83

Controlled Substances-Lockable Containers

This bill requires pharmacists to offer to dispense controlled substances in lockable or tamper-evident containers

Public Health

HB 7
Representative Bob Cupp H.D. 4

Medical Care Protections

The bill grants qualified civil immunity to certain medical providers who provide emergency medical services because of a disaster. The bill also provides that certain communications made regarding an unanticipated outcome of medical care, the development or implementation of standards under federal laws, and an insurer's reimbursement policies on health care are inadmissible as evidence in a medical claim. The bill provides that medical bills itemizing charges are inadmissible as evidence and an amount accepted as full payment for medical services is admissible as evidence of the reasonableness of the charges. The bill specifies the manner of sending a notice of intent to file a medical claim and provides a procedure for the discovery of other potential claims within a specified period after the filing of a medical claim. The bill provides that any loss of a chance of recovery or survival by itself is not an injury, death, or loss for which damages may be recovered. The bill provides civil immunity to certain medical providers regarding the discharge of a patient with a mental condition that threaten the safety of the patient or others. The bill also requires that governmental agencies that receive peer review committee records maintain their confidentiality; and to clarify the definition of "medical claim."

HB 317
Representative Ron Young H.D. 61

Pro Bono Healthcare Deduction

This bill authorizes, for six years, a personal income tax deduction for a physician based on the number of hours the physician provides uncompensated medical services through a hospital, free clinic, or nongovernmental medical organization

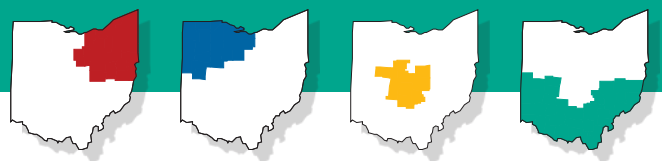
HB 535
Representative Theresa Gavarone H.D. 3

Nalaxone – Naltrexone Data Reporting

This bill requires reports regarding overdoses and the use of naloxone and includes naltrexone within the Ohio Automated Rx Reporting System.

To find more information on the Ohio General Assembly members, please visit the Ohio House of Representatives at www.ohiohouse.gov and the Ohio Senate at www.ohiosenate.gov. For more information on legislation, please visit www.legislature.ohio.gov.

Calendar



NORTHEAST

Aug. 18
The Great Amazing Race Toledo
3:15 p.m., Secor Metro Park
www.greatamazingrace.com

Aug. 25
ZERO Prostate Cancer Run/Walk
8:45 a.m., SouthWest Urology Middleburg Heights
www.zerocancer.org

Aug. 25
Tour De Donut
8:30 a.m., North Market
www.runsignup.com

Sept. 10
Drive Out Cancer
9:45 a.m., Quail Hollow Country Club
giving.clevelandclinic.org

Oct. 6
Head for the Cure 5K Run/Walk
8 a.m., Edgewater State Park
giving.clevelandclinic.org

Oct. 6
Run Now Wine Later
10 a.m., Gervasi Vineyard
www.runcanton.com

NORTHWEST

Sept. 9
Ohio State Pharmacy Alumni Society Pharmathon 5K
10 a.m., 337 Annie and John Glenn Ave.
www.runsignup.com

Sept. 16
Magruder Hospital Auxiliary Style & Trunk Show
1:30 p.m., Port Clinton Yacht Club
www.magruderhospital.com

Oct. 28
Rock'tober 10K, 5K & 1 Mile
9 a.m., 6202 Trust Dr., Holland
www.racingforrecovery.org

CENTRAL

Aug. 17
Tyler's Light Golf Outing
Noon, Little Turtle Golf Club
www.tylerslight.com

Aug. 18
Triathlon For Hope (All-Female)
8 a.m., Alum Creek State Park
www.raceroster.com

Aug. 18
Columbus Youth Triathlon/ Duathlon & Fun Run
7:30 a.m., Powell Adventure Park
www.active.com

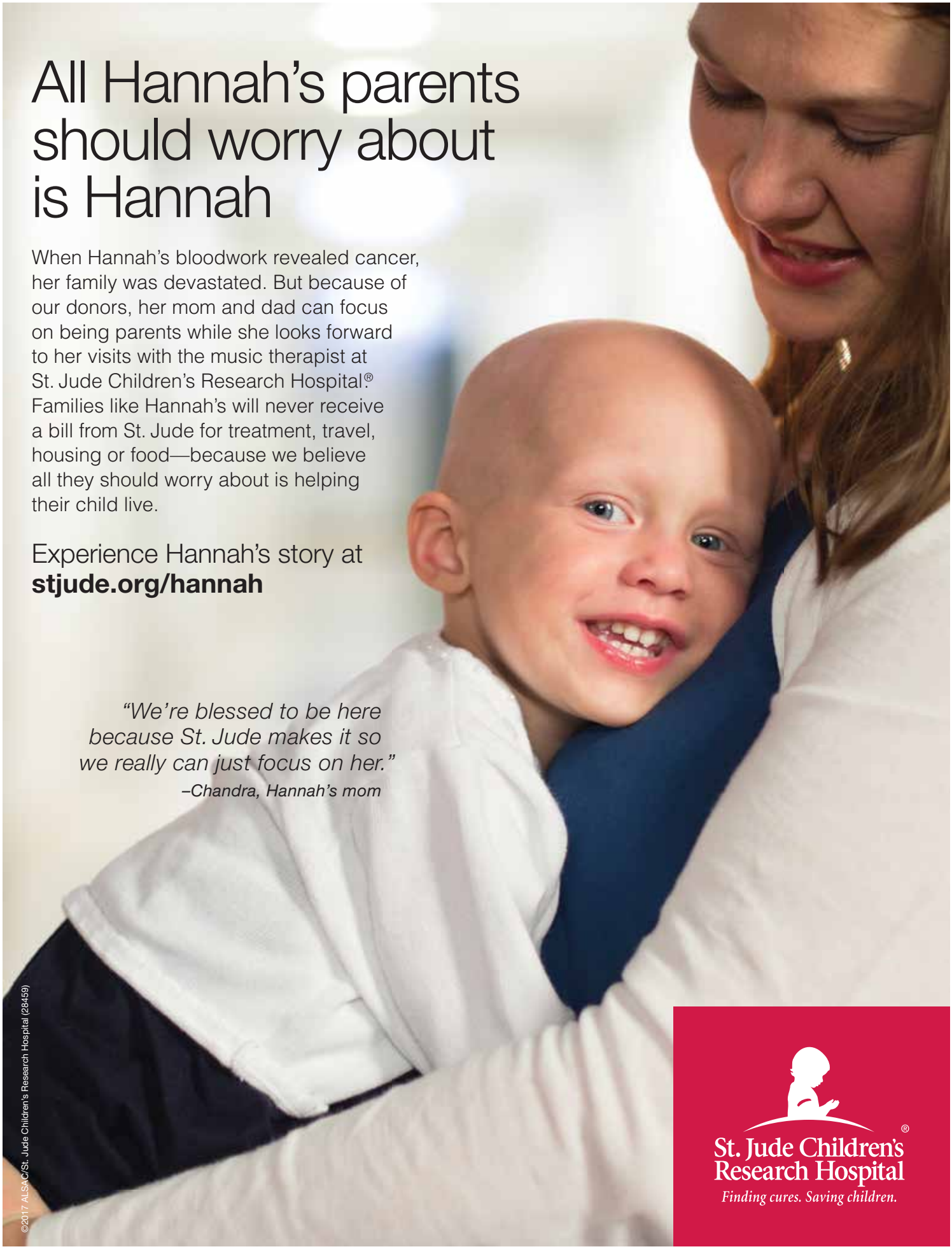
Aug. 25
The Great Amazing Race Columbus
4 p.m., Whetstone Park of Roses
www.GreatAmazingRace.com

Sept. 8
Central Ohio Walk Like MADD 2018
9 a.m., Homestead Park
www.walklikemadd.org

SOUTH

Aug. 12
Little Miami Half Marathon and 10K
7 a.m., Phegley Park
www.littlemiamihalf.com

Sept. 1
Great Amazing Race Cincinnati
4 p.m., WC Athletic Fields
www.greatamazingrace.com



All Hannah's parents should worry about is Hannah

When Hannah's bloodwork revealed cancer, her family was devastated. But because of our donors, her mom and dad can focus on being parents while she looks forward to her visits with the music therapist at St. Jude Children's Research Hospital®. Families like Hannah's will never receive a bill from St. Jude for treatment, travel, housing or food—because we believe all they should worry about is helping their child live.

Experience Hannah's story at
stjude.org/hannah

"We're blessed to be here because St. Jude makes it so we really can just focus on her."
–Chandra, Hannah's mom

St. Jude Children's Research Hospital®
Finding cures. Saving children.

Bookmarks

The information provided for these products, services and articles is for informational purposes only, and is not an endorsement by the State Medical Board of Ohio.

In the News

Why you feel tired all the time
www.medicalnewstoday.com

We've all been there, just feeling like all you need right now is to sleep for an entire day. In this article, five common reasons that people feel tired are discussed and journalist Hannah Nichols gives some ways to combat the problems.

What are the best foods to fight aging?
www.medicalnewstoday.com

Everyone wants to live a good, long life free of disease. This article by Maria Cohut lists a variety of foods from veggies to fruits to meats that have major health benefits, both physical and mental, that people should consider adding to their diets.

Got alt-milk? How plant-based alternatives compare
www.cnn.com

Whether you're vegan, lactose sensitive or just curious about other alternatives, lots of people don't drink milk from the cow anymore. Lisa Drayer looks at several alternatives, including a nutritional comparision to cow milk, in this article.

Travel snacks, as picked by nutritionists
www.cnn.com

Travel can be stressful on anyone and trying to figure out how to get food along the way is just another thing that you have to do. Lisa Drayer interviewed multiple nutritionists to get some ideas for packable travel snacks that are healthier than the typical airport fare.

100 million Americans have chronic pain. Very few use one of the best tools to treat it.
www.vox.com

Millions of Americans struggle with pain. But chronic pain isn't always strictly physical and often involves a psychological aspect. Brian Resnick sheds some light on the underutilized technique of psychotherapy as a proven way to help with chronic pain.

Health Phone Apps

These applications are for informational purposes only and are not an endorsement by the State Medical Board of Ohio.

JEFIT
Free; iOS, Google Play

Just finding the time to exercise can be difficult, let alone keeping a log and trying to find new exercises. This free app can track workouts, calculate BMI and fat percentage and recommend new exercises and workouts for you, which will ultimately lead to more free time to crush it in the gym.

MyFitnessPal
Free; iOS, Google Play

Keeping track of calories and nutrition is important to do but can be difficult. This free app can be used to log what you eat and provide important information about nutrition and dieting based off your age, weight and fitness goal.

Calm - Meditate, Sleep, Relax
Free; iOS, Google Play

Whether you have difficulty sleeping, are looking to spend time meditating or are just wanting to relax, this free app is one of the best for providing users with focus exercises and ways to calm down and meditate.

Running Distance Tracker +
Free; iOS, Google Play

Running is a great way to exercise and has a variety of health benefits, both physical and mental. This free app can help make your run easier(and more enjoyable) by logging runs, calculating your pace, track calories burned and even offers an audio coach to help keep you motivated.

Stretching & Flexibility Routines by Fitify
Free; Google Play

Fitify is a leading health and fitness app creator. They offer a variety of apps that range from TRX to bodyweight exercises. One of their free apps helps with an often overlooked aspect of fitness, flexibility and daily stretching.

The Rock is reminding guys that 'depression never discriminates'
www.gq.com

Dwayne "The Rock" Johnson is known as a big tough guy but that doesn't mean he hasn't struggled with mental health. He opens up about his experiences with depression as a young man and cautions men that it's okay to wrestle with mental health and it's not a sign of weakness to seek help.

Study finds a combination of meditation and aerobic exercise can help women after trauma
www.washingtonpost.com

For survivors of sexual violence, trauma can be difficult to deal with. Amby Burfoot discusses the findings of a recent study that shows mixing meditation followed by aerobic exercise can help women deal with trauma after sexual violence.

Why it's so hard to recover after drinking as you get older
www.huffingtonpost.com

Josh Ocampo explains why it becomes harder for the body to recover from drinking alcohol as we age. He also offers a few tips to help yourself avoid another hangover.

5 everyday strategies to make your brain stronger (one of them involves eating)
www.entreprenuer.com

Mental health can often go overlooked. Nina Zipkin offers some practical advice found from multiple different studies that can help everyone have a healthier, more creative brain.

How to treat sunburn fast
health.usnews.com

The sun makes the summer fun but also can cause damage to your skin. This article by Anna Medaris Miller gives some details on how to avoid and treat sunburns to have a fun and safe summer.

MARCH OF DIMES

JOIN US FOR THE 25th ANNUAL

SIGNATURE CHEFS AUCTION

Signature Chefs Auction is a premier fundraising event that showcases the culinary talents of local chefs, restaurants, and spirits as guests taste a sampling of their "signature" dish and bid on a unique assortment of once-in-a-lifetime auction packages. Funds raised go toward research, education, and advocacy to help March of Dimes lead the fight for the health of all moms and babies.

WHEN

Monday, October 15, 2018
5:30 pm - 9:00 pm

WHERE

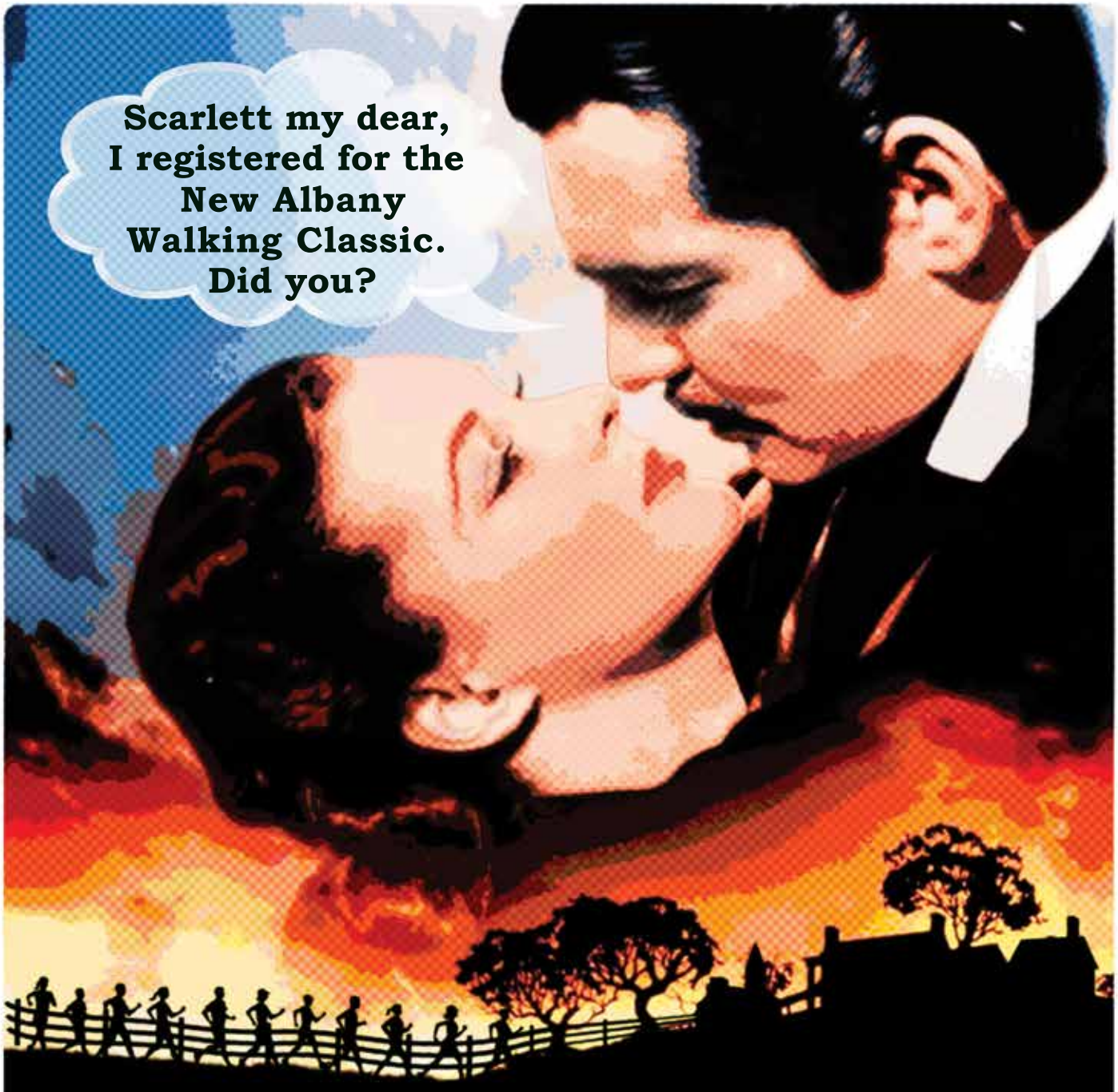
St. Charles Preparatory School's Walter Commons
2010 E Broad St, Columbus, OH 43209

CONTACT

614 392 6041 or
pburks@marchofdimes.org

MORE INFO

MARCHOFDIMES.ORG



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