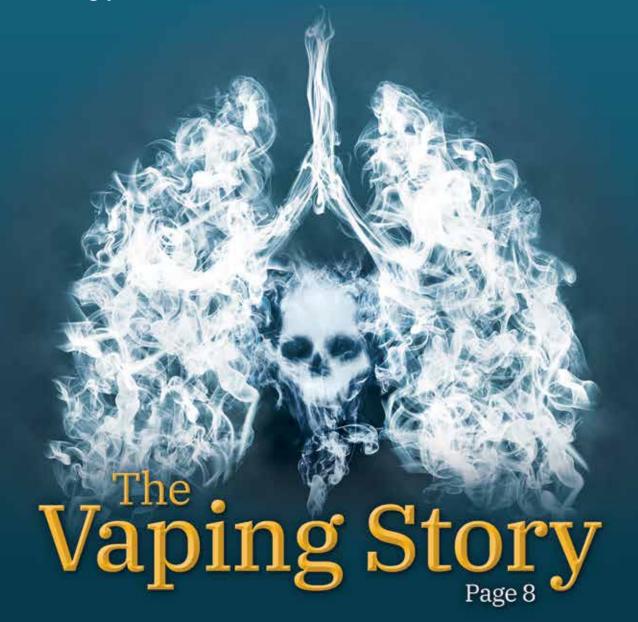
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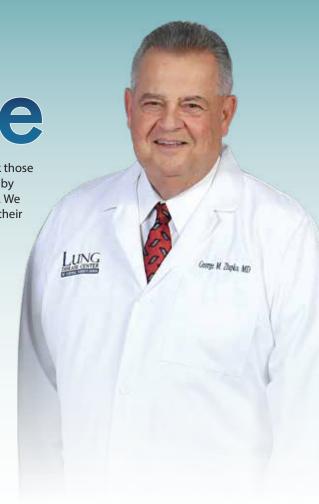
Welcome to Breathe

reathe magazine was originally designed to inform the public about issues related to lung health. Never has this mission been more important than with this 9th edition of the magazine. The epidemic of vaping associated with the use of vaping devices and e-liquids that are unregulated has led to serious consequences including death for many young, as well as old, vapers. We have devoted a large portion of this edition of Breathe magazine to this national crisis.

In addition to the major focus on vaping, including comments about vaping in pregnant women, there is a very interesting article on the use of dental appliances in sleep apnea patients. Those of you who have read our magazine in the past know that we not only appreciated your interest, but ask that you send the Lung Disease Center any suggestions for future issues.

As always, I would like to thank those who have given us their support by placing their ads on these pages. We could not be successful without their participation.

Lastly, I would like to express my gratitude to those who have helped the Lung Disease Foundation provide programs that help adults quit smoking and educate students, teachers and parents about the hazards of vaping. I ask that you take a minute to read the article about the Foundation and its many fine initiatives. Going forward my hope is that the Foundation, along with the Lung Disease Center, will continue to provide a quality service that is useful to the patients and families in Central Pennsylvania. *





Oral Appliance Therapy (OAT)

as Treatment for

Obstructive Sleep Apnea

By Charles J Dombrowski, DMD, D.ABDSM Diplomate of the American Board of Dental Sleep Medicine with Alan J. Kanouff, D.O. **Board Certified by the American Academy** of Sleep Medicine

CPAP (Continuous Positive Airway Pressure) has long been considered the "Gold Standard" for the treatment of Obstructive Sleep Apnea (OSA). Recent studies have shown dental appliances (OAT) are now recommended by the American Academy of Sleep Medicine. They may be considered first line therapy for the treatment of snoring and mild to moderate levels of OSA. Dental appliances and CPAP, at these levels, are comparable in reducing daytime sleepiness, hypertension, poor quality of life, cardiovascular mortality and improving neurocognitive function. Severe OSA is still most effectively treated by CPAP. If patients with severe OSA are unable to use CPAP, then dental appliances may be considered. Your sleep physician will direct the best course of treatment based on the

patient's individual needs.

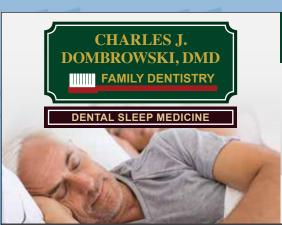
The rise in popularity of dental appliances is due, in part, to many people being unable to wear a CPAP (such as uncomfortable masks and claustrophobia). A dental appliance is portable and does not restrict movement during sleep. Studies show patients wear dental appliances longer during the night, more nights of the week, and have a high rate of compliance.

Dental appliances are custom fabricated by a qualified dentist trained in the best practices of dental sleep medicine. Impressions of the upper and lower jaws are taken to fabricate an appliance based on the physical requirements of each patient. The purpose of the appliance is to move the jaw forward to open the airway at the back of the throat. CPAP pushes air in, but a dental appliance opens the airway to allow better airflow. "Boil and Bite" devices have been shown to be much less effective than custom appliances because they are unable to provide the retention to protrude the jaw.

The good news is dental appliances, in most cases, are covered by medical insurance although deductibles and copays may apply. Medicare will approve appliances as first line therapy or in patients who show they cannot wear a CPAP. Medicare will only cover appliances from approved dentists who are Durable Medical Equipment (DME) providers. So, check with the dentist making your appliance.

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As the Medical and Dental professions, together, strive to provide quality care for patients suffering from Obstructive Sleep Apnea, innovative solutions for CPAP and dental appliances are constantly emerging. It is important to know dentists only make dental appliances under the direction of sleep physicians. Proper sleep testing and diagnosis is crucial and made by the sleep physician. Patients may be screened by a dentist but then referred to a sleep physician for diagnosis. This ensures the best clinical outcomes for the patient. *



Find out how to get help treating your obstructive sleep apnea (OSA).

Benefits of Using an Oral Appliance

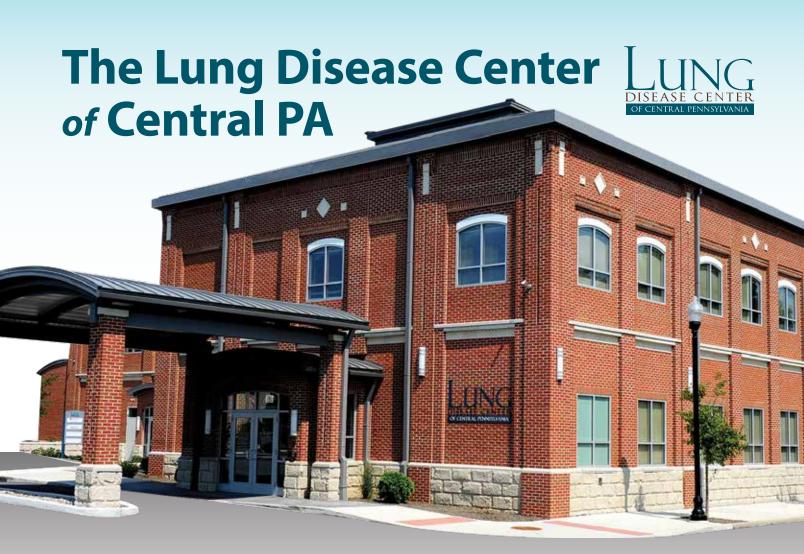
- Covered by most medical insurances
- Easy to use, comfortable to wear, and quiet
- Portable with travel
- · Improved daytime functioning
- May help improve the sleep of your partner



Charles J. Dombrowski, DMD, D. ABDSM Diplomate, American Board of Dental Sleep Medicine

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he Lung Disease Center of Central Pennsylvania will celebrate its 9th Anniversary in March 2020. It is hard to believe that we have had the pleasure of providing a healthcare presence in the community and the opportunity to provide a convenient and customer service oriented home to the Altoona Lung Specialists; the Sleep Disorder Network; and the Lung Disease Foundation of Central Pennsylvania for

nine years.

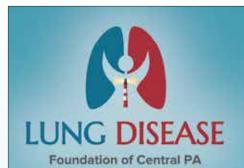
We enjoy the opportunity to participate in the Blair and Bedford County Chambers of Commerce; working with the United Way of Blair County; the annual Health-O-Rama held at the Logan Valley Mall, which has featured the Beacon of Light on Lung Cancer Walk and the much-anticipated Zlupko Family Cook-Off; as well as many other local events and organizations.

The Lung Disease Center of Central Pennsylvania continues to offer the Lung Cancer Early Detection Program, in which patients who are at high risk (55+ with a 30 pack year smoking history) are x-rayed and scanned annually to allow an early diagnosis and treatment of lung cancer.

The Lung Disease Center of Central Pennsylvania looks forward to celebrating many anniversaries to come. *



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"Individuals might accomplish a few things, but groups of people working together can do the really big things."

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Dr. George M. Zlupko, Chairman



Sherri Stayer, Executive Director

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Lung Disease Foundation

he Lung Disease Foundation of Central Pennsylvania has a new look with its new logo. The new logo hasn't changed the mission or vision of the Foundation, but has given us renewed energy to fulfil our mission.

LUNG DISEASE

The Foundation continues to provide resources pursuant to its designation as the Tobacco Control Service Provider, through a grant from the American

Lung Association, for both Blair and Bedford Counties. This year brought the opportunity to enhance the educational efforts of the Foundation by providing education to administrators, teachers, parents, and students in many area school districts relative to the risks and concerns related to vaping and juuling, which has become an epidemic among our youth. The grant continues to allow us to offer Freedom From Smoking programs on a regular schedule, free of charge, at the Lung Disease Center, our offices in the Bedford County Chamber of Commerce building,

and at the Blair Regional YMCA in Hollidaysburg. We are also able to offer programs to organizations and agencies in Blair and Bedford Counties upon their request. We continue to work with the Blair Regional YMCA and Joshua House to encourage TRU (Tobacco Resistant Unit) Groups participation, in an effort to educate and prevent use of tobacco products among our youth. We also advocate for stronger legislation relative to the purchase of tobacco products by our youth, known as Tobacco 21, which included a bus trip to Harrisburg for Day at the Capitol on



Representatives of the Foundation, TRU groups, State Representative Judy Ward (far right, first row), and past State Representative Jerry Stern at the Capitol.

May 7th. This event, as well as a great deal of advocacy with our local legislators, led to Pennsylvania becoming the 19th state to sign Tobacco 21 legislation into law. An educational opportunity was provided to local healthcare professionals by facilitating their participation in the Lung Force Expo held in May in Pittsburgh. This past year also brought the opportunity to assist Lakemont Park with Young Lungs at Play signs upon its opening. We continue to offer services available to worksites and multi-unit housing organizations for policies, education and cessation.

The Foundation received two grants, one from the United Way of Blair County and

one from the Leadership Blair County Alumni WeCare Blair County...*Helping with the journey,* with both grants assisting with the Cribs for Kids program. Thanks to these generous grants, we have been able to purchase cribs and provide safe sleep education and a safe sleep environment to parents of newborns in an effort to alleviate the occurrence of SIDS (Sudden Infant Death Syndrome) cases in our community.

The Foundation continues to work with the Healthy Blair County Coalition and its work group, which has now changed its name to the Alliance for Nicotine Free Communities.

National Lung Cancer Awareness Month in November once again brought the publication of a full page flyer to inform, empower and educate individuals; as well as the Foundation's participation in the Healthy Resolutions Expo; and four "Dining to Donate" events at Applebee's in the Logan Valley Mall, where 15% of a diner's check, upon presentation of a coupon, was donated to the Foundation

The Foundation continues to encourage those who have been affected by lung disease to donate to the Foundation to allow us to continue with our very important programs and education. A donation of any amount is always appreciated.

Please visit our website at www.lungdiseasefoundation.org to find out more information about our Foundation or to donate.

Success in Smoking Cessation

Laura Lenz came to the 2019 Health-O-Rama with a friend, "I smoked for 44 years and had stopping smoking on my mind for a long time," shared Laura. Her boyfriend had a heart attack and quit cold turkey two years prior and she felt guilty smoking

around him. Laura has a lot of heart disease in her family and they were constantly encouraging her to quit. "I quit once for eight months. During that time, I got my sense of smell and sense of taste back. I could smell cologne for the first time. Before, I could not tell if I had too much on and did not realize how bad the tobacco smoke smelled on me. I never smelled good cooking or baking."

While at Health-O-Rama, Laura was looking at the exhibits and

started talking with a woman at the Lung Disease Foundation of Central Pennsylvania table about smoking. "She was not judgmental or pushy. She was very kind, offered me information, and asked if I would be interested in going to a class." Laura answered, "I think I'm ready". She started attending a class one month later at the Blair Regional YMCA. Sherri Stayer, Executive Director

> of the Lung Disease Foundation of Central Pennsylvania and one of the trained and certified Freedom From Smoking Facilitators, was leading the class. "Sherri was an inspiration without being judgmental. She was supportive, a very good representative of the organization and class. They gave us all the tools

we needed including patches, gum, and a book. We were taught to be prepared to handle all situations, yet it was comfortable. It was a small class and we bonded."



Sherri Stayer, Executive Director of the **Lung Disease Foundation of Central** Pennsylvania stands with Laura Lenz, one of the Freedom From Smoking class attendees, at the Lung Disease Center of Central Pennsylvania's booth at the **Healthy Resolutions Expo.**

Laura said the hardest thing about quitting smoking was the fear of failure. "I wanted to be a success and I am. I can tell a difference in my health. I'm an organist at our church and there are 24 steps going up to the loft where I play. Before I quit smoking, I would be huffing and puffing before I got to the top." In just 33 days after quitting smoking, she was no longer out of breath.





Free classes designed specifically for adults like you, who want to quit tobacco use.

"I wanted to

be a success

difference in

mv health..."

– Laura Lenz

and I am.

I can tell a

Make the decision to guit nicotine today!

Register for the next series of classes at the Lung Disease Center of Central PA or the Bedford County Chamber of Commerce. Classes can also be scheduled at other locations or at businesses for their employees.

Free Participation and Nicotine Replacement Therapy To register or to schedule a class at your business call 814-946-2845.

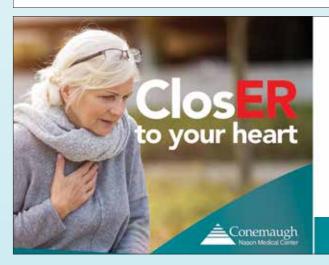
The project was funded through a Pennsylvania Department of Health grant.



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The Vaping Story



o the average person the rise in popularity of e-cigarettes and the problems associated with them seems to have occurred suddenly and unpredictably. Nothing can be further from the truth. The development of e-cigarettes has a long and interesting history. The health consequences associated with the use of e-cigarettes have evolved rapidly and, I must say, expectedly.

It is informative to know the history of e-cigarette development along with the sudden rise in their popularity. The story begins much earlier than most would realize. The initial effort was to develop a device that could deliver a habit-forming chemical, specifically nicotine, to the brain without the additional harmful effects of combustible tobacco. The search for an effective nicotine delivery device began in 1929 when a man named Joseph Robinson acquired the first patent for a device smokers could use to inhale a vaporized form of nicotine. The device was crude by modern standards and had to be plugged in to an electrical outlet to function. It would be some time before a device truly met the definition of an e-cigarette, i.e. a device with its own energy supply in the form of a battery.

Beaver Falls, Pennsylvania is the home of many famous people Mike Ditka, Joe Namath, Christina Aguilera, Henry Mancini and Tony Dorsett. Among these names and others is Herbert A. Gilbert, who is recognized as the inventor of the modern day e-cigarette. He worked in his father's

scrap yard and was a veteran of the Korean War. He was a 2 pack-a-day smoker. His device, invented in 1963. allowed a smoker to inhale "flavored air" which contained nicotine with very little vapor derived from water. It was not specifically a nicotine delivery device. The development and production of his device was thwarted by Big Tobacco and was never commercially produced.

The term "vaping" first entered our lexicon in the late 70's and early 80's. A computer entrepreneur, J. Phillip Ray, worked with his physician Dr. Norman Jacobson to develop a device to deliver nicotine without burning tobacco. Dr. Jacobson was the first to coin the term "vaping" and the people using his device as "vapers". Their device was simply a plastic tube painted at the end to look like a filter cigarette, which contained filter paper soaked in nicotine. The user would inhale through the cigarette and get a dose of nicotine. No combustion was involved. There was no vapor produced.

The development of e-cigarettes took a major step forward in the early 90's when a Chinese pharmacist in Beijing named Hon Lik, along with a company called Golden Dragon Holdings Inc., produced the first cigarette that could be called electronic (or e-). The reason Lik gave for developing the cigarette was his father died from lung cancer due to heavy smoking and he wished others to be able to get nicotine without the exposure to the many carcinogens in combustible tobacco

smoke. The cigarette was called Ruyan ("like smoke") and looked a lot like Gilbert's invetion. What made Ruyan a true e-cigarette was the inclusion of a battery to heat liquid containing nicotine and other chemicals producing a vapor that could be inhaled. Users not only got a dose of nicotine but also the vapor element of the smoking experience. The battery used in this device was a major breakthrough and allowed this product to be marketed and accepted by smokers.

The 1990's saw a flurry of activity as many cigarette manufacturers began to take notice of the e-cigarette market and it's potential. Initial studies on e-cigarettes showed that they contain far less harmful ingredients than tobacco smoke. One of these studies was actually conducted in New Zealand by the makers of the Ruyan. In February of 2011 a study was published in the American Journal of Preventive Medicine suggesting that e-cigarettes were a promising tool to help smokers quit the use of combustible tobacco. Also, in 2011 the FDA decided to regulate the sale of e-cigarettes, as it does other tobacco products, and the Obama administration ordered e-cigarettes banned from commercial airline travel. A group associated with the VA founded a non-profit organization called "Vape A Vet" to help former military service members with equipment and knowledge necessary to switch to what they thought was a healthier alternative to cigarette smoking at no cost to them.

To truly understand the reason for the success of vaping we need to begin with an understanding of nicotine. Nicotine is essentially an opioid. There is no quicker way to get nicotine into the brain, where it exerts its effect, than by inhaling it. Nicotine is found in the brain within seconds of its inhalation and begins to exert its effect immediately. Nicotine receptors in the brain send impulses to other areas telling them to produce dopamine. Dopamine is the chemical in the brain that gives us a feeling of well-being. Dopamine and the feeling it gives the smoker is the addictive result of nicotine. When the effect of the dopamine, triggered by the use of nicotine, wears off, the brain will literally scream for more nicotine to help preserve the feeling it creates and the person smokes again. This nicotine cycle repeats itself about every 45 minutes to one hour making it easy to understand why most smokers smoke about 20 cigarettes per day.

The use of e-cigarettes, especially by adolescents and teenagers, has been called an epidemic by many, including the FDA. Vaping is responsible for giving rise to a whole new generation of nicotine addicts. The most successful vaping device is one called the Juul and the use of this device is now commonly called Juuling. The Juul company initially said it developed the device to help committed smokers quit using tobacco in favor of a safer way to get nicotine. The ads for the Juul clearly targeted young people, not just committed smokers. The addition of flavors to the vaping liquid has made these products very attractive to a younger generation and is helping to develop a whole new generation of nicotine addicts. Sales of this product reached in the billions but current reports and research now show that the use of the Juul and any vaping device is associated with serious and potentially fatal consequences.

The claim that e-cigarettes are safer than tobacco stems from the fact that tobacco smoke contains at least 7,000 chemical compounds, many of which are cancer-causing. There are only four ingredients in the liquid found in commercially available e-cigarettes: propylene glycol, nicotine, flavoring agents and benzoic acid. These

chemicals are heated in the vaping device and inhaled by the user. Some of the chemicals are changed as a result of the heating process and can be cancer-causing, some of the flavoring agents have been shown to cause lung disease when inhaled, and the nicotine present in the e-liquid varies in concentration depending on what device is used.

The most recent

reports of problems associated with vaping have come from across the United States and consist of serious lung dysfunction and even fatal outcomes which have resulted from the inhalation of e-liquids containing THC (the active ingredient in marijuana) and other liquids like vitamin E acetate. These e-liquids are produced illegally and sold on the street or internet. There is no regulation on these chemical compounds or their specific concentrations. On August 1, 2019, the first cases of e-cigarette or vaping product use-associated lung injuries (EVALI) were reported and as of January 7, 2020 the number of EVALI were at 2,602 with 57 deaths reported. These numbers are updated weekly by the Centers for Disease Control and can be accessed by anyone at www. cdc.gov.

The American Heart Association found that over 1.78 million adolescents and teenagers have tried vaping. A recent survey of 8th, 10th and 12th grade students found that 56% vaped to experiment, 37.2% vaped because "it tastes good" showing how the use of flavors has attracted the younger age groups and, lastly, 23.5% vaped because they were "bored". 14.3% of 8th graders vaped because "it looked cool". Most students vape products that contain nicotine and some flavoring, but a growing percentage use nicotine along with marijuana or "hash" oil. These street level liquids are uncontrolled and dangerous. The US has the largest



Japan, the United Kingdom, Italy, Germany, and India combined. The profits from e-cigarettes could surpass tobacco products by 2021.

The message that needs to be given to adolescents, teenagers and adults is that vaping is not safer than tobacco products, it is just a different hazardous habit caused by nicotine addiction. In the last 3 years research has shown that vaping causes its own constellation of lung problems. Long term data is not available because vaping is a relatively new phenomenon, but it has not taken long to see that more serious problems are on the horizon.

Although there are no recognized programs geared specifically toward adolescent and teenage vaping cessation, the Lung Disease Foundation continues to offer, through its grant with the American Lung Association, Freedom From Smoking Programs along with trained facilitators in the N.O.T. (Not On Tobacco) cessation program for youth and the INDEPTH program, which seeks to provide an alternative to school suspension for students caught vaping or smoking. All of these programs are available in Blair and Bedford Counties. Organizations like the Lung Disease Foundation are working with school systems to help educate not only the students, but the staff and parents as well. Hopefully these efforts, along with others, will help reduce tobacco use and curtail the dangerous practice of vaping.

Vaping and Pregnancy

he use of tobacco products including cigarettes, smokeless tobacco and e-cigarettes during pregnancy is the most important modifiable risk factor associated with adverse maternal, fetal and neonatal outcomes. Screening for tobacco and e-cigarette use during pregnancy can be a powerful tool to assist patients with smoking cessation. Smoking during pregnancy, particularly of combustible tobacco products, is wellknown to effect fetal development. What is not well-known is that the use of e-cigarettes does not eliminate the risk of harm to the fetus.

All pregnant women should be asked about smoking, including the use of e-cigarettes. The strong social norms against smoking during pregnancy lead many women to fail to disclose their true smoking habits. Tobacco can be used in ways other that smoking cigarettes. Cigars, pipes and water pipes are also commonly used, along with dissolvable tobacco products like chewing tobacco, snuff and snus, which are placed in the mouth where the nicotine and other chemicals can be absorbed.

Recently, the use of e-cigarettes has been added to the list of habits used by pregnant women continuing to satisfy their nicotine cravings. The thought by most of these women is that e-cigarettes offered a safer alternative to combustible tobacco primarily because e-cigarettes contain less of the harmful chemicals found in combustible tobacco smoke. It should be noted that this is a false sense of security for the developing fetus.

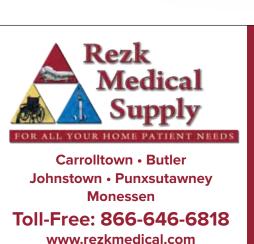
The use of e-cigarettes began to increase in 2014 and has spiraled sharply upward since then. Along with the use of e-cigarettes has come disturbing news about serious lung problems and even death associated with these products. Although many of these lung problems and deaths have been associated with unregulated e-liquids containing THC (the active chemical in marijuana) and vitamin E acetate, some have also occurred in those using commercially available liquids as well. Pregnant women need to keep in mind that even e-liquids that are sold commercially are not truly regulated as to nicotine level and the presence of other compounds in the liquid. When using e-cigarettes you are still exposing your developing fetus to nicotine and, as yet, unknown compounds.

Because the use of e-cigarettes is a relatively new habit, no long term information is available on the effects it has on the user, particularly if those users are pregnant women. Data in the last 3 years indicates that the use of e-cigarettes is associated with significant lung issues. It is unreasonable to believe that nothing will be found in legal or illegal e-cigarette devices that is not harmful to a fetus.

Quitting nicotine use, regardless of how it is obtained, is a very difficult habit to break. Pregnancy is often a time when a woman will make the maximum effort to guit smoking to help protect her developing baby. The use of e-cigarettes is not the answer to smoking cessation. Most studies have

shown that e-cigarette users actually use tobacco when the circumstances allow and e-cigarettes when they will not. Pregnant women need to be honest with their doctor about their smoking habits and consider enrolling in a smoking cessation program. The incentive that the pregnancy gives will increase the success of an attempt at smoking cessation.







Altoona OB/GYN Associates, Inc.



"The use of tobacco products including cigarettes, smokeless tobacco and e-cigarettes during pregnancy is the most important modifiable risk factor associated with adverse maternal, fetal and neonatal outcomes."

- Ryan J. Zlupko, MD



Dr. Patricia M. Hoyne, MD



Dr. David R. Lee, MD



Dr. Liang R. Bartkowiak, MD



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Altoona Lung Specialists

The Altoona Lung Specialists team continues to work diligently to provide each and every patient with the very best care possible.

At Altoona Lung Specialists, we pride ourselves in being one-stop for detection and diagnosis of pulmonary disease, and we go the extra mile to provide excellent customer service and professionalism during each and every patient encounter with the practice. The availability of a live receptionist to answer each caller contacting our office; onsite pulmonary function testing, cardiopulmonary stress testing, digital x-rays, CT scanning, and sleep testing; along with rapid turnaround for scheduling of new patients, all in a state-of-the-art facility, promises to make each patient's experience a pleasant one.

The "Team" concept initiated last year, wherein each Altoona Lung Specialists physician is entrusted to a patient population, along with their assigned clinical personnel and a medical secretary, has been met with positive feedback. The "Team" concept has enabled us to take each patient's care to the next level, empowering the patient to become familiar with, and form a working relationship with the medical team assigned to their care.

We are confident that our professional and caring "Teams" will allow patients to enjoy the opportunity to receive care in a manner which provides a positive experience for each patient. *



ing Our Doctors



George M. Zlupko, M.D., FCCP

Dr. George M. Zlupko is the senior partner and founder of Altoona Lung Specialists. He is the Director of the Lung Disease Center of Central Pennsylvania, which he founded in 2011. He also founded the Lung Disease Foundation of Central Pennsylvania.

Many of the current advanced procedures used locally in pulmonary medicine had their beginnings more than thirty years ago when Dr. Zlupko arrived in Altoona to

add knowledge, direction, and expertise to the critical care unit and respiratory care department of the, then, Altoona Hospital. He brought with him the techniques of fiberoptic bronchoscopy, followed by navigational bronchoscopy, and the new technique of **Endobronchial Ultrasound most recently** introduced by his son, Dr. Michael Zlupko.

Dr. Zlupko's mission has been to provide high quality pulmonary medicine services which would rival tertiary care facilities, close to home for more convenient patient care.

Timothy A. Lucas, M.D., FCCP

Dr. Timothy Lucas joined Altoona Lung Specialists in 2000. He received a Bachelor of Science Degree in Biology from the University of Pittsburgh. Dr. Lucas attended medical school, performed his internship, residency, and fellowship training, all at The Pennsylvania State University College of Medicine in Hershey, Pennsylvania.

Dr. Lucas is certified by the American Board of Internal Medicine in Pulmonary Disease, as well as the American Board of Sleep Medicine. He enjoys the distinction of being a Fellow of the American College of Chest Physicians.

Dr. Lucas has privileges at UPMC Altoona and is the Medical Director of the Sleep Disorder Network in the Lung Disease Center of Central Pennsylvania *





Alan J. Kanouff, D.O., FCCP

Dr. Kanouff received his education at the Pennsylvania State University spending his first two years in Altoona before finishing up at University Park. He completed his medical education at the Philadelphia College of Osteopathic Medicine. He performed his residency at Conemaugh Valley Memorial Hospital in Johnstown, Pennsylvania, and underwent his pulmonary training at

Allegheny General Hospital in Pittsburgh, Pennsylvania. He joined the Lung Disease Center of Central Pennsylvania in 2009.

Dr. Kanouff is certified by the American Board of Internal Medicine in Sleep Medicine and Pulmonary Diseases. He is also certified in Critical Care Medicine and Internal Medicine, and is licensed by the State of Pennsylvania as a Doctor of Osteopathy. Dr. Kanouff has the distinction of being a Fellow of the American College of Chest Physicians. *

Michael C. Zlupko, M.D.

Dr. Michael C. Zlupko joined the Altoona Lung Specialists in 2013. He graduated summa cum laude with a Bachelor of Arts in Biology from Franklin and Marshall College in Lancaster, PA. Dr. Zlupko received his medical degree from the University of Pennsylvania School of Medicine in Philadelphia, PA. He performed his internal medicine residency at the University of Virginia in Charlottesville, VA and completed his pulmonary and

critical care training at the Cleveland Clinic Foundation in Cleveland, OH.

Dr. Michael C. Zlupko is Board Certified by the American Board of Internal Medicine in Internal Medicine, Pulmonary Disease, and Critical Care Medicine. He is licensed to practice medicine by the State of Pennsylvania with privileges at UPMC Altoona, Tyrone Hospital, Encompass Health Rehabilitation Hospital of Altoona, and the James E. VanZandt Veteran's Memorial Hospital. *





Thank You to Our Team!

The team of experts who assist with the care of our patients at the Altoona Lung Specialists include Receptionists, Medical Secretaries, Medical Assistants, Radiology Technicians, and Sleep Technicians, each of whom are dedicated to the needs of our patients. We would like to thank each of our team members who play an integral part in the success of the practice. Thank you!





























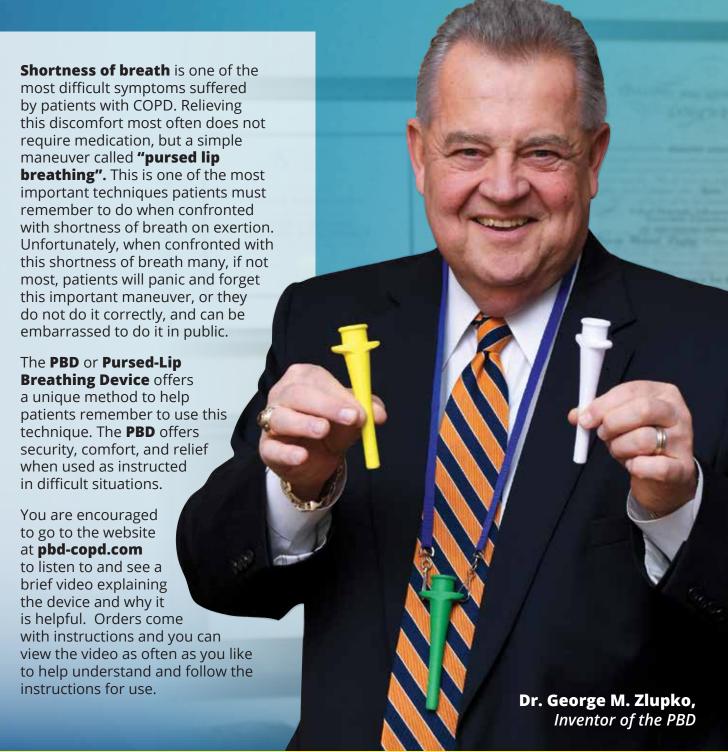




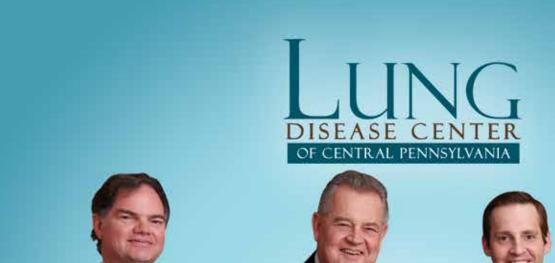


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