The American Lung Association Asthma Clinical Research Center network is starting up a major new clinical study to try and determine whether treating chronic symptoms of runny nose and/or sinus congestion are important to improve asthma control and prevent asthma exacerbations. This will be a six-month study. The study will be performed at the 20 centers throughout the United States. People participating in this study will be treated with a nasal steroid medication or nasal placebo medication. The lead center for the study will be of Vermont Lung Center. We need adults and children (over the age of six years) with asthma to help us once and for all answer the question "Does treatment of sinus or nasal symptoms help asthma?"

People participating in the study will have the lung function testing in allergy testing and return to the clinic after visits throughout the study. If you have chronic symptoms of a runny nose and sinus congestion please give us a call to participate in this major new clinical study.

Sinusitis and hay-fever symptoms are very common in people with asthma. This has been recognized by doctors for centuries. In ancient times it was thought that secretions of the brain drip down into the lungs to cause asthma. We certainly know that this is not the case. However for many years doctors have wondered whether secretions in the nose could drip down to a person's lungs to aggravate asthmatic symptoms. Other scientists have suggested that inflammation and congestion in the nose and sinuses can trigger an immune reaction which aggravates asthmatic symptoms. Consequently it is common practice for people with asthma to be prescribed medications to treat nasal and sinus symptoms.

We certainly know that treating acute symptoms of hay fever improve both asthma and hay fever symptoms. We also know that treating acute sinusitis is important for patients. But we don't know if people with asthma and chronic symptoms of runny nose or mildly congested sinuses would benefit from treatment.

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Study of Asthma and Nasal Steroids

Anne Dixon, MD

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Another Reason to Watch your Weight

Anne Dixon, MD

Every day we hear a new study about the growing problem with Americans gaining weight. For years we’ve known that if you gain weight, you’re at risk of diabetes, high blood pressure and heart attacks. We’re also beginning to realize that you’re at risk of asthma. It is estimated that 100 000 people a year in the U.S are diagnosed with asthma because of gaining weight.

Often asthma in people who are overweight is more severe than in leaner people. We think that one of the reasons that asthma is less well controlled in people who are overweight is that the asthma does not respond as well to usual asthma treatments. This may be because the cause of asthma is different in people that gain weight. Some of the early research from our studies on adipose tissue and asthma have suggested that some of the chemical produced by fat tissue may actually be affecting the airways of people who are overweight, to give them asthma. We want to find out if altering these chemicals produced by the fat cells can improve asthma.
Did you know that 2010 is the Year of the Lung? On December 6, 2009, members of the Forum of International Respiratory Societies (FIRS) gathered at the 40th Union World Conference on Lung Health in Cancun, Mexico and declared 2010 as the Year of the Lung. What does this mean? The FIRS members recognized that hundreds of millions of people around the world suffer each year from treatable and preventable chronic lung disease, and yet lung disease is vastly under recognized and has been largely neglected in the forum of public health. For example, chronic obstructive lung disease (COPD) will become the 3rd leading cause of death worldwide by 2020, yet COPD is under diagnosed and largely preventable. In China, COPD causes more tobacco-related deaths than lung cancer, whereas in Europe, lung cancer is the number 3 killer. Tuberculosis (TB) remains a major problem, especially in India, where half the world’s TB deaths occurs. And pneumonia remains a leading killer as well, with 4 million people dying each year. The purpose of declaring 2010 as the Year of the Lung was therefore to raise awareness and action on lung health around the world.

Lung disease affects people everywhere, and members of the FIRS include the respiratory societies of Latin America, Europe, North America, Africa and Asia, as well as dozens of lung foundations across the planet. Their call to action is clear: doctors must be made more aware of lung disease and be more active in diagnosing and treating it; researchers need to focus on improving understanding lung disease to allow better diagnosis and treatment; funding agencies must provide more money for research and public health measures; and policymakers must protect the public by enacting legislation to promote smoking cessation and clean air.

Many activities have already taken place during the year, including World Asthma Day on May 14, 2010, and Call to Action on COPD in Europe on June 30, 210. The next big event is World Spirometry Day, scheduled for Oct 14, 2010. On this first ever World Spirometry Day, spirometry, the basic test to measure lung function, will be offered free around the world. Measuring lung function is critical to understanding lung health and diagnosing lung disease, especially COPD and asthma. The Year of the Lung organization is providing educational and practical resources online to facilitate the mass testing of people around the world on this one day. Similar events have been run in specific venues, and the results are impressive. For example, of over 12,500 people tested, almost 20% had some degree of airflow obstruction, a hallmark of COPD and asthma. Many of these people had few if any symptoms, and nearly half were smokers, so spirometry can serve as a wake-up call to smokers and non-smokers alike that there may be a problem. Both groups may then be encouraged to seek out the advise of a health care provider to better monitor and treat any underlying disease.

Back in 1996, the National Lung Health Education Program was initiated as an organization to promote lung awareness and health in this country. Its motto is “Test your lungs. Know your numbers”. This testing and knowledge is obtained through spirometry. On World Spirometry Day, the Vermont Lung Center plans to join the many organizations around the world to provide this testing and raise awareness and knowledge about lung health and disease.

For more information on The Year of the Lung, check their website at http://yearofthelung.org/.
You were both diagnosed with asthma. How has asthma affected your life?

**Pat:** For many years, I was an EMT for several volunteer ambulance services. Since I cannot control the elements that induce asthma attacks in me, I have had to stop being a rescue member.

**Garry:** For a while, my asthma had been under control. Two years ago, however, my breathing flared. Walking around the halls of my hot school, with several rooms filled with strong air fresheners, others with teachers wearing strong perfumes, and the risk of cigarette-smoke filled bathrooms, there are days that I gasp along the way, and days that I forget I have this disease.

You are participating in asthma studies at the Vermont Lung Center at the same time. How has that been for you two?

**Pat:** Everyone at VLC has been great about making our times at the Center coincide.

**Garry:** It has made monitoring our asthma easier. Being in studies together allows us to form a fantastic support network between each other.

Which studies are you enrolled in?

**Pat:** I am enrolled in GLITZ.

**Garry:** I am enrolled in the SOYA study.

What made you decide to participate in the studies?

**Pat:** My decision to participate came with the theory that I have everything to gain by participating. Garry had been in studies when he was much younger and one of my daily medications is one for which Garry was a pilot program participant.

**Garry:** About ten or so years ago, I was enrolled in asthma studies elsewhere. It was something I always enjoyed doing, since, as I reasoned, it didn’t matter if the study helped me or not, as long as it helps somebody else (in fact, my mother takes one of the medications I tested, and I take another one of my test drugs, Xopenex®). It didn’t take me too long to make my decision to continue where I had left off.

What has been your experience with being a research participant at the Vermont Lung Center?

**Pat:** Everyone works really hard to make my participation a positive experience. I feel that I can ask about anything or mention anything and I get valuable feedback to help me recognize when I need to start taking corrective action with my symptoms.

**Garry:** Everyone really seems to care with how the patient does.

Have you learned anything new about your asthma since enrolling in studies at the Lung Center?

**Pat:** I have learned how to use my peak flow meter to the best. I am starting to recognize when my asthma is flaring before it turns into a full blown attack.

**Garry:** While I already knew a lot from prior studies, coming to the VLC was a great refresher to my past lessons.

If there was another research study that you were eligible for, would you consider participating?

**Pat:** I will be the first in line! I can either be part of the problem or part of the solution. I choose to be the latter.

**Garry:** In a heartbeat.

The Vermont Lung Center is always recruiting for studies—Would you recommend participating in research studies at the Vermont Lung Center to people you know? If yes, why?

**Pat:** I will definitely recommend participating to people I know. The more we can learn about this disease process, the better off we, as asthmatics, are.

**Garry:** I would happily recommend that people participate.
Wouldn’t it be great if you could change your diet and see a benefit for improving your asthma? Well maybe you can. SOYA (Study of Soy Isoflavones in Asthma) is a new study we are starting up as part of the American Lung Association Asthma Clinical Research Center (ACRC) Network to determine if adding a soy supplement to the diet will improve asthma control and prevent asthma worsening.

As you may know more people have asthma now than in earlier times and one reason for this could be a change in diet with a reduced intake in fruits and vegetables. In a previous ACRC study (the flu vaccine study) we asked many of the participants fill in a food questionnaire. We found that soy intake was strongly related to better lung function. Soy contains a isoflavone called genistein that can relax airways much like your rescue inhaler of a beta agonist (albuterol). In a follow-up study, a four week study of increasing soy consumption, asthmatic patients also had less airway inflammation which would suggest soy may also have properties similar to corticosteroids (an asthma controller). Taken together these studies have caused us to start this study of soy. SOYA will also be conducted here at UVM at the other 19 ACRC sites around the United States. People participating in this novel study will take a dietary soy supplement twice a day. We need adults and children (over the age of 12 years) with asthma to investigate the question, “Does a soy dietary supplement improve asthma symptoms and improve asthma control?” People participating in this exciting study will have lung function testing and return to our clinic at the Fanny Allen Campus for study visits.

If you have chronic asthma please give us a call and see if you qualify for this unique study.
There are many complementary therapies that are available and used by people with asthma. In surveys of patients with asthma more than 50% of the parents use one or more forms of alternative or complementary therapy to treat their asthma. The reason people try alternative and complementary therapies is because of dissatisfaction with conventional therapies and worries about steroid side-effects. Some find these therapies helpful, but keep in mind that there hasn’t been a great deal of research into alternative asthma treatments. No one knows for certain how effective they are, so be very wary of miraculous claims.

What Complementary Therapies are used?

**Acupuncture** is the ancient Chinese treatment of inserting very fine needles into specific parts of the body to influence the flow of energy. Some studies show that acupuncture can give short-term relief from asthma symptoms. No long-term benefits have been documented.

**Buteyko method** is a set of breathing exercises based on the theory that people with asthma lose too much carbon dioxide through overbreathing. Following the use of the Buteyko method, research shows that there is no improvement in lung function. However, a number of studies have shown that Buteyko allows some people with asthma to reduce the use of their reliever medication, but more research is needed.

**Yoga** is the ancient Indian practice of postures and movements performed in time with breathing. One form of yoga, Pranayama, has been found to be effective in reducing asthma attacks and sensitivity to certain allergens or triggers.

**Hypnosis** is a deep state of relaxation that allows the patient to focus their complete attention on one thing or idea. Hypnosis is helpful for reducing stress, but not all people can be hypnotized.

**Relaxation techniques and biofeedback** may benefit lung function by affecting emotional processes, muscles, and breathing and be worthwhile if stress is an asthma trigger.

**Chiropractic** is manipulation of the spine. Some research has shown that chiropractic has a beneficial effect on airway circulation and lung capacity.

**Homeopathy** involves preparing a special medicine containing tiny amounts of the allergic substance. The idea is that this medicine ‘trains’ the immune system to recognize the allergen as safe. This is a similar idea to allergy shots. One drawback is trying to pinpoint the exact allergen since most people with asthma have more than one.

**Herbal therapy** such as ginkgo biloba, tylophora asthmatica and saiboku-to are widely used. Research into the value of herbs is needed because their effects aren’t fully understood. Herbs can be powerful and should be treated with as much respect as pharmaceutical drugs. Be aware that there is lack of control over the quantity and quality of herbal ingredients.

**Probiotics** are cultures of potentially beneficial bacteria that normally reside in the healthy gut. There are many different strains of probiotics; studies have found that probiotic-supplemented yogurt results in trends in reduced inflammation and reduced allergic symptoms. However, not all studies have had positive results; one study found no effect of yogurt consumption on asthma related symptoms or lung function.

**Dietary Supplements** such as Vitamin C, the mineral magnesium and fish oils where found to be helpful in some studies, but not in others. There is also recent interest in Vitamin D.

Are these therapies harmful?

People with asthma should always consult a licensed health care practitioner before trying any alternative or complementary therapy. Improper use of some therapies can trigger episodes and worsen asthma. In addition, some herbal remedies, such as lobelia and pennyroyal, are potentially toxic. These therapies are designed to complement, or add to, your existing medical treatment – not replace it. Never abandon your medication and mainstream asthma management plan. At this point in time we are not sure of their exact effect or worth because of the limited research on complementary therapies.
Nearly 21 years ago, our twin granddaughters, Kayla and Samantha were born. Within hours of their birth, we learned that Kayla had Cystic Fibrosis. We didn't know anything about CF but we learned a lot in a hurry. We found out that it is the number one genetic disease affecting children and that it would impact Kayla and her family's lives on a daily basis. She would receive chest PT, nebulized antibiotics, enzyme capsules every time she eats to deal with digestive symptoms and the possibility of frequent 2 week tune-ups in the hospital to clear any lingering infections in her lungs caused by the sticky mucus. All of this and the life expectancy was only to young adulthood. We knew that we could not accept this as fact and decided to do everything we possibly could to change it.

The isolation of the defective gene that causes CF was announced on the very day that Kayla was born and we took this as a sign. We decided to raise money to send to the CF Foundation to speed the research process and make the difference for Kayla and all of the other people with CF in their lifetimes. There are over 100 people with Cystic Fibrosis in Vermont. The advances in CF research benefit all CF patients as well as those suffering from other genetic diseases. Every breakthrough made in genetic research and therapies for CF is knowledge that can be applied to other genetic diseases.

We started the Walk-a-thon event 20 years ago and this year marks the 17th Annual Three Day Stampede toward the Cure for Cystic Fibrosis. Thanks to the incredible support of the extended community this event is one of the largest grass roots fund raisers for the CF Foundation. The Stampede includes a giant yard sale under 20 tents, a used book sale, silent auction, bake sale, walk-a-thon, and much more!

Where does the money go?

All money raised during this event will go directly to the CF Foundation, which spends 90 cents of every dollar directly on programs and research, placing it as the top medical charity in the country in the efficient use of money. Please visit the CFF website www.cff.org for a complete look at The Foundation and the incredible work that is being done.

All of the people who organize and run this event are volunteers, and whenever possible, materials and services are donated. Over the course of the last 20 years, we have raised $986,000 to send directly to the Foundation for programs and research. The committee and our family work incredibly hard to put this event together each year and we couldn’t do it without people like you who are willing to become involved as sponsors. The overwhelming love that we feel for our Kayla and the urgency that we and the families of kids with CF feel about keeping them all healthy and strong so that they can make their mark on the world is all the incentive we need. We hope that it will be enough for you too!

Thank you for taking the time to read this information. Last year we raised $100,000 and with your help this year we hope to exceed that total! This year will put us over ONE MILLION DOLLARS sent to the Foundation since we started!!!!!!! This event is a habit forming, positive, uplifting experience that we are proud to present to our extended community. The event will take place on July 23, 24th & 25th at the Bristol Recreation Field.

Whether you sponsor the event, donate to the silent auction, walk in the walk-a-thon or attend the event, every dollar that you add to our total has a positive impact on each and every person in the entire world who suffers from this and every genetic disease.

Best regards,
Bonita and David Bedard
Stampede Committee
Grandparents and Organizers

David & Bonita Bedard  711 Dan Sargent Road  Starkesboro, VT 05487
802-453-4305 or 453-3952 www.threedaystampede.org
**ASTHMA**

**Study of Acid Reflux in Children with Asthma (SARCA)**
Primary Investigator: Charles Irvin, Ph.D., Director, Vermont Lung Center
Coordinator: Stephanie Burns
Who: Children age 6-17 with asthma who do not have heartburn
What: 9 visits over 7 months
Compensation: up to $550

**A Randomized, Placebo-Controlled Pilot Study of Pioglitazone for the Treatment of Moderate to Severe Asthma in Obese Asthmatics (GLITZ)**
Primary Investigator: Anne Dixon, M.D., Director, Clinical Research Coordinator: Laurianne Griffes
Who: Obese adults with moderate to severe asthma
What: 5 visits and one phone call over 13 weeks
Compensation: up to $170

**Asthma Patient Registry (APR)**
Primary Investigator: Charles Irvin, Ph.D., Director, Vermont Lung Center
Coordinator: Stephanie Burns
Who: Anyone with a physician diagnosis of asthma
What: 1 visit lasting approximately 30 minutes
Compensation: none

**The Study of Soy Isoflavones in Asthma (SOYA)**
Primary Investigator: Charles Irvin, Ph.D., Director, Vermont Lung Center
Coordinator: Stephanie Burns
Who: Adults and Children 12 years and older with symptomatic asthma
What: 9 visits over 24 weeks
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**Study of Asthma and Nasal Steroids (STAN)**
Primary Investigator: Anne Dixon, M.D., Director, Clinical Research Coordinator: Stephanie Burns
Who: Adults and Children 6 years and older with rhinitis or sinusitis and asthma
What: 10 visits over 6 months
Compensation: up to $350

**IDIOPATHIC PULMONARY FIBROSIS (IPF)**

Centocor CNT088PUL2001: A Phase 2, Multicenter, Multinational, Randomized, Double-blind, Placebo-controlled, Parallel-group, Dose-ranging Study Evaluating the Efficacy and Safety of CNTO 888 Administered Intravenously in Subjects with Idiopathic Pulmonary Fibrosis
Primary Investigator: Yolanda Mageto, M.D.
Coordinator: Stephanie Burns
Who: People with Idiopathic Pulmonary Fibrosis
What: IV infusions every 4 weeks for 48 weeks, 3 follow up visits through week 72.
Compensation: $30 per visit.

**CYSTIC FIBROSIS**

GSK: A Randomized, Double Blind, Parallel Group, Placebo Controlled 28 Day Study to Investigate the Safety, Tolerability and Pharmacodynamics of SB-656933 in Patients with Cystic Fibrosis.
Primary Investigator: Laurie Whittaker, M.D.
Coordinator: Joan Lippmann
Who: People with Cystic Fibrosis
What: 7 visits over 70 days
Compensation: Up to $650

**SARCOIDOSIS**

A Phase 2, Multicenter, Randomized, Double-blind, Parallel-group, Placebo-controlled Study Evaluating the Safety and Efficacy of Treatment with Ustekinumab or Golimumab in Subjects with Chronic Sarcoidosis
Primary Investigator: Gerald Davis, M.D.
Coordinator: Laurianne Griffes
Who: People with Chronic Sarcoidosis
What: Subcutaneous injections; 15 visits over 44 weeks
Compensation: $35 per visit

For more information on these studies, please visit our website @ www.vermontlung.org

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**Ask Dr. Charlie**

**I have asthma do I need an asthma action plan?**
Yes. Your specialist should provide you with a personalized asthma action plan. Personalized because each person’s asthma is different and you need to know which medications to take and when for the situations you may encounter.

**How do I know if my asthma is out of control?**
If you wake up at night wheezing, using your rescue inhaler frequently, or your peak flow falls and stays low for 2-3 days in a row these are some of the signs that your asthma is out of control. Seek medical advice to adjust your treatment to regain control of your asthma and your life.
Letters

Hello,

My name is Lorraine, and I am a second year student in Respiratory Therapy at Vermont Technical College (VTC). In our last year of studies, we are required to do some volunteer hours, in a field promoting the profession. Then, at the end of the year, we have to present a report in front of the first year students. The objective of the presentation is to show them the many possibilities and fields, open to a respiratory therapist, besides working at a hospital. We had to choose from a list of organizations provided by our teacher. This year, for the first time, the Vermont Lung Center was on the list. Like many other students, I applied at a few different organizations that looked interesting to me, including the Vermont Lung Center. I spoke with Laurianne Griffes, CRT, from the Vermont Lung Center. I didn’t know what to expect, knowing nothing about research and according to what I heard from other students in my class, research was so “boring” that I would regret it. Fortunately, I am not one to listen to other people’s opinions, and I like to make my own.

I accepted the opportunity Lauri was offering and it was the best thing that happened to me this year. With her, I discovered a brand new world, the world of research and pulmonary function testing. I learned several things that are not very well covered in class, such as spirometry, bronchoscopy, plethysmography, nitrogen washout, exhale nitric oxide, methacholine testing, etc. Lauri gave me the opportunity to learn how all of those tests are done and why. She let me be a participant at all of them including some on research bronchoscopies. She made me feel part of the team.

Her enthusiasm for her work was contagious. When I first started the respiratory classes, I thought I would work at the hospital but I discovered that if I still want to do it, I would prefer to be involved in pulmonary function testing (PFT). I don’t picture myself just going from bed to bed all day long. I liked the communication we have with patients during PFT. We can talk, enjoy their company, and learn a lot of things with them, just the way we would do between friends. Unfortunately, when we see them only at the hospital, it is only for a short treatment, and there is no time for communication.

Research made me curious, and made me think. Lauri was right when she told me “it is a very rewarding job”. It is fascinating to see how it is set up and how it evolves. I hope I will be able to see the results of the ones in which I was involved. Over the semester, I tried to convince my classmates how interesting research and PFT can be, and how much I was learning here, without big success I must admit. Hopefully I will do better with the first year students!

A big thank you to the team at The Vermont Lung Center, especially to Lauri, who gave me the chance to discover what research is all about and how interesting it can be. Because of her, and the Lung Center, I am now looking for a career in PFT, and who knows, maybe in research…

Lorraine Cote
Smoke from forest fires in wilderness areas can impact the lung health of people who live hundreds of miles downwind. Periodically we experience high levels of air pollution in Vermont when combustion gases and small particulates are carried south from forest fires in central or northern Quebec, Canada. These events are usually the result of lightning storms igniting forest fires under dry conditions combined with a high-pressure weather system that carries the winds from the north or northwest down across New England and the mid-Atlantic states. A typical event last several days, and very high levels of small particulate air pollution may be recorded during this time. The effects of forest fire air pollution on Vermont and neighboring states include a visible haze in the air, an acrid smoke odor, and possible adverse health events for vulnerable individuals. State health departments will usually issue air pollution alerts when pollutants approach hazardous levels.

The adverse health effects of forest fire air pollution can be severe for “smoke jumpers” who fight the fires and for residents who live very near them. For a general population living hundreds of miles downwind the effects are usually mild but still may be notable. Increased asthma, myocardial infarction (coronary heart events), nasal irritation, cough, and other symptoms may develop during the air pollution peak. Irritation of respiratory membranes from smoke is an obvious direct effect. The mechanisms leading from particulate air pollution to coronary events are less clear but have been confirmed repeatedly in many different cities. It is believed that very small particles (less than 10 μM diameter) are the most important air pollutants in smoke with regards to adverse health effects. These particles can reach the small airways and alveolar sacs in the depths of the lungs. The particles themselves are largely carbon from burning wood but they are highly absorbent and may carry organic compounds and other pollutants with them deep into the lungs.

Many Vermonters awoke to a smoky smell in the air on Memorial Day, May 31, 2010 as Quebec wildfire smoke moved south, and air pollution particulate levels reached record peaks by mid-day. The effect was very brief, however, and the smoke cleared when the wind shifted by late afternoon. No major health effects were noted. We also experienced near-record levels of particulate pollution in early July 2002 when smoke from Quebec wildfires was carried south over Vermont. In the Emergency Department and practice offices of Fletcher Allen Health Care we observed a slight increase in health care utilization for cardiac and chronic respiratory diseases during this event. Similar effects on physician visits for respiratory complaints were seen in British Columbia in 2003 during a major forest fire event. More widespread respiratory and cardiovascular effects were observed in Southeast Asia and Borneo in 1997 among populations living close to large forest fires.

The very young, the very old, and patients with chronic respiratory or cardiac diseases are the most vulnerable to the effects of forest fire air pollution. Children and adults with asthma, and others with coronary artery disease, should take precautions during these events. Staying indoors, using air conditioners, and avoiding strenuous exercise may help reduce risk. Patients who experience symptoms should seek medical assistance promptly.

Air pollution from forest fires is usually a short-lived problem, and is evident mostly as a smoky smell and a hazy horizon. Patients with asthma and other respiratory or cardiac diseases should remain alert for these events and take appropriate precautions.
What is Cystic Fibrosis clinical research?

It is possible you might have been or will be approached to participate in a CF clinical research study. But what does that actually mean? A research study or clinical trial is a way to learn more about Cystic Fibrosis (CF) as well as new ways to treat CF and its symptoms in the future. There are many different types of clinical research. In an observational study the researchers and doctors collect information and test results about patients to learn about an already existing treatment which is not controlled by the researchers. This can happen in the form of questionnaires, blood draws etc. In an interventional study the patients are given a particular treatment for the study and their health outcomes are measured. These are usually more involved studies which require visits to the study center on the Fanny Allen Campus in Colchester. At the study site we can do multiple tests, like pulmonary function tests, blood draws, sputum induction and ECG’s which could (all) be part of the study.

The Spirogram

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Join the Fight for Air.

BREATHING SHOULD NOT BE AN UPHILL CLIMB.

Bolton Valley Ski Area, Bolton Valley, Vermont
September 4, 2010

Register online at: www.climbofyourlife.org
For more information, call 1-800-LUNG-USA ext. 6860

Ask Dr. Charlie

After exercise or just going up a flight of stairs I cough, is this asthma?

It might be, the symptoms described, especially coming few minutes after an exercise period, are suspicious of asthma. If these symptoms persist and low fitness is not the issue, seek medical advice.

I tried to get a refill for generic proventil (albuterol) but was told it is no longer available. What gives?

The older meter dose inhalers of this type of asthma drug contained as propellants CFC (chlorofluorocarbons). CFC’s delete the ozone layer and have been replaced with HFA (hydrofluoroalkane) inhalers so there are currently no generic inhalers of albuterol available.
List of Current VLC Studies

ASTHMA

Study of Acid Reflux in Children with Asthma (SARCA)
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Coordinator: Stephanie Burns
Who: Children age 6-17 with asthma who do not have heartburn
What: 9 visits over 7 months
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Coordinator: Laurianne Griffes
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A Phase 2, Multicenter, Randomized, Double-blind, Parallel-group, Placebo-controlled Study Evaluating the Safety and Efficacy of Treatment with Ustekinumab or Golimumab in Subjects with Chronic Sarcoïdosis
Primary Investigator: Gerald Davis, M.D.
Coordinator: Laurianne Griffes
Who: People with Chronic Sarcoïdosis
What: Subcutaneous injections; 15 visits over 44 weeks
Compensation: $35 per visit

For more information on these studies, please visit our website @ www.vermontlung.org

The Vermont Lung Center is affiliated with the following organizations:

A New Face at the MOB

Kendall Black

What do you do at the Vermont Lung Center?
I am Dr. Anne Dixon’s lab technician. I conduct some of the lab processing for her clinical studies as well as a few other clinical researchers. In addition I am also working on a project where we are looking at gene regulation in PBMC’s.

Where did you grow up?
I grew up in Northfield Vermont, and I still have family there. I’ve lived in a few other places though. I spent some time in North Carolina on the coast and in the mountains. More recently I just came back from Miami where I moved my previous employer’s lab from Dartmouth to the University of Miami. I spent 7 months down there. That was mind-blowing.

Where did you go to school?
I went to VTC for my associates in Veterinary technology and then later down the road (after spending a few years on the beach) I went back for my bachelors in biology and minor in chemistry.

Why did you choose to live in Vermont?
I love Vermont, but most of all I have family here and a brother in NH and prefer to be close to them.

What is your favorite thing about working in research?
I enjoy working with my hands and testing new ideas. I enjoy being the first one that sees the data. Also I like being published, that’s exciting.
Motivating Smokers to Quit

David Kaminsky, M.D.

Cigarette smoking is the leading cause of all cancer-related death in the world, and is directly responsible for 90% of lung cancer cases, which is the most common type of cancer to kill both men and women. Smoking also leads to cancers of many other organs, including the larynx, esophagus, stomach, pancreas, bladder, kidney and cervix. Smoking also is a major risk factor for chronic obstructive lung disease (COPD), heart disease, stroke and dying from all causes. Therefore, it is critical to help people stop smoking. Most smokers actually want to quit, and more than 70% of smokers in the US have made at least one prior attempt. Almost half of smokers try to quit smoking each year, but only 3-5% are successful.

There are many ways to help smokers quit, including nicotine replacement, specific medications, counseling, group therapy, hypnosis, acupuncture and other methods. However, for any of these to work, smokers must first be motivated to quit. Some smokers are motivated by personal or family illness; some by education about the dangers of smoking, or, likewise, the benefits of quitting; others by economic considerations. One strategy that has been used is to provide feedback to smokers about their personal risk of smoking. For example, researchers have done this by measuring a smoker’s exhaled carbon monoxide, a deadly gas that increases in the lungs with smoking, or a smoker’s lung capacity. Studies have shown that sometimes these strategies do motivate smokers to quit. But sometimes they don’t, and the reason is not clear. We believe that a major reason is that the information collected is not effectively communicated to the smoker.

To explore this possibility, we designed a study to share information about lung capacity with smokers in a way that hopefully motivates them to try to quit. In this ongoing study, funded by the National Cancer Institute of the National Institutes of Health, we measure the lung function of smokers presenting to our Pulmonary Function Lab for testing. Then, instead of telling them their lung function is normal or abnormal, which is a rather bland and impersonal way of sharing the information, we relate their lung function to the age at which such lung function would be normal, the so-called “lung age”. The idea works like this: say a 45 year old man has a forced expiratory volume in 1 second (FEV1, a standard measure of lung function) that is only 50% of the predicted value. For example, his FEV1 could be 1.5 liters, when it should be 3.0 liters. We could tell him that his FEV1 is only 50% of predicted, which may or may not have an impact. Alternatively, we could determine the age at which a normal healthy person should have an FEV1 of 1.5 liters, which might be 85 years old. We could then tell the patient that his lungs are the lungs of an 85 year old, even though he is only 45 years old. Thus, his lung age is 85. Studies have shown that this might have a much more significant impact. We are using this strategy together with a specialized interviewing technique known as Motivational Interviewing to see if we can show that such an approach increases the chance that a smoker presenting to the Pulmonary Function Lab will make an attempt to quit. We hope that information from this project will help us design a larger, more comprehensive research study to determine whether this approach will actually help smokers to quit for good.
Sarcoidosis is a chronic inflammatory disease of unknown cause that features collections of white blood cells in hallmark aggregates called “granulomas” that cause abnormal function in the organs where they occur. The lymph nodes at the center of the chest and lung tissue are the most common sites, and patients may experience shortness of breath, wheezing, and coughing. Enlarged lymph nodes can cause discomfort in the chest or difficulty swallowing. Many patients experience constitutional symptoms such as fatigue and reduced stamina. Sarcoidosis can also involve the skin, the eyes, the joints, and less commonly other sites; most cases will have only 1-2 organs involved. New cases are typically people between the ages of 20 and 50. Sarcoidosis is fairly common in Northern New England, with up to 40 patients per 100,000 population (the national average is 5 cases).

The diagnosis of sarcoidosis is made by seeing a compatible clinical picture and the biopsy of an involved tissue showing characteristic “non-caseating granulomas”. With new technology, this diagnosis often can be made by sampling the lymph nodes at the center of the chest with a small needle guided by ultrasound endoscopy (endoscopic ultrasound bronchoscopy, EBUS). Biopsies of lung tissue, skin, or other organs can be performed if needed.

The prognosis for sarcoidosis is generally good and many patients experience few symptoms, but the course can be variable. With or without treatment the disease usually runs its course and resolves spontaneously within 2-5 years. For some patients the organ dysfunction and symptoms can be severe and disabling. Extensive lung tissue disease can cause severe respiratory limitations; involvement of the heart or the brain can be fatal. Fortunately, over 60% of patients will experience spontaneous clearing with little damage to their lungs or other organs, another 30% of patients may have more prolonged disease and significant but mild limitation, while 10% of patients may have lifelong disease with disability or death.

There is no cure for sarcoidosis. Treatments are aimed at controlling symptoms and minimizing organ damage while the disease runs its course. Many patients who only have enlarged chest lymph nodes will require no treatment. The first line of therapy for sarcoidosis is corticosteroid drugs (e.g. prednisone). Most patients can be maintained on lower doses and discontinued after 1-2 years. Other drugs such as methotrexate, azathioprine, or hydroxychloroquine may be effective if steroids are insufficient or limited by side-effects.

New research suggests that an inflammatory signal chemical in the body called “tumor necrosis factor-alpha” (TNF-α) may be critical. Blocking this chemical using intravenous therapy with infliximab led to preservation of lung function for sarcoidosis patients. We are beginning a new clinical trial sponsored by Centocor to test two drugs that block TNF-α or a related compound. We are anxious to recruit patients with chronic pulmonary or skin sarcoidosis to participate. Future research will bring understanding of the role of genetic susceptibility, identification of the cause that triggers sarcoidosis, and better treatments for it.
The Vermont Lung Center is responsible for making sure you know what is expected of you in regards to the study. Once the study is explained to you, you will be asked to read and sign an “Informed Consent”. This form is designed to explain everything you need to know about the study.

Things to know about volunteering for a research study:

1) The Vermont Lung Center staff is responsible for making sure you know what is expected of you in regards to the study.

2) Once the study is explained to you, you will be asked to read and sign an “Informed Consent”. This form is designed to explain everything you need to know about the study.

3) Studies may be therapeutic (involving observation of lung function). However, The Vermont Lung Center can make no claims that your involvement in a research study will improve your condition.

4) Compensation may or may not be provided to you for your involvement in a study. If compensation is provided, it is meant to cover your time and expenses incurred—it does not constitute employment.

If you are interested in finding out more about volunteering for a research study, please call us at (802) 847-2193.

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**THE CF CORNER**

My name is Brian Callanan. I am 33 years old and was diagnosed with cystic fibrosis at birth. My older brother also has CF, and he manages his health well. When I explain to people that we have CF, I also explain that CF has many degrees of severity. On a scale of 1-10, with 10 being the worst, we consider ourselves to have about a 2-3.

Life with CF wasn’t always on a good scale. My first hospitalization for CF was at age 16. I was admitted over my 17th birthday—a major bummer! Without knowing it, I had begun a spiral into depression, and was not taking care of myself physically or mentally. My social life and being cool was top priority, and dealing with CF was on the back burner. Eventually it boiled over, and there I was... in the hospital one month and in counseling for being suicidal the next. I didn’t even understand that I was experiencing depression, let alone why. In hindsight, I understand that I was struggling with something pretty heavy therapy. I was pretty cool and feeling pretty alone about it. It was the start of realizing that life may end a little early for me, that I wouldn’t be able to have children naturally, that I was really skinny with severe acne; and that no one I knew understood what I had to deal with on a daily basis. I didn’t know how to trust people knowing about my CF and didn’t know how to talk to someone about CF, especially as a girlfriend (if I ever got one!). My parents were too old to understand how alone I was, which made me feel even more alone. Most of all, I wasn’t even accepting the fact that I have CF.

When I finally did begin to accept it later in college, there were ways that I wanted to deal with CF that did not necessarily mesh with doctors orders. I was doing the Vest therapy only a couple times per week, whereas at home with my parents it was always done twice a day. My enzymes were nice, if I remembered them. I still did not have any social support; no one helped me or reminded me about what I “should” be doing, and therefore, could get away with not doing. Caring for my CF was still a “compartment” of my daily life, but was not an integrated part of who I was.

My senior year as a Psychology major, I wrote “A Psychosocial Autobiography: CF in Mind and Body”. I wrote about the gaps in my healthcare. Everything was monitored on a physiological level, while I struggled on a psychological, emotional, and social level. Social experiences in college of skiing, hiking, running, biking, even Frisbee, helped build not only various ways of airway clearance, but also feelings of belonging, support, success, accomplishment, confidence, and most of all control. I also wrote about spending a semester abroad in Australia. For six weeks following classes, I backpacked across the country, with exercise as the only means of therapy. I was scared that I would become ill and need to be sent home early. So I hiked like crazy to do the best airway clearance I could. I came home not only with significantly improved PFT scores, but emotionally charged. I began to realize that the better I felt emotionally, the better I took care of my self physically, and vice versa.

The summer after I graduated college, my oldest brother (who did not have CF) passed away from a misdiagnosed heart condition. He was 39. With great difficulty, I realized how important a part of my life he was. He had been a role model of living life to the fullest. He told me months before becoming ill, that he was so happy with his life, and would not have done anything differently. I saw that he did not take any day, any one, or anything for granted. My life may possibly be shortened, and he taught me that I better make the most of it.

The years following college, I sought a Ph.D. program in Behavioral Medicine. I wanted to help create therapies that could integrate exercise and FUN as a means of respiratory, social and emotional treatment. I realized the importance of CPT (or the vest), but I wanted to supplement them with lifestyles that could significantly assist in airway clearance, and more importantly, create attitudes of pride, confidence, and control. I knew this would significantly impact rates of compliance with traditional therapies. For two years I looked at programs, with no satisfaction of exactly what I was looking for. So, I founded the Cystic Fibrosis Lifestyle Foundation.

I have been working on the Cystic Fibrosis Lifestyle Foundation (CFLF) for six years. I have raised about $200,000. The intent is both short term and long term. Right now, we only have the capacity to provide money to help individuals have access to recreation. We are targeting the most difficult period of development: adolescence into young adulthood. This is a period that is generally complicated with independence, only beginnings of responsibility, denial, resentment, anger, rebellion, and usually some severe social pressure. For many, like me, it is a time of being isolated, awkward, and afraid. Chronic illness compounds it all. It is also a defining period of how someone will or will not accept CF and either deal with it, or not.

So far my dreams have brought me to the other side of the Earth twice, have brought me sailing in the Caribbean and the Keys, have brought me skiing all over the world, have allowed me to ride my bicycle the entire East Coast from Canada to Key West. I don’t have much reason to give up on my dreams now. But there is no doubt that it will take a LOT of work, so I better trim my sails and get pointing into the wind! Off we go!

Editor’s Note: Brian offers the following advice to parents of young children with CF: If you can, get out there and be active with your children, the more the better. Life is short, so have as much fun as you can. It is your choice to either fill your time with worry, or at least balance it with some fun. The investment in recreation is more than just play. It is a serious investment in healthcare for your child in the long run, not only physically, but especially psychologically, emotionally, socially, and spiritually. Never underestimate the power of the spirit. Cystic Fibrosis Lifestyle Foundation is accepting applications now for recreational scholarships, and these are based on a first come, first serve basis. The scholarships can be used for a variety of activities, such as a health club memberships, dance class, skiing equipment, etc. Individuals with CF who are between the ages of 13 and 25 years (roughly) are eligible. Please contact your CF doctor for an application, or visit the CFLF website at www.CFLF.org for more details and to download an application.
### List of Current VLC Studies

#### ASTHMA

**Study of Acid Reflux in Children with Asthma (SARCA)**  
Primary Investigator: Charles Irvin, Ph.D., Director, Vermont Lung Center  
Coordinator: Stephanie Burns  
Who: Children age 6-17 with asthma who do not have heartburn  
What: 9 visits over 7 months  
Compensation: up to $550

**Methacholine Bronchoprovocation – Influence of High Potency Corticosteroids in Asthma Study (MeCIS)**  
Primary Investigator: Charles Irvin, Ph.D., Director, Vermont Lung Center  
Coordinator: Stephanie Burns  
Who: Children aged 12-17 and Adults with and without asthma  
What: Nonasthmatics: 1 visit  
Asthmatics: 5 visits over 16 weeks  
Compensation: $50 per visit

**Novel Application of the Forced Oscillation Technique in Subjects with Asthma**  
Primary Investigator: David Kaminsky, M.D.  
Coordinator: Laurianne Griffes  
Who: People with stable asthma, moderate to severe asthma and people without asthma  
What: Up to 2 visits, each lasting about 1.5 hours  
Compensation: up to $100

**Forced Oscillation Mechanics of Lungs of Mild Asthmatics: Variation over Time, Posture and Measurement Technique**  
Primary Investigator: Lennart Lundblad, Ph.D.  
Coordinator: Laurianne Griffes  
Who: Males with stable asthma taking only “as needed” asthma medication  
What: Up to 3 visits, each lasting about 1.5 hours  
Compensation: up to $150

**A Randomized, Placebo-Controlled Pilot Study of Pioglitazone for the Treatment of Moderate to Severe Asthma in Obese Asthmatics (GLITZ)**  
Primary Investigator: Anne Dixon, M.D.  
Coordinator: Laurianne Griffes  
Who: Obese adults with moderate to severe asthma  
What: 5 visits and one phone call over 13 weeks  
Compensation: up to $170

**Asthma Patient Registry (APR)**  
Primary Investigator: Charles Irvin, Ph.D., Director, Vermont Lung Center  
Coordinator: Stephanie Burns  
Who: Anyone with a physician diagnosis of asthma  
What: 1 visit lasting approximately 30 minutes  
Compensation: none

**The Study of Soy Isoflavones in Asthma (SOYA)**  
Primary Investigator: Charles Irvin, Ph.D., Director, Vermont Lung Center  
Coordinator: Stephanie Burns  
Who: Adults and Children 12 years and older with symptomatic asthma  
What: 9 visits over 24 weeks  
Compensation: up to $400

#### CYSTIC FIBROSIS

**GSK: A Randomized, Double Blind, Parallel Group, Placebo Controlled 28 Day Study to Investigate the Safety, Tolerability and Pharmacodynamics of SB-656933 in Patients with Cystic Fibrosis.**  
Primary Investigator: Laurie Whittaker, M.D.  
Coordinator: Joan Lippmann  
Who: People with Cystic Fibrosis  
What: 7 visits over 70 days  
Compensation: Up to $650

#### SARCOIDOSIS

**A Phase 2, Multicenter, Randomized, Double-blind, Parallel-group, Placebo-controlled Study Evaluating the Safety and Efficacy of Treatment with Ustekinumab or Golimumab in Subjects with Chronic Sarcoidosis**  
Primary Investigator: Gerald Davis, M.D.  
Coordinator: Laurianne Griffes  
Who: People with Chronic Sarcoidosis  
What: Subcutaneous injections; 15 visits over 44 weeks  
Compensation: $35 per visit

For more information on these studies, please visit our website @ [www.vermontlung.org](http://www.vermontlung.org)

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H1N1

H1N1, or swine flu, is a type of influenza virus that causes a severe flu-like illness in people. People across the world have been affected and a pandemic has been declared.

The first virus was detected in people in the United States in April 2009. H1N1 is sometimes called the “swine flu” because many of the genes in the virus are similar to influenza viruses that occur in swine (pigs). The signs and symptoms of H1N1 in people include body aches, cough, sore throat, young children, people less than 25 years of age, people with other serious medical problems.

This differs from seasonal influenza in which the most severe cases occur in people over age 65. However, if people older than age 65 are infected with H1N1, they are at risk for serious complications. The H1N1 vaccine is now readily available and it is recommended that people get vaccinated, especially those in high risk groups.

Ask Dr. Charlie

1. How can I prevent asthma attacks?
   A. Take your medications especially the ones to decrease inflammation.
   B. Minimize exposure to your asthma triggers.
   C. Get a flu shot (Yes, even this late in the season).

2. How can I prevent asthma symptoms after exercise?
   Take your medications before you exercise. Prevention is the key!