

EFFORTS



Emphysema Foundation For Our Right To Survive

Emphysema Takes Your Breath Away

April 2007

SMOKERS CLOCK UP ALMOST 8 ADDITIONAL DAYS OF SICK LEAVE EVERY YEAR

Smokers take an average of almost eight days more of sick leave every year than their non-smoking colleagues, suggested research published in Tobacco Control .

The research team analysed nationally representative registry data on sickness absence among more than 14,000 workers in Sweden between 1988 and 1991.

Of the sample included in the study, 45% had never smoked. Of the remainder, 29% were current smokers and 26% former smokers.

Non-smokers took the fewest days off sick; smokers took the most. Across the whole sample, the average number of days taken as sick leave was 25

But smokers took almost 11 extra days off sick compared with their non-smoking colleagues, equal to 43% of all sick leave taken every year among the sample, say the authors.

There was little difference in the number of additional days taken as sick leave between male and female workers.

Adjusting for the fact that smokers tend to choose "riskier" jobs and have poorer underlying health, as well as socioeconomic factors, brought the difference in the number of days taken as sick leave to just below eight.

Factors other than ill health directly caused by smoking may account for much of the time taken off in sick leave, suggest the authors.

The authors accept that sick leave rates in Sweden are among some of the highest in Europe, but say that their findings nevertheless point to smoking as having a significant impact on productivity. Source: MedLinks



HEALTH TIP: SEEING YOUR DOCTOR?

You probably have several topics that you'd like to discuss with your doctor, but it's easy to forget them when you're sitting in the examining room. To get the most out of your doctor's visit, AARP recommends that you:

- Make a list of all of the questions you have to ask your doctor, and be prepared to take notes on the answers.
- If you haven't been feeling well, make a list of all of your symptoms.
- Bring a list of all medications you take, including any over-the-counter medicines and supplements. Be sure to include doses and how often you take each.

- If you're seeing a new doctor, bring your medical records or have them sent ahead of time.

Source: HealthDay News



DOC NOT INSULTING YOU WHEN HE WRITES SOB ON YOUR CHART

Essential to the practice of medicine is the art of asking questions. As we've seen in this series of columns, the review of systems is that series of questions intended to reveal potential abnormalities. Ask enough questions and you'll get a hot answer. After all, we're all abnormal in at least some, subtle way.

The purpose of this is to raise your awareness of what should be brought to your doctor's attention. It isn't all common sense. Physicians don't expect everyone to know what's medically normal. Nevertheless, exasperated doctors are known to exclaim, "Why didn't you tell me that earlier?" The patient's answer is always the same: "You didn't ask."

This is a review the screening questions for respiratory disease. Again, a positive response (in medicine that means a "yes") should be at the top of the problem list you bring to your doctor.

Are you having any difficulty breathing?

If you're experiencing abnormal shortness of breath, it would be the only time the doctor will write S.O.B. in your chart. Extreme shortness of breath when lying on your back is a common symptom for both congestive heart failure and pregnancy. Of course, if you're that far along, you don't need a doctor to tell you that you're expecting. Shortness of breath with exercise may be due to heart disease, asthma, chronic lung disease, or just being out of shape. If you're over 40 or if you have any of the risk factors for cardiovascular disease, you should consult with your family doctor before beginning a new exercise program.

Do you wheeze?

A wheeze is a musical sound heard over the lungs with exhalation. It is due to constriction or tightening of the airways in the lungs, most often associated with asthma and chronic lung disease, which is common in long-term smokers. Stridor, in contrast, is a musical sound heard during inspiration and is due to narrowing of the upper airway (i.e. in the trachea of the throat). It is commonly seen in preschool children with the upper respiratory infection, croup. Stridorous or wheezy breathing could also be

due to partial upper or lower airway obstructions, such as due to a foreign body.

Are You Coughing?

Often the answer is obvious without asking. This is commonly the case with the tickly throat cough that can occur as a side effect of taking a certain class of blood pressure medication called ACE inhibitors. Over the history of medicine, medical treatments have caused sufficient side effects that we've come up with an adjective for these conditions. Iatrogenic means "caused by the doctor." A cough can be caused by any irritation to the respiratory tract, extending from the nose to the throat and down into the lungs. The causes are therefore legion and include infections (e.g. colds, sinusitis, tonsillitis, tuberculosis, bronchitis and pneumonia), allergies (causing either a post-nasal drip or asthma), gastroesophageal reflux or GERD (wherein fluids from the stomach flow back up into the esophagus and throat), asthma, chronic bronchitis or emphysema, and cancers occurring anywhere in the respiratory tract. If a cough associated with a cold or flu is mild, lasts less than three weeks and is not associated with other significant symptoms, such as shortness of breath or unexplained weight loss, you needn't rush in to see the doctor.

Have you coughed up blood?

Most people will report this symptom without being asked. Blood in the sputum can be caused from a broken blood vessel anywhere in the airways, the most common source being a benign bleeding nose. In most cases, however, it should prompt a careful examination by your physician to rule out cancers of the throat or lungs. Nasopharyngeal carcinoma (NPC) is a cancer inside the nasal passages, which occurs more frequently in Orientals.

Finally, with respect to the relativity of shortness of breath, we rely on patients' perceptions of what is normal for them. People who've had poorly controlled asthma or chronic bronchitis for years may not realize that they shouldn't be so winded and wheezy walking briskly or climbing a flight of stairs. They have to compare their respiratory fitness with their peers and with their own previous abilities. If in doubt, their physicians can correctly assess their function.

Source: www.vancourier.com



HEALTH INSURANCE FAILS TO PROTECT AMERICANS FROM FINANCIAL RISK

Low premiums do not mean affordable insurance

Sickness or injury can leave people in serious financial jeopardy even when they have health insurance, according to a report released today by The Access Project and Brandeis University. The Illusion of Coverage: How Health Insurance Fails People When They Get Sick, reports findings based on in-depth interviews with dozens of insured Americans in seven states.

"Widespread debt and access problems among insured people represent major product failure in our private health

insurance market," stated Carol Pryor, Senior Policy Analyst at The Access Project and co-author of the report. "Confusing and complex insurance policies, routine denial of claims that should be paid, and poor customer service plague the insurance industry. These problems call for the establishment of clearer rules and standards of accountability for health insurers."

"For too many Americans, health insurance fails to protect them from the costs of medical care," said Jeff Prottas, coauthor and professor at The Heller School for Social Policy and Management at Brandeis. "A large percentage of the insured find themselves with unmanageable burdens of medical debt. This study details the many ways in which health insurance can fail to provide the financial protection people believe they are paying for," said Prottas.

Key findings from The Illusion of Coverage include:

- Shifting more costs of care onto patients through high deductibles, co-insurance, and less comprehensive coverage creates significant health access and financial consequences.
- Confusing insurance company policies and procedures leave patients confused, in debt, reluctant to seek health care, and vulnerable to predatory scam products.
- Affordability of health insurance must be judged on more than premiums—it is necessary to consider the costs that people will face should they get sick.

The findings in The Illusion of Coverage are consonant with other national research and reports. "The national research data consistently point to the same disturbing trend: more and more insured people face out-of-pocket medical bills that leave them in debt and afraid to go to the doctor and face even more bills," noted Kathleen Stoll, Health Policy Director from Families USA. "Insured people with medical debt exhibit care-seeking behavior more like the uninsured than the well-insured."

From Massachusetts to California, states are crafting public policies that rely on private health insurance to achieve universal coverage. As the costs of health care continue to escalate faster than wages and inflation, the question facing policy makers is how to make insurance affordable. "Health plans that keep premiums down by instituting high deductibles and scaled-back coverage don't address the underlying problem of rising costs. Instead, these plans shift costs onto consumers, leaving them vulnerable to financial and access problems when they need insurance the most," asserted Pryor.

The Illusion of Coverage outlines policy options to help address the medical debt crisis among the insured:

1. SET STANDARDS FOR WHAT CONSTITUTES COMPREHENSIVE, AFFORDABLE INSURANCE. Standards must include both the range of benefits covered and the out-of-pocket amounts for which consumers are liable.

2. PROVIDE CLEAR INFORMATION THAT ALLOWS PEOPLE TO MAKE INFORMED DECISIONS WHEN PURCHASING HEALTH INSURANCE. For example, insurance companies could be required to provide consumers with standard disclosure forms that clearly detail the services



products cover and the out-of-pocket expenses for which consumers are liable.

3. CONDUCT OVERSIGHT TO ENSURE THAT HEALTH INSURANCE PREMIUMS ARE REASONABLE. States should require insurers to file requests for premium increases and hold public hearings on the requests. Requests should be evaluated with respect to insurers' efficiency and resources.

4. DEVELOP PUBLIC/PRIVATE PARTNERSHIPS TO SHARE COSTS OF QUALITY COVERAGE. Some states have already implemented programs that combine state and private funding to provide comprehensive coverage for groups that could not otherwise afford it.

Nancy Warrington from San Diego, California, has experienced inadequate insurance first-hand. Because her husband's employer did not offer insurance, the family purchased it on the individual market. The only plan they could afford had a deductible of \$2500, which increased to \$5000 the next year. "The out of pocket expenses drove us into debt and ruined our credit," Nancy related. "It is heartbreaking for me to see my husband working so hard for his family, paying for our insurance because it is the right thing to do, only to be buried. It makes even honest, hardworking people like us wonder if it would have been better to not have had insurance in the first place." Source: www.accessproject.org.



A new respiratory device that could revolutionize the treatment of patients with severe breathing difficulties has won the ERA Foundation Award from The Royal Academy of Engineering.

The device, which is currently undergoing pilot clinical trials at the Royal Brompton Hospital, will help sufferers of emphysema, cystic fibrosis and other breathing-related conditions. It works by automatically adjusting the flow of oxygen to a patient according to their needs rather than having a fixed flow of oxygen. This could decrease the likelihood of hospital admissions for sufferers and reduce healthcare costs.

According to the British Thoracic Society, respiratory disease costs the NHS more than any other disease area, and is responsible for more deaths each year than coronary heart disease or cancer. Accordingly, the respiratory devices sector, particularly in the home-healthcare market, is one of the fastest growing sectors in healthcare. Our device provides a solution that is consistent with the trend toward home treatment and is also capable of providing significant savings to health service providers as well as improved patient well-being.

Source: dynamictherapeutics.com



A CLOSER LOOK INSIDE OUR LUNGS

Penn researchers develop 2 novel imaging techniques

Researchers at the University of Pennsylvania School of Medicine are harnessing two new, non-invasive techniques to look more closely inside the working lungs - leading to early detection of diseases, like emphysema, before it becomes evident in other modes of imaging.

"Up until now, imaging the way lungs function in real time has been limited by conventional methods which result in rather low resolution images," comments Warren Gefer, MD, Chief of Thoracic Imaging in the Radiology Department at Penn. "We are developing a way to get a better look inside the lungs by polarizing atoms -- making them all spin in the same direction -- with magnetic resonance [MR], which allows the atoms to have a strong signal for sharper images."

Hyperpolarized ³He gas allows radiologists to observe the lung as gas flows in and out, giving them high resolution images of human ventilation. Combining several techniques enables researchers to measure the rate of diffusion of these helium gas molecules, which reflect the size of the air sacs in the lung. This, in turn, allows researchers to detect very early emphysema, even before it's evident on CT (computed tomography) - providing physicians with additional information in which to make diagnoses and offer treatment.

Gefer adds, "We have moved from imaging the structure to imaging the function of the lung to a scale well below a millimeter in size. It's truly groundbreaking."

To use this extremely powerful research tool, which provides accurate and precise measurements, patients must inhale the helium at the exact right time, after it's been exposed to a laser light to make all of the atoms spin in the same direction, creating the polarized helium, which then enters the lung.

Utilizing another new MR technique, Penn imaging researchers are pushing the scale of what we see in the lung down to an even smaller level -- to the cellular and intracellular level. Investigators have figured out a way in which they hope to look for a "marker" of disease inside the body. In animal models, they are injecting polarized carbon-13-labeled molecules and watching its conversion in real time. They can take images of the carbon-13 as it shuffles through the metabolic steps inside the cell.

Rahim Rizi, PhD, Associate Professor of Radiology at Penn, explains, "We observe the polarized carbon-13 labeled molecule as it breaks down and releases energy. What this 'flagged molecule' converts into could tell us whether the cell is normal or abnormal. This is a whole new approach to molecular imaging. For the first time, we can now follow the C-13 molecule, in real time, as it moves throughout the body to pinpoint the location of disease. It's real-time molecular imaging. This is revolutionary to MRI technology."

Penn is one of only a few sites in the world, and the only site on the East Coast, with this capability. Penn researchers hope to translate this technique for use in humans before the end of 2007.

Source: pennhealth.com



A NANOFABRIK IN A PILL?

The list of side effects on your prescription bottle may one day be a lot shorter, according to researchers at the University of Maryland's A. James Clark School of Engineering.

That's because instead of taking a conventional medication, you may swallow tiny "nanofactories," biochemical machines that act like cells, first conceived of at the Clark School. For example, these ingested nanofactories, using magnetism, could detect a bacterial infection, produce a medication using the

body's own materials, and deliver a dose directly to the bacteria. The drug would do its work only at the infection site, and thus not cause the side effects that may arise when an antibiotic travels throughout the body in search of infections.

William Bentley, professor and chair of the Fischell Department of Bioengineering at the Clark School, and several graduate students including Rohan Fernandes, have developed this "magnetic nanofactory" concept and published their research in *Metabolic Engineering* in December of last year. Colleagues around the country voiced their support for the technology in *Nature Nanotechnology* last month.

"In the lab," Bentley says, "our group showed we can produce a tiny nanofactory and attach it to a target cell magnetically. The nanofactory then makes small molecules from surrounding materials and delivers the molecules—potentially drug molecules—to the targeted cell."

Besides drug molecules, the researchers showed that the nanofactory could produce signaling molecules that communicate with the target cell or block the target cell from communicating with other, similar cells (a process called "quorum sensing") and thus prevent infection. The researchers attached the nanofactories to *E. coli* cells, targeting them with the help of a mixture of iron particles and chitosan, a substance derived from the shells of crustaceans like crabs and shrimp. The nanofactories then produced a signaling molecule that could render the *E. coli* harmless. Nanofactories could be designed to produce the needed drug molecules over an extended period of time.

Now that the viability of nanofactories has been shown, researchers must overcome a few challenges before they can be used in humans. First, nanofactories must be cloaked so that the body does not react to them as a foreign substance and try to attack them. Another goal is to find a method to shut down the nanofactory once it has produced the needed substance—a type of off-switch that could be activated from outside the body. These and other topics are being investigated in the Fischell Department of Bioengineering.

Source: University Of Maryland



CAN POOR SLEEP AFFECT YOUR WEIGHT?

Are you avoiding the bathroom scale? Is it a struggle to pull on last year's clothes? If the answer is "yes," you probably need to take off some extra pounds. But what you might not know is that a little extra sleep could be the answer. There's a relationship between how much you weigh and how much you sleep.

Studies show that people who sleep too little are actually more likely to raid the refrigerator. It seems as if the body responds to sleep restriction by craving more fuel, a reduced energy balance, and this is communicated by the fat cells, actually. Leptin is a molecule secreted by fat cells and conveys a satiety signal. "There's enough fuel on board." And with sleep restriction, keeping the level of activity and the amount of calories constant, the body says, "I need more food." And this is inappropriate and may lead to overeating and potentially obesity in the long term.

Not only might you be eating more, you're probably going to crave just the wrong foods. When you're sleep-deprived, you want to go for an empty calorie energy boost and usually those are carbohydrates that are very low in nutrients and very high in calories.

But even making wise food choices might not work if you suffer from restricted sleep. This kind of poor sleep can actually change your metabolism. Not sleeping enough seems to be associated with metabolic changes that can lead to overeating and obesity, so in studies where sleep restriction in the laboratory was done, subjects tended to have metabolic changes and alterations of glucose metabolism that might lead to their becoming obese in the future.

Sleeping too little can also contribute to weight gain by putting undue stress on the body. The body sees sleep deprivation as a state of stress; cortisol is the stress hormone. Cortisol causes, in turn, the release of insulin and insulin is a storage hormone that promotes fat storage.

Sleeping poorly may also do more permanent damage than just adding inches to your waistline. Sleeping too little seems to adversely affect glucose levels in the body, so that glucose levels are higher and people are more glucose resistant, more prone to diabetes if they sleep less. Habitual sleep restriction could play a very important role in increasing risk for diabetes later in life, especially if maintained over many years and decades, much like a sedentary lifestyle or poor eating habits. It's not something that catches up with you in a week or in two weeks, but it's something that over decades can shorten your life.

While poor sleep can contribute to weight gain and other health problems, getting quality sleep could make it easier to get on that treadmill and stay trim. When someone switches their sleep pattern to one of increased deep sleep, they wake up renewed. They don't put off going to the gym; they get out of bed, have their water, put on their gym clothes and go out the door and exercise. People who exercise do spend more time in deep sleep rather than in light sleep; this has been measured. It is a cycle, and that exercise will help them to sleep better that night and so I think each kind of helps the other.

While we all know quality sleep keeps us rested and alert for the day ahead, it now seems that it might even lead to a healthier metabolism and a healthier life. Given the wealth of data that exists, it makes a lot of sense that sleeping at least seven hours a night and getting good quality sleep will improve our metabolic function in terms of glucose levels, in terms of body weight, and getting a good night's sleep also makes people feel better.

Sleep is a sign of a balanced lifestyle, including exercise and diet. And it's important to sleep a sufficient amount as a part of a balanced lifestyle that would promote good health.

Source: Healthology, Inc.



CHRONIC OBSTRUCTIVE PULMONARY DISEASE IN WOMEN - A STUDY

Background:

Little is known about the comparative impact of chronic obstructive pulmonary disease (COPD) between women and men and about women's response to pulmonary rehabilitation.

Objectives:

To compare lung function, disability, mortality and response to pulmonary rehabilitation between women and men with COPD.

Methods:

In the present retrospective study, 68 women and 168 men were evaluated by means of pulmonary function testing and an incremental symptom-limited cycle exercise test. Forty women and 84 men also participated in a 12-week pulmonary rehabilitation program. A 6 min walking test and the chronic respiratory questionnaire were used to assess the effects of pulmonary rehabilitation. Survival status was also evaluated.

Results:

Compared with men, women had a smaller tobacco exposure, displayed better forced expiratory volume in 1 s (FEV1), a higher functional residual capacity and total lung capacity. Peak oxygen consumption was not different between women and men when expressed in predicted values but lower in women when expressed in absolute values. Pulmonary rehabilitation resulted in significant improvements in 6 min walking test and quality of life in both sexes, but women had a greater improvement in chronic respiratory questionnaire dyspnea. Survival status was similar between sexes, but predictors of mortality were different between sexes.

Conclusions:

Women may be more susceptible to COPD than men. The clinical expression of COPD may differ between sexes with greater degree of hyperinflation in women, who also benefit from pulmonary rehabilitation

Source: Canadian Respiratory Journal



COMBATting CHRONIC OBSTRUCTIVE LUNG DISEASE (COLD)

You are more likely to contract chronic obstructive lung disease (COLD) if you have a low income and below average education. In a few years, chronic obstructive lung disease will become the third most important cause of death in the world. Today, 200,000 people in Norway have COLD and another 9000 contract the disease every year. According to the World Health Organisation (WHO) this disease will probably become one of the most frequent causes of death anywhere in the world within a few years. Long-term smoking is the most usual cause, and more and more women are becoming sufferers.

Standard of living

Scientists at SINTEF Health Research have set themselves the goal of finding out more about this group of patients, and have started a wide-ranging program of work in this area. They are currently mapping out how COLD patients have been diagnosed and treated; the standard of living of the group will be studied, and the potential of new, improved treatments will be checked out.

Karl-Gerhard Hem is working on the standard of living survey, which aims to find out more about the lifestyle of people in this group in order to customize measures that could help them. Hem is comparing such measures as education, health, occupational status, etc. in COLD patients and a group

of normal non-sufferers, as well as in patients with other chronic diseases.

“We can already say that people with COLD who are less than 67 years old have lower levels of income and education than the normal population. As far as social conditions such as contact with family and friends is concerned, however, there are few identifiable differences”, says Hem. A further aim of the study is to find out what we do not know about this group at present, and Hems points out that there are many COLD sufferers in Norway who have still not been diagnosed as such. “To find them and offer them treatment is important, so a more highly customized study of COLD patients will be designed in the future”.

Course of treatment

“Swedish studies have shown that the total cost to society of patients in that country is around nine billion kroner. With a population about half of that of Sweden, we can estimate that it costs Norway about NOK 4 billion”, says Tommy Haugan, who leads a project that is surveying courses of treatment for this group of patients. “Identifying success factors for the best treatment of these patients – which would also have an effect on society as a whole - is our aim”.

The group has collaborated with a data company in developing software capable of digging out specific types of information from large databases. Five medical practices in Steinkjer and three in Trondheim have opened up their files to the project, and information on 4000 Norwegian patients with COLD, asthma and respiratory problems has been downloaded. Data about the same patients has also been fetched out of databases in hospitals and emergency services.

“It has been an exacting job to correlate the enormous number of data files”, admits Haugan, “but now we possess a unique overview of the course of treatment undergone by a large number of patients between 1995 and 2004. Here there are “soft” transitions between patients with COLD, asthma and breathing difficulty, and there are many points of similarity among these diagnoses. We know how often patients have visited hospital or emergency medical services, and what medicines they have been prescribed. This enables us to search for relationships. Can measurements of lung function and treatment with medicines have some connection with hospital admissions and acute disease?”

The scientists are now analyzing the data and expect to have answers to many of their questions in the course of the summer.

Equipment

Further down the corridor, Jarl Reitan and the scientists in his department are studying equipment for COLD patients, on contract to Innomed. The scientists have performed a survey, looked at existing technology and listened to the experiences of users.

“It is when they are at home and when they are traveling that these patients have the greatest need for innovative solutions”, says Reitan. “It is both a difficult process and rather embarrassing to appear in society with a nasal catheter, tubing and an oxygen flask. We want to find out whether the equipment can be made less visible. Perhaps the nasal catheter could be integrated into a pair of spectacles? SINTEF is in close contact

with the medical gas supplier Aga, a useful connection where product development is concerned.

Ole Martin Winnem at SINTEF ICT has been a member of an international project called LinkCare, which has evaluated how COLD patients manage at home with their equipment and measurements. Groups of patients in Barcelona and on Cyprus have transmitted their measurements via mobile telephone and answered a set of question in the morning and evening, with good results. SINTEF's role has been to integrate a home-based monitoring system of this sort with other members of the health services. Source: www.innovations-report.de

FLIPPING A COIN TO DIAGNOSE A DEADLY DISEASE?

Use of Current Tests for Emphysema Might Be Lacking, New Research Shows

Could some doctors have no better than a 50/50 chance of making the correct diagnosis of emphysema? Perhaps. A new study from Greece found that about half of primary care patients diagnosed with emphysema do not actually have the disease. And almost a quarter of them have no lung disease at all.

Dr. Lazaros Sichletidis and colleagues at the Aristotle University of Thessalonica in Greece published these surprising results in the most recent issue of the Primary Care Respiratory Journal, an international medical journal. The finding has huge implications for a common and devastating disease. According to the National Heart Lung and Blood Institute (NHLBI), emphysema, also known as chronic obstructive pulmonary disease (COPD), is the fourth-leading cause of death in the United States. It is projected to be the third-leading cause of death by the year 2020.

Nearly 120,000 adults died from COPD in the United States in 2000. Moreover, about 1.5 million adult emergency department visits for COPD occurred in 2000, resulting in 726,000 hospitalizations. And the total nationwide cost of COPD in 2002 was approximately \$32.1 billion.

But what happens when the disease is improperly diagnosed? Many people may get treatments they don't require. Worse, others could miss out on needed treatments.

The Anatomy of Emphysema

COPD is a lung disorder characterized by progressively worsening shortness of breath. The symptoms are present every day, though they are made worse with exercise. Emphysema is often associated with a cough that sometimes brings up a small amount of sputum (the so-called "smoker's cough"). Many people with this disease are simply unable to get enough air. At severe stages, people require oxygen from a tank or a compressor. These patients feel as if they are "huffing and puffing" to breathe, because they literally are.

During bouts of pneumonia or influenza infections, breathing can be so exhausting that patients stop altogether -- which is, of course, a medical emergency. Even if they do not stop breathing, pneumonia and influenza are leading causes of death among patients with emphysema. The most common cause of COPD in the United States is cigarette smoking, but

other irritants such as chemical exposures at work or breathing secondhand smoke over many years can also cause this disease.

Prolonged exposure to these airborne irritants inflames and kills normal lung tissue. This leaves behind empty space and flimsy air passages that collapse when a person exhales. Collapsed air passages trap air inside the chest that has already delivered most of its oxygen to the blood. Compounding this problem is that the trapped air overexpands the chest, making it more difficult to breathe in new air. Some patients fight for each breath.

Diagnosis Can Be Difficult

Although the diagnosis of COPD officially rests on formal breathing studies, many primary care doctors make the diagnosis based on the patient's symptoms and a history of smoking or other toxic exposures. And many doctors would argue that this "casual" method of diagnosis works pretty well. It certainly is cheaper.

But how well does such an approach actually work? Does it overdiagnose COPD, placing the patients at risk for unnecessary treatments -- to say nothing of a having an unfavorable diagnosis that can affect applications for health and life insurance? Worse, does it underdiagnose COPD, making it more likely that patients will not receive life-saving measures such as pneumonia or influenza vaccines?

These are the questions that Sichletidis and his colleagues sought to answer in their new study. They entered 319 subjects carrying a diagnosis of COPD at eight health centers in Greece. All patients completed a questionnaire about their symptoms and underwent widely accepted breathing tests and chest X-rays to make a definitive diagnosis. As it turns out, only about half of these COPD patients fulfilled the diagnostic criteria for the disease. Of the other half who did not meet these criteria, 22 percent had no respiratory disease at all.

What does this mean? Well, NHLBI estimates that while only 12 million adults in the United States reported being diagnosed with emphysema or COPD in 2001, another 24 million adults have evidence of impaired lung function indicating this disease. This probably means that these individuals do not go to the doctor for breathing symptoms, taking for granted that they will have some shortness of breath from smoking. Thus, while a high percentage of the American population with COPD has never been formally diagnosed, Sichletidis' study points out that many patients in the primary care clinic with breathing symptoms are wrongly diagnosed.

These facts emphasize two things: Patients with shortness of breath should see their doctors, and doctors must carefully make the correct diagnosis using formal testing. This is made even more important by the fact that some of the medications used to treat this disorder -- for example, oral steroids such as prednisone -- can potentially have risky side effects, even though they are life-saving. Additionally, missing the other causes of a patient's respiratory illness by inaccurately calling it COPD can prolong suffering and delay correct treatment.

What Can Be Done?

Smokers comprise the vast majority of patients with COPD. To slow down the progression of their disease, quitting smoking is imperative. Inhalers that open up breathing passages are the

foundation of COPD therapy. Two classes of these "bronchodilators" exist, and both should be used in moderate to severe COPD because they work by different mechanisms. If bronchodilators do not fully resolve symptoms, inhaled steroids are usually added to the regimen. These inhaled medications decrease inflammation of lung passages and are quite safe.

As a last resort, oral steroids, such as prednisone, are used to treat bad COPD flare-ups. Doctors try to use these types of steroids sparingly because of their frequent -- and sometimes serious -- side effects. Despite side effects, though, during significant COPD flares steroids save lives, and patients should not hesitate to use them when they are required.

It cannot be overemphasized that patients with COPD must receive the pneumonia vaccine (about every six years) and an annual flu shot. Both infections kill. If you have COPD, don't give up. Many communities have pulmonary rehabilitation centers where people with COPD can learn exercises that improve their breathing and overall health. In addition, the camaraderie of being with others who share your illness can be quite comforting.

In consultation with your doctor, you can also initiate your own COPD rehabilitation program by emphasizing aerobic exercise. Although not fully studied, some experts suggest upper body strength training to build up muscles that help with breathing. There are many resources for COPD available on the Web. A good place to start is the American Lung Association. Stopping therapy can be deadly, so do not stop treatment that you are currently taking. However, you might ask your doctor about whether you need formal testing for COPD -- and then follow through with any treatment recommendations he or she advises.

Dr. John Spangler is director of tobacco intervention programs and professor of family medicine at Wake Forest University School of Medicine.

Source: ABC News Internet Ventures



LESS THAN TWO PER CENT OF COPD PATIENTS CAN ACCESS REHAB PROGRAMS

Marked shortfall in Canada between capacity and need for respiratory services

While the number of respiratory rehabilitation programs in Canada has doubled in the last five years, a new study by researchers at West Park Healthcare Center shows that less than two per cent of people with a debilitating lung disease could access programs proven to significantly improve their lives.

The study, published today in the Canadian Respiratory Journal, examined the national capacity for rehabilitation of patients with chronic obstructive pulmonary disease (COPD) - the fourth leading cause of death in Canada. There is no cure and the disease gets progressively worse, but patients can significantly improve their quality of life with rehabilitation programs.

"Our patients are breathless, but not helpless," says Dr. Roger Goldstein, a Respirologist at West Park Healthcare

Center, expert in COPD and co-author of the study. "Through rehabilitation programs, COPD patients can learn simple techniques that help them regain their mobility and independence."

"Recommended services include supervised exercise training, education self-management, as well as psychological and social support," said Dr. Dina Brooks, Associate Professor in the Department of Physical Therapy at the University of Toronto, a West Park Research Associate and co-author of the study. "These types of services are inexpensive compared to the economic burden on the Canadian health care system from patients without access to rehabilitation services."

The study, based on a 2005 survey of healthcare facilities across Canada, concluded that 60 facilities offered 98 pulmonary rehabilitation programs, with 41 of those programs located in Ontario. The total capacity for all of the programs was ,927 people per year - about 1.2 per cent of the estimated 750,000 Canadians diagnosed with COPD.

Compared to a similar study in 1999, the recent survey showed significant growth in the number of pulmonary rehabilitation programs, doubling from 44 programs to 98. The most significant increases have been in Ontario (23 to 41 programs), Quebec (four to 21 programs) and Alberta (three to eight programs). "Despite this improvement, Canada is still woefully under-serviced in rehabilitation programs that are vital to people living with COPD," says Nora Sobolov, President and CEO of the Canadian Lung Association. "This study highlights the urgent need for continued investment in rehabilitation programs throughout Canada."

COPD represents a combination of chronic bronchitis and emphysema. It is characterized by shortness of breath, wheezing and coughing. West Park Healthcare Center provides specialized rehabilitation, complex continuing care and long-term care, helping people overcome their health barriers, to live the fullest lives possible after an illness or injury. The center is recognized internationally for its expertise and research in respiratory rehabilitation for those with chronic respiratory diseases and its care of those with tuberculosis.



NEW REPORT: AMERICA'S SCIENTIFIC AND MEDICAL PROGRESS THREATENED BY FLAT FUNDING FOR NIH

Leading US universities call for increased NIH funding to protect health, retain nation's scientists, shore up US global leadership in research

Years of stagnant budgets outpaced by inflation threaten the progress of biomedical research and could thwart advances in treatments that are within reach, nine of the nation's most preeminent scientific and medical institutions told Congress today. In a new report on the status of U.S. medical research and its funding, the group explained how perennially flat funding of the National Institutes of Health (NIH) has halted promising research in mid-stream, challenged seasoned researchers to continue to achieve scientific progress, and threatened the future of young investigators pursuing careers in academic research.

And, if left unaddressed, these problems could undermine U.S. global leadership in biomedical research, the report warns.

"When scientists have to spend most of their time trying to get funded, caution wins out over cutting-edge ideas, creativity sacrifices to convention, and scientific progress gives way to meetings and grant applications," said report contributor and infectious disease expert Robert Siliciano, M.D., Ph.D., at The Johns Hopkins University School of Medicine. "Right now, very, very productive scientists are doing too little research. Instead, they are spending their time trying to get their labs funded again," he said.

The report was co-authored by The University of California, Columbia University, Harvard University, The Johns Hopkins University, Partners HealthCare, The University of Texas at Austin, Washington University in St. Louis, The University of Wisconsin Madison, and Yale University.

The group says that to fulfill the promise of previous investments by Congress the country needs to provide more consistent and robust funding of NIH. According to the report, *Within Our Grasp—Or Slipping Away? Assuring a New Era of Scientific and Medical Progress*, the doubling of NIH's budget between 1998 and 2003 enabled advances in basic research that transformed understanding of diseases affecting millions of Americans. But the NIH budget has been virtually frozen since 2003 and has shrunk by at least 8 percent after inflation is considered, with recent estimates up to 13 percent. Most recently, a small increase approved by Congress in the 2007 budget would be virtually wiped out by the Bush Administration's proposed 2008 budget, continuing the downward spiral in inflation-adjusted dollars. The implications are far-reaching for science, medicine, the economy and U.S. leadership in biomedical science, they add.

The 21-page report says that the country reaped a strong pay-off from previous years of robust funding of basic biomedical research, achieving progress in treating and preventing many devastating diseases and conditions. But the American public will ultimately pay the price for slowing the pace of research as scientists downsize their laboratories and abandon some of their most innovative work.

The report argues that research momentum gains have slowed, and in some cases may be lost, if flat funding continues. For example, in the fight against cancer, "The number of drugs moving into the pipeline that are based on our new, more profound genetic and molecular understanding of cancer is extraordinary—and there's no money to handle the testing of these compounds," said Joan Brugge, Ph.D., who chairs the Department of Cell Biology at Harvard Medical School.

A similar situation faces the quest to cure spinal cord and brain injuries. "Ten years ago, the search for treatment of spinal cord injury was a daunting and hopeless task," said Stephen Strittmatter, M.D., Ph.D., a professor of neurology and neurobiology at Yale University's School of Medicine. Today that is changing, in part due to the discovery of NOGO, a molecule that prevents regeneration of spinal cord nerves.

Scientists are investigating whether the molecule can be inhibited, allowing the spinal cord and neurons in the brain to repair themselves.

"The neurological sciences are on the launching pad of a revolution," according to Strittmatter. "We are at a juncture where we can begin identifying multiple molecular targets for the neurological diseases that have stymied us for so long. Without funding, they may go undiscovered, and we will have only weakly effective therapies."

The Threat to Future Scientific Endeavor

Despite the great push forward that accompanied the doubling of the NIH budget, subsequent flat funding has put many projects at risk. Today, eight of ten research grant applications are unfunded, according to the report. Those that are funded often require multiple submissions and suffer lapses in funding. Certain NIH institutes, such as the National Cancer Institute, report that they can only fund 11 percent of research project grant applications, rejecting many of exceptional quality.

The effects are being felt by both principal investigators and young researchers new to the field. For young researchers, the decreased funding contributes to another problem: a multi-year wait for receiving their first grant. In 1970, the average age recipient of a first grant was 34.2 years; today it is 41.7.

"Our product is not just our technology or medical breakthroughs," said Dr. Brent Iverson, Ph.D., The University of Texas at Austin. "Our College of Natural Sciences alone puts 1,000 undergrads in research situations in labs, most with NIH funding. That is a catalyst for creating innovative new scientists," he added.

Consequently, senior scientists fear that young people will turn away from science because the funding situation is so bleak. Scientists report that many of the brightest young minds no longer see the promise of a career in science, choosing law, business, and other professions. Losing young scientists today will cost the U.S. a lot later, the report warns. "That will have a generational impact that will take 15 years to fix," said Richard Davidson, Ph.D., University of Wisconsin-Madison.

In addition, scientists are increasingly having to abandon some of their most innovative and promising research in favor of more conventional projects with more predictable results that are more likely to be funded. Principal investigators also must spend enormous amounts of time fundraising and writing grants rather than conducting research.

Others are following research dollars overseas, to countries in Europe and Asia that are making investment in biomedical sciences high national priorities and actively recruiting star U.S. scientists, according to scientists interviewed for the report.

Said Nobel Laureate Eric Kandel at Columbia University Medical Center, who contributed to the report: "The scientific community is one of the driving forces of the economy. In biology, it helps drive the pharmaceutical industry, and helps people live longer in a productive way. Now, the rug has been pulled from under science in this country. We'll lose scientific manpower to European countries, and to India, China and Japan."

The funding problem is so great that the NIH's 2007 "Fiscal Policy for Grant Awards," urges decisionmakers to consider "the goal of not losing outstanding laboratories," as they allocate limited funds, says the report.

The group says that addressing the funding crisis now is imperative given the demographics of the population. "Medical treatments take decades to develop," says Harvard's Dr. Brugge. "If we wait until the baby boomers retire to find the most effective means for prevention and treatment for diseases like Alzheimer's and cancer, we will break the bank."

Source: harvard.edu



POTENTIAL MECHANISMS CONNECTING ASTHMA, ESOPHAGEAL REFLUX, AND OBESITY/SLEEP APNEA COMPLEX—A HYPOTHETICAL REVIEW

Summary

Obstructive sleep apnea (OSA) and asthma are potentially linked at several levels. The pathophysiology of these two conditions seems to overlap significantly, as airway obstruction, inflammation, obesity, and several other factors are implicated in the development of both diseases. Gastroesophageal reflux disease (GERD), cardiovascular complications, obesity itself, and the underlying inflammatory processes are all complex contributory factors that provide hypothetical links. Furthermore, a collateral rise in prevalence of both OSA and asthma has been noticed during the past few years, occurring in association with the emerging epidemic of obesity, a common risk factor for both conditions. OSA and asthma share many other risk factors as well. We propose a hypothetical OSA–asthma relationship that has implications on the diagnosis and management of patients presenting with either condition singly. Clinicians should be aware that OSA might complicate asthma management. Based on this hypothesis, we suggest that the treatment of the individual patient who experiences both asthma and OSA needs to be multidisciplinary and comprehensive. This hypothetical association of asthma and OSA, though described anecdotally, has not been systematically studied. In particular, the influence of continuous positive airway pressure therapy (for sleep apnea) on asthma outcomes (such as quality of life, steroid utilization, emergency room visits) and fatality needs to be studied further.

Source: MedLinks.com



UNIQUE PROJECT TO IMPROVE COPD CARE, UK

A unique project to improve care for patients with Chronic Obstructive Pulmonary Disease (COPD) was launched on 21st March, 2007. For the first time ever, an evaluation is being carried out to assess a peer review process in which teams of healthcare professionals and managers from one hospital will be paired with another and will work together on improving key services for COPD patients.

The National COPD Resources and Outcomes Project (NCROP) will work across primary and secondary care boundaries, and is run by the British Thoracic Society (BTS),

British Lung Foundation (BLF) and the Royal College of Physicians (RCP), and is funded by The Health Foundation.

COPD is a progressive, irreversible lung disease that kills around 30,000 people a year in the UK. More people in England and Wales die of COPD than of breast, colon or prostate cancer. Yet COPD is both preventable and treatable and early diagnosis and treatment can slow the progression of the illness.

Best practice guidelines for the management of COPD were produced for NICE by the National Collaborating Centre for Chronic Conditions (based at the RCP) in 2004, but surveys have shown that hospitals still vary widely in the services they offer to patients, who are not always given the most appropriate treatments. This has a major impact on their quality of life.

The new project aims to improve the quality and effectiveness of services provided for people with COPD by measuring care in four key areas identified in the NICE guidelines for COPD - availability of early discharge schemes for patients from hospital, pulmonary rehabilitation schemes, access to non-invasive ventilation when required, and the provision of oxygen services. These areas have been chosen as they offer the best way of both improving quality of life and reducing the risk of dying from COPD.

Audits on other medical conditions show that hospitals working on their own tend to improve continuously, but slowly. The NCROP project will try to find out if hospitals can improve their performance more quickly by working together in pairs with peer review visits facilitated by the NCROP project team. The hospitals will visit each other, share good practice, produce an action plan, implement changes, and after 9 months will participate in the next National COPD Audit (2008) to find out what improvements have been made.

Professor Mike Roberts, Chair of the NCROP Steering Group and a Respiratory Physician at Whipps Cross University Hospital in London, said; "Doctors, nurses and managers working with patients as one team sharing their successes and solutions to COPD care with other teams in other parts of the country grappling with the same problems. Learning what is best in the NHS from each other. So simple but potentially so very effective."

Dame Helena Shovelton, Chief Executive of the British Lung Foundation, said: "This project gives us a real chance to improve key services and enhance the quality of life of thousands of people who have COPD. Its crucial aspect is involving people with COPD themselves, whose experiences will help to shape the best possible treatments in future."

Dr Robert Stone of the British Thoracic Society said; "This will be the first study demonstrating how real change and improvement can be made at a practical level, to COPD services and patients, across the United Kingdom."

Dr Jonathan Potter, Clinical Director of the RCP's Clinical Effectiveness and Evaluation Unit, said: "This exciting project not only offers the opportunity to enhance care for people with COPD, but will shed light on the effectiveness of peer review in improving healthcare. The results of this study will be important for the improvement of care in other clinical areas."

Wendy Buckley, Assistant Director at the Health Foundation, said: "We are delighted to be supporting this important project that has the potential dramatically to improve the quality of care for patients with COPD. We commend the dedication and drive to share best practice and to develop jointly innovative and effective ways of working."

The British Lung Foundation supports people affected by lung disease through the individual challenges they face. The charity helps people to understand their condition and works for positive change in lung health by campaigning, raising awareness and funding world-class research.

The British Thoracic Society's aims are:

- The relief of sickness for people with respiratory and associated disorders by the promotion of the highest standards of clinical care; the undertaking of research into the causes, prevention and treatment of respiratory and associated disorders; and disseminating the results of such research.
- The preservation and protection of public health by the provision of information in matters concerning respiratory and associated disorders and how they might be prevented.

The Health Foundation wants to make the quality of healthcare in the UK the best it can be. Working with others, we are helping to shape a future healthcare system that offers safe, effective and responsive care for all. We are a charitable foundation and operate independently from government, political parties or other interest groups. Our endowment enables us to spend up to £20 million annually. We seek out the best people in healthcare and support them to learn and share with others. Through projects, research and evaluation studies we test and measure new ways of improving health services for the future. We actively influence healthcare decision-makers so that we achieve sustainable and widespread improvements in the quality of patient care.

Source: Royal College of Physicians of London



UPDATED GUIDELINES ADVISE FOCUSING ON WOMEN'S LIFETIME HEART RISK

Update gives definitive answers on HRT, aspirin, supplements

Healthcare professionals should focus on women's lifetime heart disease risk, not just short-term risk, according to updated American Heart Association guidelines. The 2007 Guidelines for Preventing Cardiovascular Disease in Women – published today in a special women's health issue of *Circulation: Journal of the American Heart Association* – also include new directions for using aspirin, hormone therapy and vitamin and mineral supplements in heart disease and stroke prevention in women.

"The updated guidelines emphasize the lifetime risk of women, not just the more short-term focus of the 2004 guidelines," said Lori Mosca, M.D., Ph.D., director of preventive cardiology at New York–Presbyterian Hospital and chair of the American Heart Association expert panel that

wrote the guidelines. "We took a long-term view of heart disease prevention because the lifetime risk of dying of cardiovascular disease (CVD) is nearly one in three for women. This underscores the importance of healthy lifestyles in women of all ages to reduce the long-term risk of heart and blood vessel diseases." The guidelines include a new paradigm for risk assessment based on risk factors and family history, as well as the Framingham risk score. (First published in 1998, the Framingham risk score estimates the risk of developing coronary heart disease within 10 years.)

The new guidelines include expanded recommendations on lifestyle factors such as physical activity, nutrition and smoking cessation, as well as more in-depth recommendations on drug treatments for blood pressure and cholesterol control. Furthermore, guidelines on hormone and aspirin therapy and antioxidant and folic acid supplements are revised based on recently published data.

"Since the last guidelines were developed, more definitive clinical trials became available to suggest that healthcare providers should consider aspirin in women to prevent stroke," Mosca said. "In addition, providers should not use menopausal therapies such as hormone replacement therapy (HRT) or selective estrogen receptor modulators (SERMs) such as raloxifene or tamoxifene to prevent heart disease because they have been shown to be ineffective in protecting the heart and may increase the risk of stroke."

A recent American Heart Association survey showed that women are confused about methods to prevent heart disease including the role of aspirin, hormones and dietary supplements. "The new guidelines reinforce that unregulated dietary supplements are not a method proven to prevent heart disease. For example, recent studies have shown that folic acid is ineffective to protect the heart despite widespread use by patients and physicians hoping for a heart benefit," Mosca said. "These recent findings emphasize the importance of using well-conducted clinical trial data to develop national recommendations to help patients and their doctors use best practices to prevent heart disease – practices based on data rather than myth or wishful thinking."

CVD is the largest single cause of mortality among women, accounting for 38 percent of all deaths among females. The public health impact of CVD in women is not solely related to mortality, as advances in science and medicine allow many women to survive heart disease. For example, in the United States 42.1 million (36.6 percent) women live with CVD and the population at risk is even larger. In fact, "nearly all women are at risk for CVD, underscoring the importance of a heart-healthy lifestyle in everyone," the authors wrote. "Some women are at significant risk of future heart attack or stroke because they already have CVD and/or multiple risk factors. These women are candidates for more aggressive preventive therapy and we define them as high risk."

Physicians can easily identify high-risk women, but tools to determine other levels of risk are limited, Mosca said. The authors have aligned their recommendations with treatments proven to work and give strong advice for what not to do, as

well. "Therefore, we have more aggressive recommendations for high-risk women, and strongly emphasize lifestyle strategies to reduce risk in all women," she said. "Medicine is still an art but these guidelines are meant to guide healthcare professionals on the best science available."

Highlights of the changes include:

- Recommended lifestyle changes to help manage blood pressure include weight control, increased physical activity, alcohol moderation, sodium restriction, and an emphasis on eating fresh fruits, vegetables and low-fat dairy products.
- Besides advising women to quit smoking, the 2007 guidelines recommend counseling, nicotine replacement or other forms of smoking cessation therapy.
- Physical activity recommendations for women who need to lose weight or sustain weight loss have been added – minimum of 60–90 minutes of moderate-intensity activity (e.g., brisk walking) on most, and preferably all, days of the week.
- The guidelines now encourage all women to reduce saturated fats intake to less than 7 percent of calories if possible.
- Specific guidance on omega-3 fatty acid intake and supplementation recommends eating oily fish at least twice a week, and consider taking a capsule supplement of 850–1000 mg of EPA (eicosapentaenoic acid) and DHA (docosahexaenoic acid) in women with heart disease, two to four grams for women with high triglycerides.
- Hormone replacement therapy and selective estrogen receptor modulators (SERMs) are not recommended to prevent heart disease in women.
- Antioxidant supplements (such as vitamin E, C and beta-carotene) should not be used for primary or secondary prevention of CVD.
- Folic acid should not be used to prevent CVD – a change from the 2004 guidelines that did recommend it be considered for use in certain high-risk women.
- Routine low dose aspirin therapy may be considered in women age 65 or older regardless of CVD risk status, if benefits are likely to outweigh other risks. (Previous guidelines did not recommend aspirin in lower risk or healthy women.)
- The upper dosage of aspirin for high-risk women increases to 325 mg per day rather than 162 mg. This brings the women's guidelines up to date with other recently published guidelines.
- Consider reducing LDL cholesterol to less than 70 mg/dL in very high-risk women with heart disease (which may require a combination of cholesterol-lowering drugs).

This 2007 update provides the most current clinical recommendations for preventing CVD in women 20 and older and are based on a systematic search of the highest quality science interpreted by experts in the fields of cardiology,

epidemiology, family medicine, gynecology, internal medicine, neurology, nursing, public health, statistics and surgery.

The authors note that these guidelines cover the primary and secondary prevention of chronic atherosclerotic vascular diseases. Recommendations for managing vascular disease before or after cardiac procedures or post-hospital and valvular heart disease are covered in other American Heart Association guidelines.

Source: American Heart Assoc.



YOUR FAMILY'S HEALTH HISTORY

Recording your family's health history could save your life

You watch what you eat, take regular walks and get eight hours of shut-eye each night. But if you don't know how your Aunt Myra died or what put Grandpa in a wheelchair, you may be missing vital information.

That's why more doctors are recommending patients compile a family health history—a document that details illnesses that run in their families. "Finding out what runs in your family can help you predict problems you're at risk for and take action to prevent them," says Larry Thompson, a spokesperson for the National Human Genome Research Institute, which is exploring the genetic basis for many conditions. To uncover your health heritage:

Make a List

At a minimum, look at the health history of your parents, grandparents, aunts, uncles and cousins, as well as siblings and their children. "A good rule of thumb is at least three generations, or, even better, two generations up and two generations down," says Robin L. Bennett, M.D., assistant director of the Medical Genetics Clinic at the University of Washington Medical Center in Seattle. You should also note the age at which conditions developed, as well as at what age anyone passed away—and why.

If interviewing relatives isn't possible, follow the paper trail. "Family bibles are a great source of information, as are any places where people have saved genealogical information," says Kelly E. Ormond, M.Sc., associate professor and director of the graduate program in genetic counseling at Northwestern University in Chicago. Birth and death certificates, baby books and hospital medical records are also good sources.

Format Findings
A good way to structure your information is by creating a family tree. "It allows you to put reams of medical records on one page," says Dr. Bennett. "Plus, it's easy to update."

It also allows you to easily discern recurring issues. "In general, a health problem that develops under age 50 could be a risk, especially if it occurs among more than one relative," Dr. Bennett says.

Share Your History

Ormond suggests letting your primary care doctor in on your research, and, ideally, updating it every year or two. If you and your physician discover worrisome health trends, you can devise a plan for reducing your risk of a given disease or catching it early. If colon cancer turns up frequently, for instance, you may

need to start getting colonoscopies at an earlier age, and have them more frequently, than is usual.

And tell other family members what you've found. "By sharing this information," says Dr. Bennett, "you may be helping to save a life."

Smart Habits

Now that you've collected your family's health history, how can it help you? According to Northwestern's Ormond, you can:

- Adopt lifestyle measures such as exercise and eating well to help stave off diseases such as cancer, heart disease and diabetes.
- Ask your doctor whether you should have screening tests earlier or at more frequent intervals than is generally recommended. Or discuss using more precise screening tools. For example, if you are at high risk for breast cancer, some doctors might recommend MRI in addition to mammograms.
- Talk with your doctor about whether you would benefit from medications that lower risk for a disease that runs in your family.
- If your doctor suggests it, visit a genetics specialist to assess your risks and test for certain diseases.

Source: 2007 MediZine, Inc.



SECONDHAND SMOKE IS NOT JUST AN ANNOYANCE -- IT'S A KNOWN KILLER

Secondhand smoke is a mixture of the smoke given off by the burning end of a cigarette, pipe or cigar and the smoke exhaled from the lungs of smokers. The smoke exhaled by someone who is smoking is more than an annoyance. It's a known killer.

Secondhand smoke is the third leading cause of preventable deaths, killing 1,000 non-smoking Marylanders every year.

Last summer, U.S. Surgeon General Richard H. Carmona issued a comprehensive scientific report that concluded that there is no safe level of secondhand smoke. Secondhand smoke causes heart disease, lung cancer, asthma, emphysema and stroke. Even brief exposure can cause immediate harm. This finding is a major public health concern due to the fact that nearly half of all nonsmoking Americans are still regularly exposed to secondhand smoke.

The Centers for Disease Control and Prevention have reported that as little as 30 minutes' exposure to secondhand smoke can have a serious and even lethal effect for people with heart disease or at risk for heart disease.

Secondhand smoke contains more than 250 toxins and cancer-causing chemicals, such as carbon monoxide, formaldehyde, arsenic, benzene, and lead. The economic costs of exposure to secondhand tobacco smoke in Maryland were \$597 million in 2005 according to a recent Johns Hopkins study.

Secondhand smoke hurts children

Children who breathe secondhand smoke are more likely to suffer from pneumonia, bronchitis, and other lung diseases;

have more ear infections; and develop asthma. Children who have asthma and who breathe secondhand smoke have more asthma attacks.

Tips to protect your family

This is what you can do to protect yourself and your family from secondhand smoke:

- Don't smoke in your home.
- Ask other people not to smoke in your home, especially baby-sitters or others who may care for your children.
- Choose children's day care centers, schools, restaurants and other places you spend time in that are smoke-free.
- Ask smokers to go outside while they smoke.
- If someone must smoke inside, limit them to rooms where windows can be opened or fans can be used to send the smoke outside.

Help people who are trying to quit smoking.

In order to help reduce the damaging effects of tobacco on families, the American Lung Association of Maryland is training adults in Wicomico County to be able to teach children about the dangers of secondhand smoke and enlisting their support in being advocates for clean indoor air and remaining life-long non-smokers by discussing the toxic components of tobacco products. The training and materials are free.

Youth groups that are interested, may register by calling 410-548-1613 or e-mailing jphillips@marylandlung.org.

In Somerset County, the Lung Association is teaching restaurant owners, managers, workers and customers about the dangers of secondhand smoke. A survey will be conducted to find out the restaurant management's attitude about being smoke-free, their knowledge of the health risks of secondhand smoke and their understanding of the benefits of being smoke-free.

"Stamp out secondhand smoke" stickers will be available to the public to be placed on restaurant checks to help make Somerset County smoke free.

For information, or help to quit smoking, call the Lung Association at 1-800-586-4872 or visit the Freedom From Smoking online smoking cessation clinic at www.ffsonline.org.

Source: Medlinks



KAMADA BEGINS PHASE III CLINICAL TRIAL IN THE U.S. WITH ITS ALPHA-1 ANTITRYPSIN PRODUCT INDICATED FOR CONGENITAL EMPHYSEMA

Kamada, an Israeli bio-pharmaceutical company which develops, manufactures and markets prescription drugs, announced that it is beginning the third and last stage of clinical trials before licensure of its flagship product Alpha-1 Antitrypsin (AAT), also known as Alpha-1 Proteinase Inhibitor (API). The clinical trial, which follows FDA-approved protocol, will include 50 patients from the U.S.

Already marketed in several countries, AAT is an injectable drug indicated for Congenital Emphysema, a disease caused by an inborn deficiency of AAT. According to available information, Kamada's product is the only ready-to-use AAT therapy that does not require reconstitution with water. Based on

this and other unique characteristics, Kamada is developing the next generation AAT which will deliver the drug by inhalation directly to the lungs, thus reducing the length and cost of treatment and rendering it much more convenient for patients. This aerosolized version is currently undergoing phase I clinical studies in accordance with a clinical program that was approved by the EMEA.

Kamada CEO David Tsur stated, "We are excited to have arrived at the final phase of development of our injectable AAT product which, we believe, will make the treatment of Congenital Emphysema accessible to more patients worldwide."

Kamada anticipates that final FDA approval for the commercial use of AAT will generate a substantial and sustainable contribution to the company's revenues. The American Alpha-1 Association estimates that more than 200,000 people in the U.S. and Europe alone suffer from Congenital Emphysema, with only 10 percent diagnosed, many of whom are not treated.

About Kamada

Kamada is a biopharmaceutical company engaged in the development, production, and marketing of high quality, ready to use, plasma therapeutics. In addition to AAT, Kamada's product line includes specific and general immune globulins and other plasma-derived products which are manufactured using sophisticated chromatographic purification technology. Kamada is a public company based at Kiryat Weizmann Science Park, Ness Ziona, Israel.

Source: Medical News Today

STUDY SHOWS WHY EXERCISE BOOSTS

BRAINPOWER

Exercise boosts brainpower by building new brain cells in a brain region linked with memory and memory loss, U.S. researchers reported Monday. Tests on mice showed they grew new brain cells in a brain region called the dentate gyrus, a part of the hippocampus that is known to be affected in the age-related memory decline that begins around age 30 for most humans.

The researchers used magnetic resonance imaging scans to help document the process in mice -- and then used MRIs to look at the brains of people before and after exercise. They found the same patterns, which suggests that people also grow new brain cells when they exercise.

"No previous research has systematically examined the different regions of the hippocampus and identified which region is most affected by exercise," Dr. Scott Small, a neurologist at Columbia University Medical Center in New York who led the study, said in a statement.

Writing in the Proceedings of the National Academy of Sciences, the researchers said they first tested mice. Brain expert Fred Gage, of the Salk Institute in La Jolla, California, had shown that exercise can cause the development of new brain cells in the mouse equivalent of the dentate gyrus. The teams worked together to find a way to measure this using MRI, by tracking cerebral blood volume. "Once these findings

were established in mice, we were interested in determining how exercise affects the hippocampal cerebral blood volume maps of humans," they wrote. They of course could not dissect the brains of people to see if new neurons grew, but they could use MRI to have a peek.

They recruited 11 healthy adults and made them undergo a three-month aerobic exercise regimen. They did MRIs of their brains before and after. They also measured the fitness of each volunteer by measuring oxygen volume before and after the training program. Exercise generated blood flow to the dentate gyrus of the people, and the more fit a person got, the more blood flow the MRI detected, the researchers found.

"The remarkable similarities between the exercise-induced cerebral blood volume changes in the hippocampal formation of mice and humans suggest that the effect is mediated by similar mechanisms," they wrote. "Our next step is to identify the exercise regimen that is most beneficial to improve cognition and reduce normal memory loss, so that physicians may be able to prescribe specific types of exercise to improve memory," Small said.

HELP! I ABSOLUTELY DESPISE EXERCISE!

How to get moving when the motivation just isn't there

"When I was thin I did not exercise. I've never enjoyed it. Now that I'm overweight, I work out but I struggle being consistent with my routine. I've gotten past the embarrassment of being so large, but my question is: How can I make myself remain consistent with exercise when I truly, truly HATE working out? I do it because I have/need to. I want to be healthy. But I don't like being hot and sweaty, I don't like the gym, I don't like the clothing, I don't like the smell. I'll do OK for two to three months, then something will interfere and I really struggle getting back on track. HELP!"

Sure, there are fitness fanatics who can't get enough exercise, and it doesn't sound like you're ever going to be one of them. Join the club. Many regular exercisers don't absolutely LOVE it, not the way they relish chocolate lava cake or drinking beer with their buddies or plopping down in front of the TV after a long day at work — all the good things in life that, in excess, make us overweight and out of shape in the first place.

But you need to ask yourself if you truly hate all physical activity, or just the activities of your current routine. Seems as though what you really hate is your gym, and either the equipment or the classes you take there. (Plus, if the gym smells, that can't help matters!) So it's time for a change of plans, says Jenny Susser, a sports psychologist at the Hospital for Special Surgery in New York City. "There are lots of ways to think outside the box that can make exercise have a different kind of meaning," she says.

If you really don't like the treadmill or that cardio groove class, the inner and outer thigh machines — or whatever you're currently doing — drop them. Really! You can even cancel the membership at that stinking gym. Then try something new. How about salsa dancing, rowing, home workout videos or swimming? Swimming won't make you all "hot and sweaty." Surely there is some form of movement that you enjoy, says Keli

Roberts, a personal trainer and group fitness instructor at the Equinox gym in Pasadena, Calif. "I think that people who decide they hate exercise are doing the wrong thing," she says.

Roberts, a self-proclaimed fitness nut, says she used to hate swimming. She didn't like always having wet, green-tinged hair. So she gave up swimming and started hitting the gym instead. Dry hair and a perfect fit. In your case, getting out of the gym may be the solution. Find an activity, or a few, that you enjoy — or at least like a bit — and then keep experimenting. Anything gets old after awhile, so mix things up. Keep in mind that all physical activity counts. So try to be more active in your daily life: walk more, take more stairs, clean the house, mow the lawn, that kind of thing. You don't even need the workout clothes you dislike so much for these activities.

And on those days when you just can't get motivated to move, think of all the reasons why you should: it's good for your health, it can help you lose weight, it can boost your mood, it will help ease the guilt from that chocolate lava cake you ate last night, etc. "Look for multiple motivators so you've got a little repertoire of inspiration," says Susser. "Have a slew of reasons why you should work out so that if one fails, you've got two to three backups."

"Is there a window of opportunity after you eat in which — through exercise — you can undo some of your wrongs and quickly work out more so that the weight stays off your waist? I heard this was true but am wondering if it's just another bogus theory. If it's true, how long is the window to get on the running trail before the pizza turns into a potbelly?"

Such a magical window of opportunity would be nice, but unfortunately it doesn't quite work that way, says Mike Bracko, an exercise physiologist in Calgary, Alberta, Canada, and a spokesperson for the American College of Sports Medicine.

"It takes about 24 hours for the food we eat to either get stored as fat or carbohydrates (as glycogen in the muscles)," explains Bracko. "But we can't 'take away' the food we just ate by exercising after we eat." That said, working out a few hours after an indulgent meal, or the next day, can help you burn some extra calories. But running immediately after the pizza party? That just can't feel good. Source: MSNBC.com

BETTER OFF RED

Beans may be a near-perfect health food -- especially if they're red.

We already know that beans are a great source of fiber and vegetable protein. But red kidney beans are also stellar when it comes to packing an antioxidant punch. In fact, red beans are right up there with blueberries when it comes to total antioxidant value. So brighten up your salads and stews by tossing in some crimson-colored beauties.

In addition to red kidney beans, other antioxidant champions include artichokes, russet potatoes, pinto beans, sweet cherries, plums, and pecans. What's so great about antioxidants? They help guard against the cell damage that can lead to cancer, heart disease, and early aging by swiftly

mopping up free radicals -- cell-process by-products that can damage DNA.

Here are the antioxidant winners in a recent study, which examined over 100 different plant-food sources:

- Fruits: Cranberries, blueberries, blackberries
- Vegetables: beans (red, kidney, pinto, and black), artichokes, and russet potatoes
- Nuts: pecans, walnuts, hazelnuts

NARY A RED BEAN IN YOUR DIET? TRY THIS TACO-INSPIRED SALAD RECIPE.

Depending on the type of salsa you use, this salad will vary in heat. To please everyone, make it mild and put a bottle of your favorite hot sauce on the table. Make it a meal: Baked corn tortilla chips or cheese quesadillas and lime wedges are natural accompaniments.

Makes 4 servings, 1 cup filling & 2 cups salad each

ACTIVE TIME: 30 minutes

TOTAL TIME: 30 minutes

EASE OF PREPARATION: Easy

- ½ cup prepared salsa
- ¼ cup reduced-fat sour cream
- 1 teaspoon canola oil
- 1 medium onion, chopped
- 3 cloves garlic, minced
- 1 pound 93%-lean ground turkey
- 2 large plum tomatoes, diced
- 1 14-ounce can kidney beans, rinsed
- 2 teaspoons ground cumin
- 2 teaspoons chili powder
- ¼ cup chopped fresh cilantro
- 8 cups shredded romaine lettuce
- ½ cup shredded sharp Cheddar cheese

1. Combine salsa and sour cream in a large bowl.
2. Heat oil in a large nonstick skillet over medium heat. Add onion and garlic and cook, stirring often, until softened, about 2 minutes. Add turkey and cook, stirring often and crumbling with a wooden spoon, until cooked through, about 5 minutes. Add tomatoes, beans, cumin and chili powder; cook, stirring, until the tomatoes begin to break down, 2 to 3 minutes. Remove from the heat, stir in cilantro and ¼ cup of the salsa mixture.
3. Add lettuce to the remaining salsa mixture in the bowl; toss to coat. To serve, divide the lettuce among 4 plates, top with the turkey mixture and sprinkle with cheese.

NUTRITION INFORMATION: Per serving: 356 calories; 14 g fat (5 g sat, 1 g mono); 81 mg cholesterol; 26 g carbohydrate; 33 g protein; 10 g fiber; 618 mg sodium; 763 mg potassium.

Nutrition bonus: Vitamin A (150% daily value), Vitamin C (60% dv), Folate (53% dv), Iron (25% dv), Potassium (22% dv).

Exchanges: 1 starch, 2 vegetable, 4 lean meat; 1 Carbohydrate Serving.

Source: EatWell.com

CLASSIC MACARONI AND CHEESE

Low fat cheese and skim milk help to make this favorite dish heart-healthy. Makes 8 servings.

Ingredients

2 cups macaroni
 ½ cup chopped onions
 ½ cup evaporated skim milk
 1 medium egg, beaten
 ¼ tsp black pepper
 1 ¼ cups sharp cheddar cheese (4 oz), finely shredded, low fat
 Nonstick cooking oil spray

Directions

Cook macaroni according to directions. (Do not add salt to the cooking water.) Drain and set aside.

Spray a casserole dish with nonstick cooking oil spray.

Preheat oven to 350° F.

Lightly spray saucepan with nonstick cooking oil spray.

Add onions to saucepan and sauté for about 3 minutes.

In another bowl, combine macaroni, onions and the remaining ingredients and mix thoroughly.

Transfer mixture into casserole dish.

Bake for 25 minutes or until bubbly. Let stand for 10 minutes before serving.

Nutrition Per Serving

Serving size: ½ cup

Calories—200; fat—4g; saturated fat—2g; cholesterol—34mg; sodium—120mg.

Source: NIH Publication 97-3792

**BAKED SALMON DIJON**

This salmon entree is easy to make and will be enjoyed by the whole family!

Ingredients:

1 C fat free sour cream
 2 tsp dried dill
 3 Tbsp scallions, finely chopped
 2 Tbsp Dijon mustard
 2 Tbsp lemon juice
 1 1/2 lb salmon fillet with skin, cut in center
 1/2 tsp garlic powder
 1/2 tsp black pepper
 as needed fat free cooking spray

Directions:

1. Whisk sour cream, dill, onion, mustard, and lemon juice in small bowl to blend.
2. Preheat oven to 400 °F. Lightly oil baking sheet with cooking spray.
3. Place salmon, skin side down, on prepared sheet. Sprinkle with garlic powder and pepper, then spread with the sauce.
4. Bake salmon until just opaque in center, about 20 minutes.

Nutrition Per Serving

Yield: 6 servings

Serving size: 1 piece (4 oz)

Calories: 196

Total fat: 7 g

Saturated fat: 2 g

Cholesterol: 76 mg

Sodium: 229 mg

Total fiber: less than 1 g

Protein: 27 g

Carbohydrates: 5 g

Potassium: 703 mg

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