

# EFFORTS

*Emphysema Foundation For Our Right To Survive*



Emphysema Takes Your Breath Away

April 2009

## **TIRED OF THE TREADMILL? GET OUT AND PLAY INSTEAD**

Tired of the same old exercise routine? Get out and play instead, suggests a fitness expert who spoke at the American College of Sports Medicine's (ACSM) Annual Health and Fitness Summit in Atlanta.

Play is "the perfect anecdote for when your exercise routine starts to feel like more of a chore than an activity of enjoyment," health scientist from Bethesda, Maryland, and ACSM faculty member Dr. Carol E. Torgan noted in a statement from the meeting. It's good for the body, mind and soul.

"Think about activities you loved to do as a child and incorporate those into your routine (and) include your family," Torgan added in comments to Reuters Health.

To rediscover your inner child, visit a playground, toss a Frisbee, take a hike, go rock climbing, pick up a hoola hoop, or dance. An adult weighing 150 pounds can burn more than 300 calories an hour by dancing.

"If you spent your childhood outside exploring," suggested Torgan, "head out the front door and try Geocaching" -- an outdoor treasure hunt game using GPS.

You don't need to be young to reap the calorie-burning, mind-stimulating benefits of play. "The 'power of play' for adults, lies in simply focusing on the joy of moving, having a little fun with it, and not taking ourselves too seriously. Whether it's shooting hoops or even playing on a teeter-totter with a friend, these unstructured activities can create a sense of belonging and community." Torgan said.

Another benefit of "play" exercise is that it "doesn't require expensive equipment, a gym membership, or form-fitting Lycra - it's free. You only need an open mind," Torgan said. "The key for most adults," she added, "is simply to give themselves permission to play - even for 10-15 minutes. Unplug and dance. Life is too short to spend it checking your email."

<http://tinyurl.com/cer92u>



## **TAKE PRECAUTIONS WHEN EXERCISING WITH**

**HYPERTENSION** Hypertension (high blood pressure) cases are flooding the doctors offices. Fortunately, this

condition can be improved and even reversed with good nutrition and exercise. Your blood pressure is highest when your heart beats, pumping the blood. This is called systolic pressure (top number). When your heart is at rest or between beats, your blood pressure falls. This is the diastolic pressure (bottom number).

--120/80 or lower is normal blood pressure

--140/90 or higher is high blood pressure (hypertension)

An example of pre-hypertension would be a reading of 130/85. High blood pressure many times has no symptoms, but it can cause serious problems such as stroke, heart failure, heart attack and kidney failure. You can control high blood pressure through exercise, healthy eating and medication if needed.

If you have hypertension, you can follow a pretty regular exercise routine. But, you do need to take some precautions:

1) Do your resistance exercises in a seated or standing position to avoid dizziness.

2) Breathe during exercises. This seems like a no-brainer, but I constantly remind clients to breathe properly.

3) If you are feeling light-headed, before a workout, it is safest to check your blood pressure.

4) Don't over-grip when lifting weights and do not clench your fists while running or exercising.

5) Progress the intensity of your cardio exercise when clearance from your doctor is given.

6) Always pay attention to "your heart-rate response" to certain exercises. Every one is unique and there is no one-size-fits-all formula for exercise.

Remember, fitness is a lifestyle choice and should be a permanent commitment for you. Don't rush the results when your health is at stake!

<http://tinyurl.com/cu6ozx>



## **AGING - WHAT TO EXPECT AS YOU GET OLDER**

*Find out what's considered normal to aging*

Looked in the mirror lately only to find a few more wrinkles and gray hairs? Those are just a few of the changes you're likely to notice as you get older. But what exactly is going on with your body? Here's a list of the natural changes

you can expect as you age.

### **CARDIOVASCULAR SYSTEM**

Over time, your heart muscle becomes less efficient, working harder to pump the same amount of blood through your body. In addition, your blood vessels lose elasticity. Hardened fatty deposits may form on the inner walls of your arteries (atherosclerosis), narrowing the vessels. The natural loss of elasticity, in combination with atherosclerosis, makes your arteries stiffer, causing your heart to work even harder to pump blood through them. This can lead to high blood pressure (hypertension).

### **BONES, MUSCLES AND JOINTS**

Your bones reach their maximum mass between ages 25 and 35. As you age, your bones shrink in size and density. One consequence is that you might become shorter. Gradual loss of density weakens your bones and makes them more susceptible to fracture. Muscles, tendons and joints generally lose some strength and flexibility as you age.

### **DIGESTIVE SYSTEM**

Swallowing and the motions that automatically move digested food through your intestines slow down as you get older. The amount of surface area within your intestines diminishes slightly. The flow of secretions from your stomach, liver, pancreas and small intestine may decrease. These changes generally don't disrupt your digestive process, so you may never notice them. But you might notice more constipation.

### **KIDNEYS, BLADDER AND URINARY TRACT**

With age, your kidneys become less efficient in removing waste from your bloodstream. Chronic conditions such as diabetes or high blood pressure and some medications can damage your kidneys further.

About one in 10 people age 65 and older has experienced a loss of bladder control (urinary incontinence). Incontinence can be caused by a number of health problems, such as obesity, frequent constipation and chronic cough.

Women are more likely than men to have incontinence. Women who've been through menopause might experience stress incontinence as the muscles around the opening of the bladder (sphincter muscles) lose strength and bladder reflexes change. As estrogen levels decline, the tissue lining the tube through which urine passes (urethra) becomes thinner. Pelvic muscles become weaker, reducing bladder support.

In older men, incontinence is sometimes caused by an enlarged prostate, which can block the urethra. This makes it difficult to empty your bladder and can cause small amounts of urine to leak.

### **BRAIN AND NERVOUS SYSTEM**

The number of cells (neurons) in your brain decreases with age, and your memory becomes less efficient. However, in some areas of your brain, the number of connections between the cells increases, perhaps helping to compensate for the aging neurons and maintain brain function. Your reflexes tend to become slower. You also tend to become less coordinated and may have difficulty with balance.

### **EYES**

With age, your eyes are less able to produce tears, your retinas thin, and your lenses gradually turn yellow and become less clear. In your 40s, focusing on objects that are close up may become more difficult. Later, the colored portions of your eyes (irises) stiffen, making your pupils less responsive. This can make it more difficult to adapt to different levels of light. Other changes to your lenses can make you sensitive to glare, which presents a problem when driving at night. Common

conditions that affect aging eyes include cataracts, glaucoma and macular degeneration.

### **EARS**

Hearing loss is one of the most common conditions affecting adults who are middle-aged and older. About half of all people older than age 85 experience hearing loss. Over the years, noises can damage the sensory hair cells of your inner ears.

Also, the walls of your auditory canals thin, and your eardrums thicken. You may have difficulty hearing high frequencies. Some people find it difficult to follow a conversation in a crowded room. Changes in the inner ear or in the nerves attached to it, earwax buildup and various diseases can all affect your hearing.

### **TEETH**

How your teeth and gums respond to age depends on how well you've cared for them over the years. But even if you're meticulous about brushing and flossing, you may notice that your mouth feels drier and your gums have pulled back (receded). Your teeth may darken slightly and become more brittle and easier to break.

Most adults can keep their natural teeth throughout their lives. But with less saliva to wash away bacteria, your teeth and gums become slightly more vulnerable to decay and infection. If you've lost most or all of your natural teeth, you might use dentures or dental implants as a replacement.

Some older adults experience dry mouth (xerostomia), which can lead to tooth decay and infection. Dry mouth can also make speaking, swallowing and tasting difficult. Oral cancer is more common among older adults. Your dentist checks for oral cancer when you go for regular cleanings and checkups.

#### **OKAY, WHAT'S NEXT?**

Counting your steps. NIH et.al. set a goal of 10,000 steps a day, but don't let that scare you. The only number that counts right now is the number of steps you take today.

If you stay home, you may walk 1,000 steps. If you're out, you may walk 4,500 steps. The rewards begin when you add more steps to your day.

To find out how many steps you walk daily, you can wear a step counter or pedometer—an inexpensive tool that can satisfy your curiosity and encourage you to walk just a little farther. And with a pedometer, every morning you return to 0 and get a fresh start.

**SKIN, NAILS AND HAIR**

With age, your skin thins and becomes less elastic and more fragile. You'll likely notice that you bruise more easily. Decreased production of natural oils may make your skin drier and more wrinkled. Age spots can occur, and small growths called skin tags are more common. Your nails grow at about half the pace they once did. Your hair may gray and thin. In addition, you likely perspire less — making it harder to stay cool in high temperatures and putting you at increased risk of heat exhaustion and heat stroke.

How fast your skin ages depends on many factors. The most significant factor is sun exposure over the years. The more sun your skin has been exposed to, the more damaged it may be. Smoking adds to skin damage, such as wrinkles. Skin cancer also is a concern. Your risk of skin cancer increases as you age.

**SLEEP**

Sleep needs change little throughout adulthood. If you need six hours of sleep nightly, chances are you'll always need six hours — give or take 30 minutes. However, as you age, you'll likely find that you sleep less soundly, meaning you'll need to spend more time in bed to get the same amount of sleep. By age 75, some people wake up several times each night.

**WEIGHT**

As you age, maintaining a healthy weight — or losing weight if you're overweight — may be more difficult. Your metabolism generally slows, meaning that your body burns fewer calories. Calories that were once used to meet your daily energy needs instead are stored as fat. Your level of activity may decrease, resulting in unwanted weight gain.

Healthy changes can improve quality of life as you age

If you think you've already done too much damage to yourself to hope for a long life, think again. Researchers say it's never too late to adopt a healthy lifestyle. For example, if you quit smoking now, your risk of heart disease begins to fall almost immediately.

Living a healthy lifestyle can improve how you age. Try the following:

- Stop smoking.
- Eat a healthy diet full of fruits, vegetables and whole grains.
- Exercise for at least 30 minutes most days of the week.
- Maintain a healthy weight.
- Get enough sleep so that you wake feeling rested.

Follow your doctor's guidance for checkups and health screenings.

<http://tinyurl.com/c3x59y>

**HOW DEPRESSION HARMS YOUR HEART**

There is little doubt that depression is bad for the heart. Much as fatty diets, cigarette smoking, inactivity and obesity

are linked with an increased risk of heart disease, recent evidence suggests that mental health has a similarly powerful impact. The question has always been, why?

Now, researchers provide the first data that may explain the association. Published in the Journal of the American Medical Association, the findings suggest that depression contributes to heart disease indirectly — by fostering unhealthy behaviors like smoking — rather than directly. Certain biological factors linked with depression, such as inflammation and the levels of brain chemicals like serotonin, may play some role in heart health, researchers say, but the new study found that the factors that most increased heart disease risk in depressed people were the ones you might expect: lack of exercise and smoking.

"We looked at all sorts of biological markers that could

potentially play a role in linking depression and heart disease," says Dr. Mary Whooley, an internist at the VA Medical Center in San Francisco, and lead author of the new study. "We measured all of those, and found that they did not explain the association. All we needed to do was to ask the patient how much they were exercising to be able to explain the link."

Whooley studied more than 1,000 patients with heart disease at the VA for nearly five years. The patients filled out regular questionnaires to determine their mood state, and were asked yearly to report on any heart-related events. Researchers took blood and urine samples to measure their levels of omega-3 fatty acids, cortisol and the inflammatory marker

C-reactive protein, as well as the neurotransmitters serotonin and norepinephrine — all agents that may be involved in both depression and heart disease. In all, about 20% of the participants reported depressive symptoms; over five years, those patients had a 50% higher rate of additional heart problems, compared with their non-depressed peers.

Whooley's team studied the depressed group further. Researchers systematically adjusted for each potential risk factor to figure out whether it was mediating the link between depression and heart disease. Physiological factors, such as serotonin levels or CRP, for example, appeared not to have much impact. But when researchers adjusted for physical activity — that is, when they analyzed the data by assuming identical levels of exercise in both depressed and non-depressed patients — the difference in heart disease risk between the groups disappeared. Indeed, inactivity among the depressed patients gave them a 44% greater risk of having a heart event than people who were not depressed, accounting for nearly all of the depressed patients' 50% higher risk. Picking up the remainder of the increased risk was cigarette smoking.

**SET YOUR OWN GOALS**

Walk for ten minutes and see how many steps you have taken. What is your goal for the number of steps to walk in 10 minutes? Some people set a goal of walking 1,000 steps in 10 minutes. (Whew!)

There are 2,000 steps in one mile. Once you know how many steps you usually walk daily, you can set a goal. Maybe you want to add 50 steps (or 100) to your daily total—choose a number that you know you can do.

Think of this: Walking 100 steps takes one or two minutes. Tell yourself what a good walker you are. Progress, even in tiny steps is energizing.

The findings suggest that the effect of depression on heart health may have less to do with changes in hormones or other biochemical pathways, and more to do with behavior. Compared with other people, notes Whooley, the depressed are less healthy overall — they're less likely to exercise or take their heart medications, and are more likely to smoke. The relationship also feeds back on itself; previous studies show that exercise not only improves cardiovascular health, but also elevates mood and can ease depression.

The study may even help to explain why treating depression alone — rather than addressing patients' mental state and accompanying behavioral changes — has not proven successful in reducing the risk of heart disease. "We have always looked at certain behaviors like physical activity and smoking in isolation with respect to their effect on heart disease," says Dr. Clyde Yancy, president-elect of the American Heart Association and medical director of the heart and vascular institute at Baylor College of Medicine. "But one or both could be manifestations of depression, which in turn leads to heart disease."

And while researchers are intrigued by the question of which comes first — depression or heart disease — the study points out that, in practice, it doesn't really matter. "It's hard to tease out which came first," says Whooley. "But our bottom line is that regardless of which is coming first, this study introduces a new pathway that might get at that risk, by focusing not so much on depression itself, but by getting at the behaviors that go along with depression." It may be easier to take Prozac than to take a jog, but as the study suggests, it may not always be as effective.

<http://tinyurl.com/5qbw6na>



## EMERGENCY OXYGEN DELIVERY PATIENTS WITH ASTHMA AND COPD

This article outlines recommendations in British Thoracic Society guidance on oxygen therapy in patients with asthma and COPD

### ABSTRACT

This is the second of a two-part unit on the use of emergency oxygen in adults. Part 1 outlined the main recommendations of the recently published British Thoracic Society guidance. It also examined managing breathlessness in non-hypoxaemic patients, including those with lung cancer.

This part discusses some potential changes to clinical practice and provides practical examples on administering oxygen to patients with acute asthma and COPD. It also outlines issues around administering oxygen that lack evidence and need good-quality studies.

### LEARNING OBJECTIVES

***Know how to manage acute exacerbations of asthma in hypoxaemic patients.***

## ***Understand how to manage hypoxaemic patients with COPD.***

### INTRODUCTION

Part 1 of this unit addressed some of the central terms associated with oxygen therapy. It also discussed evidence-based modalities for managing breathlessness in adult patients, as this therapy has been found to be of little benefit in these cases.

This part discusses some important changes to oxygen therapy and the need for change in clinical practice and local policy. In addition, it examines using this therapy for adults with acute asthma and those with COPD. It draws on current guidelines on managing asthma and COPD exacerbations to ensure the most up-to-date information is given (Scottish Intercollegiate Guidelines Network <<http://www.sign.ac.uk>> and BTS <<http://www.brit-thoracic.org.uk>>, 2008; BTS Standards of Care Committee, 2004).

### OXYGEN THERAPY AND ASTHMA

The SIGN and BTS (2008) asthma guideline contains completely revised sections on diagnosis, pregnancy, asthma that is difficult to manage and updated information on pharmacological and non-pharmacological management.

The section on treatment for acute asthma in adults suggests that higher concentrations of inspired oxygen may be needed. When high-flow oxygen is given, it is necessary to ensure that high-flow masks such as Hudson or MC masks are used so the desired concentration of inspired oxygen can be reached.

This advice is confirmed in the emergency oxygen use guideline (O'Driscoll et al, 2008). It also gives additional information for critically ill patients on the need for higher concentrations of oxygen (60–90%) when using reservoir masks (non-rebreathing masks).

Oxygen therapy for acute asthma aims to achieve oxygen saturations of at least 92%. However, the emergency oxygen guidance suggests a range of

94–98% for all situations if possible. When adults with severe acute asthma need nebulised medications, often described as wet nebulisation, the guidance recommends that these are delivered via oxygen-driven nebulisers.

The guideline also includes an algorithm for clinical management of adults with severe acute asthma in A&E, and this may help healthcare professionals to provide optimal care at this very challenging and critical time for patients. Oxygen therapy and COPD

People with COPD have different pathophysiology compared with those with asthma. In particular, people with

### STEP UP

You'll be stronger after several weeks of walking. Check again and see how long it takes you to walk 500 steps. Can you walk 500 more steps tomorrow? Is that too many for this week? Do you want to add 200 steps to your goal this week? You are competing against yourself, but you always win!

Listen to your body. Taking small steps toward a large goal is the only way to get there.

Today will come and go whether you walk or not. But walking each day of this year will give you some experiences that you cannot have by watch by watching TV or surfing the internet.

COPD often experience exacerbations with decreasing lung function after each episode (Wedzicha and Donaldson, 2003).

An exacerbation is the sustained worsening of patients' symptoms such as breathlessness, cough, increased sputum production and change in sputum colour (BTS Standards of Care Committee, 2004).

The outcomes for these patients can be catastrophic after hospital discharge, with 34% being readmitted and 14% dying within three months (BTS Standards of Care Committee, 2004).

In patients with COPD who are experiencing an exacerbation, the guidance recommends that they be given oxygen therapy via a venturi mask at either 28% with flow rate of 4L per minute or 24% with a flow rate of 2L per minute (O'Driscoll et al, 2008).

The target level in the BTS COPD guidelines indicates that an oxygen saturation level of 90% or above should be achieved and maintained with oxygen therapy. This level of saturation in the COPD guideline is consistent with the emergency oxygen one, which recommends that a range of 88–92% as acceptable (O'Driscoll et al, 2008). In addition, the oxygen guidance highlights the importance of assessing each individual patient and analysing arterial blood gas measurements in conjunction with their clinical history.

Furthermore, in patients with COPD there may be some who have had an episode of hypercapnic respiratory failure and high oxygen concentrations may worsen their condition. Although COPD patients with hypercapnic respiratory failure are not common (around 10%) (Plant et al, 2000), it is important to identify such people as they need specific precautions while receiving low concentrations of oxygen therapy. The guidance also recommends oxygen alert cards for patients with high-risk conditions such as kyphoscoliosis, respiratory failure due to neuromuscular conditions or known type 2 respiratory failure. These patients should be instructed to show ambulance and A&E staff these alert cards to ensure safe and correct prescription and administration of oxygen therapy.

The oxygen guideline also includes detailed information and working examples of oxygen prescription charts as well as examples of specific respiratory charts that incorporate patient observations such as respiratory rates with oxygen saturation values and oxygen therapy details.

Other practical issues

Both those with asthma and those with COPD can develop mucous plugging and there is little evidence that humidification with high-flow oxygen is effective and the oxygen guideline recommends that a bubble bottle should not be used (O'Driscoll et al, 2008). However, single doses of nebulised normal saline (sterile isotonic normal saline ampoules) have been shown to

help in sputum clearance and reduce breathlessness in patients with COPD (Khan and O'Driscoll, 2004; Poole et al, 1998).

A recurring theme in the BTS oxygen guideline is the use of the appropriate device and flow rate to achieve the target oxygen saturation range. For those with asthma and COPD, nasal cannulae may be used to deliver the required percentage of oxygen in an acute situation after the initial phase of treatment. This guidance highlights the impact of patients' breathing patterns on oxygen flow rates and other considerations when using nasal cannulae. We would advise all nurses to read this important section to ensure optimal use of nasal cannulae.

#### FURTHER RESEARCH

To integrate this guideline into local policy, it may be necessary to re-evaluate existing policies that incorporate oxygen therapy, such as those on caring for patients with asthma or COPD.

O'Driscoll et al (2008) suggested staff education as the vehicle to enhance clinical implementation of the guidance.

However, the best method for educating staff is unclear, since there are many and diverse clinical areas where oxygen therapy is administered. This is a potential area of further research for nurses.

Furthermore, the BTS guidance on emergency oxygen use also identifies a substantial list of issues for further research. Many of these topics could be undertaken by nurses with research expertise to ensure rigorous studies that produce sound clinical evidence.

#### Conclusion

The new BTS guideline on emergency oxygen use in adults provides recommendations that are consistent with current asthma and COPD guidance. It also provides more detailed information on assessing patients, oxygen prescription and administration, and monitoring and maintaining target saturations.

The diagnoses of asthma and COPD differ and so do prescriptions for oxygen therapy, as each diagnostic group and individual patients have their own physiological and pathophysiological needs. The emergency oxygen guideline provides a list of potential research questions, some of which nurses with research expertise may consider undertaking.

Finally, we would recommend that all nurses read the new BTS guidelines, irrespective of their clinical area, to ensure that their practice stays up to date. <http://tinyurl.com/cttrr2>



#### "POLYPILL" PROMISING IN CUTTING HEART RISKS-STUDY

Bundling three older blood-pressure medicines, a cholesterol-lowering drug and aspirin into a single pill shows

#### IMPORTANT FACTS

- ▶ Thin people are not automatically fit. They need to walk too.
- ▶ You can be overweight and still be fit.
- ▶ Overweight people who walk can be healthier than thin people who don't.

#### SIT DOWN

If you cannot walk on land or water, try walking while sitting in a sturdy chair without arms. Raise your knees as high as you can and keep your spine tall and your chin up. Point and flex your feet.

Playing music helps you get the rhythm of walking and can keep you moving.

promise as a way to reduce heart disease, new research showed on Monday.

A 2,053-patient, Indian clinical trial marked the largest study to evaluate such a "polypill" and test whether it leads to meaningful changes in heart risk factors, according to researchers presenting the study at the American College of Cardiology scientific meeting in Orlando.

"Before this study, there were no data about whether it was even possible to put five active ingredients into a single pill, in terms of feasibility, the bioavailability of different agents and possible interactions," said Salim Yusuf of the Population Health Research Institute at McMaster University, which presented the data. "We found that it works."

Cardiologists have theorized about using polypills for years to prevent heart disease -- and its potential has been aided by the fact that many heart drugs have lost patent protection and are available as generics.

Based on the reduction in risk factors seen in the trial, Yusuf projected the polypill could reduce heart disease by 60 percent and stroke by 50 percent.

The pill was well-tolerated and showed no evidence of problems with the increasing number of active components. In fact, the effects of some ingredients counteracted side effects of others, Yusuf said.

The polypill in the study was manufactured by privately held Cadila Pharmaceuticals of India, which also sponsored the study. Cadila's polypill is a capsule, with the brand name, Polycap.

It incorporated low doses of three blood-pressure drugs from different classes -- thiazide, atenolol and ramipril -- as well as the statin cholesterol-lowering drug Zocor and aspirin.

Dr. Udho Thadani, a professor of medicine at The University of Oklahoma Health Sciences Center, said cardiac patients are often juggling several medicines so reducing their pill load could help them stay on their drugs while also potentially saving money. "I think it will be great for compliance and also bring the cost down," said Thadani, who was attending the cardiology conference.

Participants in the Indian study were randomized to the polypill or one of eight other arms which included one of the individual medicines or combinations of them. They were 45 to 80 years old without heart disease but with at least one risk factor for developing cardiovascular problems.

While the pill proved as good as its individual components in lowering blood pressure and heart rates, it fell slightly short of lowering bad LDL cholesterol as much as Zocor alone.

The authors of the study, also published in the journal *Lancet*, described the cholesterol difference as borderline significance. Yusuf said the study would help inform the design of larger, more definitive studies as well as developing appropriate combinations.

Michael Ross, president of Cadila's U.S. division, said the company had not yet determined its next step for developing its polypill, but was pleased the formulation could work.

"We're just very excited about the outcome of the study," Ross said.

<http://tinyurl.com/co4zdn>



## SMOKERS' COPD RISK IS GENETIC

It's well known that puffing on cigarettes can eventually leave you out of puff. But why do a quarter of long-term smokers develop serious breathing problems, when others do not? New research published *BioMed Central's* open access journal *Respiratory Research* has found that the answers may lie in a smoker's genetics, which affect their chances of developing chronic obstructive pulmonary disease (COPD) in later life.

US-based researchers Alireza Sadeghnejad, Jill Ohar, Eugene Bleecker and colleagues from the Wake Forest School of Medicine and Saint Louis University, looked at a disintegrin and metalloprotease (ADAM) gene known as ADAM33 in 880

long-term heavy smokers. Located on chromosome 20, ADAM33 has been linked with asthma in previous studies. This new study is unique in comparing long-term smokers with COPD versus a control group of long-term smokers without COPD.

The researchers found five single nucleotide polymorphisms (SNPs) -- human DNA sequence variations -- in ADAM33 that were more frequent in the COPD group than in the group of smokers without COPD. One SNP, known as S1, had a particularly strong link to lung abnormalities. "Functional studies will be needed to evaluate the biologic significance of these

polymorphisms in the pathogenesis of COPD," according to the authors.

COPD is characterized by progressive decline in lung function, and encompasses chronic bronchitis and emphysema. Almost 90% of COPD is caused by long-term cigarette smoking, yet only 25% of chronic tobacco smokers will go on to develop COPD.

<http://tinyurl.com/cpdzec>



## NEW CLASS OF ANTI-INFLAMMATORY DRUGS DEVELOPED

In the treatment of pain, inflammation and fever, non-steroid anti-rheumatic drugs (NSAR) such as acetylsalicylic acid - more commonly known as Aspirin - or Ibuprofen have always been popular choices. However, had they been tested using today's stringent criteria, many of these drugs would not have passed the clinical trial stage, due to the potential risks and side effects they entail.

This suggests the need for more innovative thinking in this area of drug therapy. One such new approach has been developed in Manfred Schubert-Zsilavecz's laboratory at the

### WHEN?

The best time to walk is about 45 minutes after meals. It burns some of the calories you've eaten and lowers blood sugar levels. Walking for 30 minutes burns about 200 calories and builds muscle. Muscle is good because it continues to burn calories even at rest. You can do three 10-minute walks or one 30-minute walk. The rewards are the same. Keep searching for walking opportunities and just do it!

Goethe University, using chemical substances belonging to the dual mPGES-1/5-LO-Inhibitors. Oliver Werz's group at Tübingen has characterized the substances at the molecular/pharmacological level. Their research results now form the basis of a joint patent application, and a publication in the renowned "Journal of Medicinal Chemistry" (Koeberle et al, J Med Chem (2008), Nov 19. [Epub ahead of print]).

Aspirin and the related NSAR drugs act on the arachidonic acid biosynthesis cascade, which plays a central role in the onset of pain and inflammation. They thus prevent the synthesis of specific prostaglandins, which are essential for vital bodily functions. When the drugs are taken over a long period of time, the unselective inhibition of this essential pathway may result in unwanted side effects on the gastrointestinal tract and the cardiovascular system. As Schubert-Zsilavec explains: "By comparison, our class of drugs/substances acts on a later stage in the arachidonate cascade, and is more selective. We therefore can expect it to have considerably fewer side effects."

A further advantage of this new class of drugs is that they not only specifically target the biosynthesis of prostaglandin, but also of leukotrienes, which are metabolites in the second important branch of the arachidonate cascade and play a central role in allergic and inflammatory reactions. This double attack promises more effective results for these new substances.

Gerd Geisslinger, Speaker of the LiFF-Initiative and President of the Center for Drug Research, Development and Safety (ZAFES) explains: "This is a most important success for our newly established Lipid Signalling Research Centre, which was established only a short time ago under the LOEWE initiative, funding research in the German state Hesse."



## FRUIT EXTRACT SHOWS PROMISE AS WEIGHT-LOSS AID

An extract derived from a West African fruit may help overweight people shed pounds and lower their cholesterol, a new study suggests. The extract comes from *Irvingia*

*gabonensis*, also known as African mango, a fruit commonly eaten in West Africa. Lab research has shown that extracts from the plant's seed may inhibit body fat production, through effects on certain genes and enzymes that regulate metabolism.

For the current study, researchers at the University of Yaounde in Cameroon randomly assigned 102 overweight adults to take either the plant extract or a placebo twice a day for 10 weeks. The study participants did not follow any special diet and were told to maintain their normal exercise levels.

By the end of the study, the extract group had lost a significant amount of weight -- an average of roughly 28 pounds -- while the placebo group showed almost no change. At the same time, they showed declines in "bad" LDL cholesterol and blood sugar levels.

Dr. Julius E. Oben and his colleagues report the findings in the online journal *Lipids in Health and Disease*. The Fairfield, California- based Gateway Health Alliances, Inc. supplied the *Irvingia gabonensis* extract and partially funded the research.

The study is the first well-controlled clinical trial of the extract's effectiveness as a weight-loss aid, the researchers note. But the findings, they write, suggest that *Irvingia gabonensis* could offer a "useful tool" for battling the growing worldwide problem of obesity and its related ills.

A few patients on the extract reported side effects, including headaches, sleep problems and gas,

but the rates were similar in the placebo group.

The findings, Oben's team concludes, should "provide impetus for much larger clinical studies."

SOURCE: *Lipids in Health and Disease*, online 3/2/09

### WHY?

- ▶ Walking is strong medicine. It keeps your body fit.
- ▶ Walking keeps you younger in mind and body.
- ▶ Walking can stamp out stress.
- ▶ Walking increases the muscles' demand for oxygen, which stimulates the growth of new blood vessels. This improves your circulation, which helps to brighten your complexion and improve your memory, too.
- ▶ This also helps if you tend to get cramps in your legs while walking. Stop until the pain passes, then walk on.
- ▶ Walking helps prevent diabetes. If you already have diabetes, you can control it better by walking every day.
- ▶ Walking prevents heart attacks and strokes. It lowers blood pressure, cholesterol and triglycerides.

<http://tinyurl.com/5vzg8y>

## CHANGING THE PRICE OF FOODS MAY SIGNIFICANTLY AFFECT AMERICANS' WEIGHT

A new article published in *The Milbank Quarterly* explores how food prices can affect weight outcomes, revealing that pricing interventions can have a significant effect on obesity rates.

Raising the prices of less healthy foods (e.g., fast foods and sugary products) and lowering the prices of healthier foods (e.g., fruits and vegetables) are associated with lower body weight and lesser likelihood of obesity. Children and adolescents, the poor, and those already at a higher weight are most responsive to these changes in prices.

Small taxes on unhealthy food items or small subsidies for healthy foods are not likely to produce substantial changes in BMI or obesity prevalence while nontrivial pricing interventions may have a measurable effect on Americans' weight outcomes.

"This review provides evidence about the potential effectiveness of using food pricing policies to affect weight outcomes, including the potential impact of excise and other taxes on less healthy products and of subsidies for more healthy products," the authors conclude.

This is the first comprehensive review of evidence on the effects of food prices on weight outcomes. Lisa Powell and Frank J. Chaloupka of the University of Illinois at Chicago assessed research published between 1990 and 2008 that involved weight and BMI in combination with pricing and taxes. <http://tinyurl.com/d7mz4q>



## EVEN A TINY BIT OF FLAB RAISES HEART FAILURE RISK *New study finds hazards even for those who were modestly overweight*

Even a little bit of extra weight can raise the risk of heart failure, according to a U.S. study published on Monday that calculated the heart hazards of being pudgy but not obese.

It comes as little surprise that obesity makes a person much more apt to get heart failure, a deadly condition in which the heart is unable to pump enough blood throughout the body.

But researchers who tracked the health of 21,094 U.S. male doctors for two decades found that even those who were only modestly overweight had a higher risk — and it grew along with the amount of extra weight.

In men who are 5 feet 10 inches tall, for every seven pounds (3.2 kg) of excess body weight, their risk of heart failure rose on average by 11 percent over the next 20 years, the researchers wrote in the journal *Circulation*.

The average age of the men at the outset of the so-called Physicians' Health Study was 53. During the study, 1,109 of them developed heart failure.

Overall, the risk of heart failure increased by 180 percent in men who met the definition of obesity according to their body mass index (BMI of 30 and higher), and by 49 percent in men who met the definition of overweight (a BMI of 25 to 30).

Heart failure, also known as congestive heart failure,

contributes to 300,000 deaths each year in the United States.

Conditions such as coronary artery disease and high blood pressure can leave the heart too weak or stiff to fill and pump blood efficiently.

Dr. Satish Kenchaiah of Brigham and Women's Hospital in Boston and colleagues also looked at how physical activity affected heart failure risk.

"The lean and active group had the lowest risk and the obese and inactive group had the highest risk," Kenchaiah said in a telephone interview.

"As far as vigorous physical activity is concerned, even if somebody said they exercised one to three times per month — which is a very low level of exercise — they had an 18 percent reduction in the risk of heart failure after accounting for all other established risk factors," Kenchaiah added.

The benefit of exercise in cutting heart failure risk was seen in lean, overweight and obese men, the researchers found. But regardless of the level of activity, higher body mass index also meant higher heart failure risk. <http://tinyurl.com/85qrp5>



## GREEN TEA ASIAN STIR-FRY

- 1/2 cup brewed Lipton® Green Tea Bags, any variety
- 2 Tbsp. reduced sodium soy sauce
- 2 Tbsp. honey
- 2 Tbsp. Bertolli® Classico™ Olive Oil
- 1 lb. boneless, skinless chicken breasts, thinly sliced or 1 lb. pork tenderloin, thinly sliced
- 1 bag (16 oz.) frozen Oriental or stir-fry vegetables

### IT ALL ADDS UP

Keep in mind that all exercise adds up.

Health and fitness experts now say that people can get their government-recommended half hour of physical activity a day in short spurts. So if you have an extra 10 to 20 minutes at lunch, consider taking a brisk walk outside. Even brief bouts of activity, such as opting for the stairs instead of the elevator or walking a memo to a colleague down the hall instead of e-mailing it, help.

Little exercise breaks during the day are also important in preventing common work-related pains, such as back aches.

Prolonged sitting is a risk factor for herniated disks. Taking short exercise and stretch breaks alleviates pressure on the disks and nourishes them, in addition to getting muscles throughout the body moving.

Aim to sit no longer than 50 minutes at a time. Then take a few minutes to get up and get your body moving through a short walk or activities like side bends and arm or ankle circles. Stretching is a good idea because muscles get short and tight (particularly those of the neck, wrist, back, hip, shoulders, chest and the hamstrings) when we sit hunched over at our desks for long periods. Consider doing some of these exercises before work too, as a warm-up.

Combine tea, soy sauce and honey in small bowl; set aside. Heat Olive Oil in 12-inch skillet over medium-high heat and cook chicken, stirring frequently, 5 minutes or until chicken is thoroughly cooked. Remove chicken and set aside. Add vegetables and tea mixture to same skillet. Bring to a boil over high heat. Reduce heat and simmer 3 minutes or until vegetables are almost tender. Return chicken to skillet; cook 1 minute or until heated through.

\*Brew 2 Lipton® Green Tea Bags in 1/2 cup boiling water for 1-1/2 minutes.

This recipe is an Eat Smart™ recipe. Eat Smart™ recipes can help reduce your intake of saturated fats, trans fats, sugars, sodium and cholesterol.

Cost per recipe\*: \$9.43

Cost per serving\*: \$1.57

\*Based on average retail prices at national supermarkets.

Serves: 6  
Preparation Time: 10 Minute(s)  
Cook Time: 10 Minute(s)

Nutrition Information per serving  
Calories 170, Calories From Fat 50, Total Fat 6g, Saturated Fat 1g, Trans Fat 0g, Cholesterol 45mg, Sodium 240mg, Total Carbohydrate 10g, Dietary Fiber 2g, Sugars 8g, Protein 19g, Vitamin A 6%, Vitamin C 20%, Calcium 2%, Iron 6%



## TEA POACHED TILAPIA

2 cups boiling water  
2 Lipton® Orange & Spice Flavored Black Tea Bags  
1 green onion, coarsely chopped  
2 to 4 thin slices fresh ginger (about 2-inch each)  
1-1/4 lbs. tilapia, cod or flounder fillets

Pour water over Lipton® Orange & Spice Flavored Black Tea Bags in 2-cup glass measuring cup and brew 5 minutes. Remove Tea Bags; set aside. Bring tea, green onion and ginger to a boil over high heat in 12-inch skillet. Add fillets. Reduce heat to low and simmer covered 6 minutes or until fish flakes with a fork. Remove fillets to serving platter and sprinkle, if desired, with chopped green onion.

This recipe is "Best Life" approved. Best Life is a trademark owned by Best Life Corp. Learn more about the Best Life program at [HTTP://www.thebestlife.com](http://www.thebestlife.com)

Serves: 4  
Preparation Time: 5 Minute(s)

Cook Time: 12 Minute(s)

Nutrition Information per serving  
Calories 140, Calories From Fat 20, Total Fat 2.5g, Saturated Fat 1g, Trans Fat 0g, Cholesterol 70mg, Sodium 75mg, Total Carbohydrate 1g, Dietary Fiber 0g, Sugars 0g, Protein 29g



## TASTY TEA BAKED APPLES

1 cup water  
4 Lipton® Cup Size Tea Bags  
4 large baking apples (such as Rome or Golden Delicious), cored  
1/4 cup firmly packed dark brown sugar  
1/4 cup chopped walnuts (optional)  
2 Tbsp. raisins (optional)  
1/4 tsp. ground cinnamon  
4 tsp. I Can't Believe It's Not Butter!® Spread

Preheat oven to 350°.

Bring water to a boil in 1-quart saucepan; remove from heat. Add Lipton® Cup Size Tea Bags and brew 3 minutes, dunking occasionally. Remove Tea Bags and squeeze; set aside. Peel top 1/3 of apples. Arrange apples, peeled end up in 8-inch square baking dish; set aside. Combine brown sugar, walnuts, raisins and cinnamon in small bowl. Evenly spoon walnut mixture into center of apples, then evenly top with Spread. Pour tea over and around apples. Bake uncovered, basting occasionally, 1 hour or until apples are tender.

Cost per recipe\*: \$4.11

Cost per serving\*: \$1.03

\*Based on average retail prices at national supermarkets.

Serves: 4  
Preparation Time: 10 Minute(s)  
Cook Time: 1 Hour(s) 10 Minute(s)

Nutrition Information per serving  
Calories 240, Calories From Fat 70, Total Fat 7g, Saturated Fat 1g, Trans Fat 0g, Cholesterol 0mg, Sodium 40mg, Total Carbohydrate 48g, Dietary Fiber 6g, Sugars 39g, Protein 2g, Vitamin A 6%, Vitamin C 15%, Calcium 4%, Iron 4%



Information in this newsletter is for educational purposes only. Always consult with your doctor first about your specific condition, treatment options and other health concerns you may have.



"I'm sorry, Mr. Dillman, but you're seven months behind on the payments for your pacemaker."

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