

EFFORTS



Emphysema Foundation For Our Right To Survive

Emphysema Takes Your Breath Away

August 2008

FEW WEB PHARMACIES ASK FOR PRESCRIPTIONS *85 percent of sites selling controlled drugs don't ask for order, study finds*

Despite new efforts to regulate Internet pharmacies, 85 percent of sites selling controlled drugs do not require a prescription, researchers reported on Wednesday.

Most orders filled by the 365 Internet pharmacies examined were for controlled substances, especially benzodiazepines like Xanax and Valium, according to the report by the National Center on Addiction and Substance Abuse at Columbia University in New York.

Researchers for CASA, which advocates against substance abuse, used search engines to find sites that sold certain controlled drugs. Dispensing controlled medication to patients without a doctor's prescription is illegal.

It is difficult to quantify how much these sites earn from prescription sales or determine how often they are used, said the center's chairman, Joseph Califano. One of the main problems is that such sites frequently open up for a short time then re-open under a different name. Still, teen surveys and focus groups with college students suggest many obtain prescription drugs through the Internet. "The Internet is a pharmaceutical candy store for teenagers and college students," Califano, a former U.S. health secretary, said in a telephone interview.

Tripling of teen abuse

"In the past few years, there has been a tripling of 12- to 17-year-olds that abuse prescription drugs. We know a lot of them get them over the Internet," he said. Just two of the 365 sites were certified by the National Association of Boards of Pharmacy, a professional organization representing the all state boards of pharmacy, the study showed. Of the sites not requiring prescriptions to buy controlled substances, 42 percent clearly stated that no prescription was needed.

The CASA report recommended that the United States negotiate treaties with other governments to shut down Internet trafficking of prescription drugs. It also called on Internet search engines like Yahoo Inc, Google Inc and Microsoft Corp's MSN.com to block advertisements from unlicensed and uncertified online pharmacies. An estimated 48 million people age 12 and older have abused prescription drugs in their lifetime, according to data from the National Institute on Drug Abuse.

In the past two years, eight states have passed laws regulating Internet pharmacies. In April, the U.S. Senate passed a bill that would require more stringent regulation of online pharmacies. It is now awaiting action in the House of Representatives. "We know of at least 18 people that have died due to overdoses from drugs purchased online through these rogue pharmacies and even more who have entered rehabilitation or suffered injuries due to these drugs," California Democratic Sen. Dianne Feinstein said in a statement. "Our Internet pharmacy legislation has passed the Senate. It's time for the House to take action and pass this important bill," she said.

<http://www.msnbc.msn.com/id/25609177/>



'GOOD' CHOLESTEROL DEMENTIA RISK *Too little of one type of cholesterol has been linked by research to memory loss and Alzheimer's disease.*

UK and French scientists studied 3,673 civil servants, revealing low levels of "good" cholesterol were associated with poor memory. Doctors might be able to uncover high-risk patients using blood tests, they said in a US heart journal.

But other experts said the study did not yet support larger diet trials aiming to boost levels. The relationship between levels of HDL, or "good", and LDL, or "bad" types of cholesterol is thought to be important in the development of other serious conditions such as heart disease and stroke. Higher levels of HDL, in particular, are believed to protect against damage to blood supply caused by the narrowing of the arteries.

There is also evidence that "good" cholesterol can influence the laying down of the beta-amyloid "plaques" that are a distinctive feature in the brains of Alzheimer's patients. This suggests that low HDL cholesterol might also be a risk factor for dementia. Regular exercise and eating less saturated fat, while eating more "healthy" fats such as olive oils, can boost levels.

The researchers, from University College London and the INSERM institute in France, used data from the Whitehall II trial - a collection of thousands of civil servants, to see what influence it might have over memory within a five-year period. They took blood samples at the start of the study, and gauged word recall with a simple test. That was repeated again at the

end of the study.

The researchers found that people with low levels of HDL were 53% more likely to suffer memory loss compared with the people with the highest levels of HDL. People with impaired memory have a much greater risk of going on to develop dementia later in life.

Early sign

Dr Archarna Singh-Manoux, who led the study, said: "Memory problems are key in the diagnosis of dementia. "This suggests that low HDL cholesterol might also be a risk factor for dementia." She said that doctors should be encouraged to monitor HDL levels in order to predict dementia risk.

However, an editorial in the same journal, *Arteriosclerosis, Thrombosis, and Vascular Biology*, by Dr Anatol Kontush and Dr John Chapman, from INSERM and the Universite Pierre and Marie Curie in Paris, said that the study did not prove that low HDL could cause memory loss, or high HDL protect against it. "Unfortunate results in large interventional trials with dietary antioxidants suggest that we should remain cautious when proposing therapeutic intervention," they wrote.

Dr Susanne Sorenson, from the Alzheimer's Society, said HDL cholesterol was believed to transport harmful cholesterol from the arteries back to the liver to be degraded. "This study shows that if there is not enough HDL to transport cholesterol and other lipids around the body, it can not only increase your risk of heart disease but also affect your memory and may increase your risk of getting Alzheimer's disease. "We know that controlling cholesterol in midlife is important if you are to reduce your risk of developing vascular dementia later and this may also be important for the development of Alzheimer's disease."

<http://news.bbc.co.uk/go/pr/fr/-/1/hi/health/7481818.stm>



FATTY FOODS AND MEMORY DECLINE

Type 2 diabetics are more likely to forget something after a high fat meal.

The study out of Canada involved 16 people age 50 and older who consumed three different meals. Their memory skills were then tested. Researchers found memories were more likely to falter after the high fat meal. However, when those same people ate that same meal and took 1000 milligrams of vitamin C and 800 IU of vitamin E, they scored about the same on the tests as when they were fed water alone.

The researchers believe fatty foods may lead to a mental decline because they can induce oxidative stress, a key factor in Alzheimer's disease and other memory problems. The vitamins may be helping to counteract those effects because of their antioxidant properties.

So, is it okay for diabetics to eat fatty foods if they just pop the vitamin pills along with their meal? The investigators believe a better tactic would be to eat healthy foods high in these vitamins instead.

"While our study looked at the pill form of antioxidants, we would ultimately want individuals to consume healthier foods high in antioxidants, like fruits and vegetables," study

author said Dr. Carol Greenwood was quoted as saying.

SOURCE: Nutrition Research, published online June 26, 2008



TRENDS IN TOTAL CHOLESTEROL SCREENING AND IN PRESCRIBING LIPID-LOWERING DRUGS IN GENERAL PRACTICE IN THE PERIOD 1994-2003

ABSTRACT (PROVISIONAL)

Background

General Practitioners (GPs) play a central role in controlling an important risk factor for cardiovascular diseases, i.e. cholesterol levels in serum. In the past few decades different studies have been published on the effect of treating hyperlipidemia with statins. Guidelines for treatment have been adopted. We investigated the consequences on the practice of GPs screening cholesterol levels and on the timing of starting statin prescription.

Methods

For this descriptive study, data from the Intego database were used, complemented with data from the electronic medical records (EMR) of 47 general practices in Flanders. GPs had not received special instructions for testing specific patients. For each patient the mean cholesterol level per year was calculated. A patient belonged to the group with lipid-lowering drugs if there was at least one prescription of the drug in a year in his EMR. Mixed model linear regression models were used to quantify the effect of covariates on total cholesterol values.

Results

In the period 1994-2003 total cholesterol was tested in 47,254 out of 139,148 different patients. Twelve percent of those tested took lipid-lowering medication. The proportion of patients with at least one cholesterol test a year, increased over a period of ten years in all age groups, but primarily for those over the age of 65. The mean cholesterol level decreased in the treated as well as in the non-treated group. Of the patients with a cardiovascular antecedent who were on lipid-lowering drugs in 2003, 56% had a cholesterol level [less than or equal to]199 mg/dl, 31% between 200-239 and 13% over 240 mg/dl.

Conclusions

The indications for testing and treating cholesterol levels broadened considerably in the period examined. In 2003 cholesterol was tested in many more patients and patients were already treated at lower cholesterol values than in previous years. Comparisons of cholesterol levels over different years should therefore be interpreted with caution as they are a reflection of changes in medical care, and not necessarily of efficacy of treatment.

Source: BioMed Central Ltd; BMC Family Practice 2008 target for cell-based therapy. This disease is associated with:

- 1) loss of resident reparative cells;
- 2) loss of the extracellular matrix that transmits pre-stress signaling;
- 3) and loss of pre-stress itself, the very signal required to trigger regenerative responses.

Although these factors represent obstacles to the development of regenerative therapeutic strategies for

emphysema, preliminary studies in our lab show that modulation of mesenchymal and epithelial cell proliferation using members of the fibroblast growth factor family complexed to carrier molecules in a biocompatible polymer can promote expansion of parenchymal tissues. The polymer scaffold, an air containing foam with mechanical properties similar to healthy lung tissue, effectively transmits stress to reparative/progenitor cells to promote proliferation and remodeling. Studies proposed here will test the hypothesis that therapeutic post-natal lung tissue growth in emphysema can be achieved

- by augmenting the lung's innate healing response using growth factors to direct endogenous reparative lung cells following a localized mild injury; and that
- the magnitude of this response can be modulated by altering pre-stress using concomitant bronchoscopic lung volume reduction therapy to increase transpulmonary pressures. We intend to advance this approach, known as pneumografting, into human trials under a physician-sponsored Investigation New Drug Application. <http://tinyurl.com/6k3mve>



UIC RESEARCHERS MAKE PROMISING FINDING IN SEVERE LUNG DISEASE

Researchers at the University of Illinois at Chicago have identified a novel function for an enzyme that plays a role in the tissue injury in acute respiratory distress syndrome, also known as ARDS. The finding offers a new therapeutic target for the prevention and treatment of lung inflammation and injury. The research will be published in the journal *Nature Immunology* later this year and online June 29.

ARDS is an often fatal complication of bacterial infections, blood transfusions, overdoses of some medications, or traumatic injury. According to the National Heart, Lung, and Blood Institute, it affects nearly 150,000 people each year in the United States. In ARDS, the lungs become swollen with water and protein, and breathing becomes impossible, leading to death in 30 percent to 40 percent of cases. There is no effective treatment.

It has previously been shown that the enzyme, called nonmuscle myosin light-chain kinase, or MYLK, plays a pivotal role in the disruption of the endothelial barrier -- a single thin layer of cells that line blood vessels -- which prevents water and protein from accumulating in tissues.

In addition to the disruption of the endothelial barrier and build-up of water in lungs in ARDS, a circulating blood cell, the neutrophil, "migrates into lung tissue and, when activated, can cause profound injury," said Jingsong Xu, assistant professor in pharmacology and dermatology and lead author of the paper.

Neutrophils are the most common type of white blood cells and are critical to what is called the innate immune response. They normally engulf and destroy invading bacteria and fungi and act as the first line of immune system defense. In acute respiratory distress syndrome, they misfire and attack healthy tissue.

"Although there have been many studies into how MYLK disrupts the endothelial barrier, no one has investigated how MYLK functions to regulate the neutrophil transmigration into tissues," said Xu. "We decided to look at this."

The researchers found that MYLK was essential to the movement of neutrophils through the endothelial barrier. It unleashes a cascade of molecular events inside the neutrophil that changes the cell's shape, which is necessary for adhesion and migration.

"To our surprise, the pathway was a completely novel one that did not involve the well-studied and expected target of (the enzyme)," Xu said. The unexpected finding of a novel pathway "opens up a completely new set of possible therapeutic targets for the prevention and treatment of this deadly disease," said Dr. Asrar Malik, distinguished professor, head of pharmacology and co-author on the paper.

Source: <http://www.uic.edu>.



WHAT GOES WRONG WITH THE LUNGS AND OTHER ORGANS IN CHRONIC OBSTRUCTIVE PULMONARY DISEASE?

The most important job that the lungs perform is to provide the body with oxygen and to remove carbon dioxide.

This process is called gas exchange, and the normal anatomy of the lungs serves this purpose well. The lungs contain 300 million alveoli whose ultrathin walls form the gas exchange surface. Enmeshed in the wall of each of these air sacs is a network of tiny blood vessels, the capillaries, which bring blood to the gas exchange surface. When a person inhales, air flows from the nose and mouth through large and small airways into the alveoli. Oxygen from this air then passes through the thin walls of the inflated alveoli and is taken up by the red blood cells for delivery to the rest of the body. At the same time, carbon dioxide leaves the blood and passes through the alveolar walls into the alveoli. During exhalation, the lung pushes the used air out of the alveoli and through the air passages until it escapes from the nose or mouth.

Gas Exchange

Inhaled air travels through the airways to the alveoli. Blood is pumped out of the heart through the pulmonary arteries to a network of capillaries that surround the alveoli. The oxygen of the inhaled air diffuses out of the alveoli into the blood while carbon dioxide in the blood moves into the alveoli to be exhaled. The oxygen-rich blood is returned to the heart through the pulmonary veins.

When COPD develops, the walls of the small airways and alveoli lose their elasticity. The airway walls thicken, closing off some of the smaller air passages and narrowing larger ones. The passageways also become plugged with mucus. Air continues to get into alveoli when the lung expands during inhalation, but it is often unable to escape during exhalation because the air passages tend to collapse during exhalation, trapping the "stale" air in the lungs. These abnormalities create two serious problems which affect gas exchange:

Blood flow and air flow to the walls of the alveoli where

gas exchange takes place are uneven or mismatched. In some alveoli there is adequate blood flow but little air, while in others there is a good supply of fresh air but not enough blood flow. When this occurs, fresh air cannot reach areas where there is good blood flow and oxygen cannot enter the bloodstream in normal quantities.

Pushing the air through narrowed obstructed airways becomes harder and harder. This tires the respiratory muscles so that they are unable to get enough air to the alveoli. The critical step for removing carbon dioxide from the blood is adequate alveolar airflow. If airflow to the alveoli is insufficient, carbon dioxide builds up in the blood and blood oxygen diminishes. Inadequate supply of fresh air to the alveoli is called hypoventilation. Breathing oxygen can often correct the blood oxygen levels, but this does not help remove carbon dioxide. When carbon dioxide accumulation becomes a severe problem, mechanical breathing machines called respirators, or ventilators, must be used.

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AGE-RELATED CHANGE IN THE LUNG FUNCTION AND EFFECT OF SMOKING AND SMOKING CESSATION

Adapted from 1984 Surgeon General's Report

Pulmonary function studies of large groups of people show that lung function--the ability to move air into and out of the lungs--declines slowly with age even in healthy nonsmokers. Because healthy nonsmokers have excess lung capacity, this gradual loss of function does not lead to any symptoms. In smokers, however, lung function tends to worsen much more rapidly. If a smoker stops smoking before serious COPD develops, the rate at which lung function declines returns to almost normal. Unfortunately, because some lung damage cannot be reversed, pulmonary function is unlikely to return completely to normal.

In smokers, lung function tends to worsen much more rapidly than in nonsmokers. COPD also makes the heart work much harder, especially the main chamber on the right side (right ventricle) which is responsible for pumping blood into the lungs. As COPD progresses, the amount of oxygen in the blood decreases which causes blood vessels in the lung to constrict. At the same time many of the small blood vessels in the lung have been damaged or destroyed as a result of the disease process. More and more work is required from the right ventricle to force blood through the remaining narrowed vessels. To perform this task, the right ventricle enlarges and thickens. When this occurs the normal rhythm of the heart may be disturbed by abnormal beats. This condition, in which the heart is enlarged because of lung problems, is called cor pulmonale. Patients with cor pulmonale tire easily and have chest pains and palpitations. If an additional strain is placed on the lungs and heart by a normally minor illness such as a cold, the heart may be unable to pump enough blood to meet the needs of other organs. This results in the inability of the liver and kidneys to carry out their normal functions which leads to swelling of the abdomen, legs, and ankles.

Another adjustment the body makes to inadequate blood oxygen is called secondary polycythemia, an increased

production of oxygen-carrying red blood cells. The larger than normal number of red blood cells is helpful up to a point; however, a large overpopulation of red cells thickens the blood so much that it clogs small blood vessels causing a new set of problems. People who have poor supply of oxygen usually have a bluish tinge to their skin, lips, and nailbeds, a condition called cyanosis.

Too little oxygen and too much carbon dioxide in the blood also affect the nervous system, especially the brain, and can cause a variety of problems including headache, inability to sleep, impaired mental ability, and irritability.

Source: NHLBI is expelled. Some is "trapped" and remains in the lung, adding to the residual volume (RV). Here's a little more about it, from a very good article about pursed lip breathing.

"Probably the most important thing that you can learn in pulmonary rehabilitation classes is a more efficient breathing technique. You have been breathing ever since you entered this world so why are you suddenly supposed to "learn" a new way to breathe? Because there have been changes in your body.

Many of you in this group feel that you "suddenly" had a problem with your breathing after getting that last episode of flu or pneumonia. Actually, emphysema is a disease that slowly progresses over a 20 or 30 year period. The first thing that happens, maybe while you are still a teenage smoker, is that the elastic fibers in your lungs start to deteriorate and lungs start losing their elastic recoil, their ability to get air out of the lungs efficiently. Over the years this gets worse and you start to develop air trapping or more residual volume (RV). Now, everybody has some air in their lungs even after they breathe out as much as they can. This prevents the alveoli, the little air sacks, from collapsing, flat as an old balloon. But patients with COPD may have a 200% or even larger increase in air trapping or residual volume.

So why does that matter? That amount of extra air compresses the undamaged alveoli, so that they can't work efficiently, much the way an expanded air bag would compress your body in your car seat. The other thing that happens is that the larger lungs push out your chest walls. Have you noticed that your chest size is larger, or that your bra size has increased? That is why.

Another effect of air trapping is that the diaphragm becomes flattened, which can be seen on your chest x-ray. When your lungs weren't damaged the diaphragm did about 80% of the work of breathing. Now it can no longer suck air in as it tightens and flattens, because it is already flattened out. The mechanics of breathing are all thrown off. You start to use accessory muscles of respiration such as your shoulder and neck muscles. These muscles are only meant to be used in emergencies. They are inefficient. If you think that you work harder on your breathing than other people do, you are absolutely right! Even at rest you are probably working about 17 times harder to breathe than a person without lung disease. So what can you do about it?

Well, if you remember what is wrong it will be easier to make sense of the new breathing techniques we will teach

you. Loss of elasticity in the lungs is the first thing for you to remember. What does that mean in practical terms? It means that you now have to work to get air out of you lungs. Think of a balloon. You have to work to get air into a balloon as you have to work to get air into your lungs. But when you let go of the neck of the balloon the air shoots out without any effort on your part. Your lungs do the same thing when they are not damaged. However, when they loose their elastic recoil you have to work to get the air out. It's like breathing into a paper bag. You have to squeeze the air out of the bag since it won't flatten out by itself. You now have to work to get air out of the lungs as well as to get air into the lungs. This will take longer so the first thing to remember is to slow your breathing and concentrate on breathing out.

You have been breathing in all your life and you do that automatically so forget about getting air into your lungs. That is not your problem. Your problem now is working on getting air out of your lungs. You now need to breathe out 2 or 3 times longer than you breathe in. If you panic and breathe too fast, or breathe in and out at the same rate, you will cause more air trapping and get more short of breath. In our studies, patients who did good pursed lip breathing (PLB) slowed down to about 10 breaths a minute at rest.

<http://www.perf2ndwind.org/html/breathing.html>



PEOPLE WITH LUNG PROBLEMS SHOULD AVOID OPEN FIRES

People with lung problems should not approach campfires, fireplaces and fireworks because open fires can worsen their condition, the Hanover-based German Lung Foundation advised. It noted that wood burning produced smoke - the components of which not only increased the risk of lung cancer, but were also conducive to inflammations in patients with asthma or smoker's lung (also called COPD), which could exacerbate the disorders. Healthy people, too, should be careful around open fires, warned Professor Harald Morr, chairman of the Foundation's board and director of the Waldhof Elgershausen Pneumological Clinic in the German town of Greifenstein. He said that open fires also produced carbon monoxide, an odorless, toxic gas that blocks the blood pigment hemoglobin, which is responsible for carrying oxygen from the lungs to the organs. The gas causes fatigue, headaches, dizziness, a dazed feeling, a racing pulse and impaired vision. A few lungfuls of it can be fatal.

<http://tinyurl.com/6lyoc2>



THE SWEET SIDE OF DIABETES RESEARCH

OK, I'll admit it's not easy printing this story with a straight face.

Researchers at the University of East Anglia are seeking postmenopausal women with Type 2 Diabetes for a study about preventing heart disease. Given the links between menopause and diabetes in the development of heart disease in older women, it's important research.

Here's the part that may get the researchers lots of applicants: women participating in the study will be asked to

eat a bar of chocolate every day for a year. Cocoa, from which chocolate is made, contains flavonoids--compounds that are believed to help protect against heart disease. In fact, the chocolate bars will have extra flavonoids added. The purpose of the study is to determine if flavonoids should be added to the diets of people at risk for heart disease.

The researchers note that we shouldn't all rush out to buy chocolate because it is very high in sugar and fat.

Health Matters July 2008



STUDY: 10% OF MIDDLE AGED PEOPLE SUFFER FROM SILENT CEREBRAL INFARCTIONS (SCI)

Massachusetts One of the recent studies revealed that about 10 percent of middle aged people suffer from Silent cerebral infarctions (SCI) without even realizing it. This is because its symptoms are very mild and often go unnoticed, for example- minor vision problem, facial weakness, trouble walking, and reduced thinking power.

The magnetic resonance imaging (MRI) scan of 2,040 people, average age 62, showed that 10.7 percent of them had suffered from "silent brain infarct". This study was the first to associate the total score of the Framingham Stroke Risk Profile with the occurrence of SCI.

Sudha Seshadri, MD, Boston University School of Medicine, Boston, Massachusetts, and co-author of the study, said, "The findings reinforce the need for early detection and treatment of cardiovascular risk factors in midlife. This is especially true since SCIs have been associated with an increased risk of incident stroke and cognitive impairment."

High systolic blood pressure, hypertension and elevated levels of homocystein are some of the risk factors commonly associated with SCI. It can be called the cerebral equivalent of what the physicians call a 'myocardial infarct', which involves the blockage of blood vessel that causes damage to the tissue. In case of SCI the blockage and the tissue damage occur in the brain and may lead to insidious progressive brain damage resulting in vascular dementia.

"The significant relationship between hypertension, elevated serum homocysteine, carotid artery disease, and prevalent SCI underscores the importance of current guidelines for the early diagnosis and prevention of hypertension and atherosclerosis and their risk factors," said Dr. Seshadri.

<http://tinyurl.com/4j7df8>



THERAVANCE REPORTS PROGRESS ON CLINICAL TRIALS OF THREE NEW COPD MEDICINES

Enrollment remains on track for the large **Phase 2b Chronic Obstructive Pulmonary Disease (COPD)** dose-ranging study with the lead long-acting beta agonist (LABA), '444.

We expect to report top-line data from this study in the first half of 2009.

...Inhaled Bifunctional Muscarinic Antagonist-Beta2 Agonist (MABA) Program....

We recently reported positive clinical results from our

Phase 2 study in the MABA program with our lead investigational compound, GSK961081 ('081), for the treatment of COPD. '081 administered once daily to COPD patients demonstrated 24-hour bronchodilation on day 14 that was statistically greater than placebo, and comparable to a combination therapy active control of salmeterol dosed twice daily plus tiotropium dosed once daily. '081 was generally well tolerated throughout the 14-day study. In conjunction with the successful achievement of proof-of-concept in this Phase 2 clinical study, we earned a milestone payment of \$10 million from GlaxoSmithKline (GSK).

.... Inhaled Long-Acting Muscarinic Antagonist (LAMA) Program

We recently reported clinical results from our Phase 1 study in the LAMA program with our lead investigational compound, GSK1160724 (TD-4208), for the treatment of COPD. TD-4208 administered as a single dose to healthy volunteers was generally well tolerated, with a similar incidence of adverse events to placebo. In addition, TD-4208 demonstrated evidence of bronchodilation in volunteers sensitive to muscarinic antagonists.

<http://money.cnn.com/news/newsfeeds/articles/marketwire/0419017.htm>



MILK DOES THE HEART GOOD

You've heard milk does a body good, but now a new study finds milk does a heart good too. The new research finds those who drink low fat or fat free milk could help reduce their risk for heart disease.

For the research, authors from the U.S. and Norway looked at kidney function of more than 5,000 adults between 45 and 84. They looked at eating patterns and tested their albumin-to-creatinine ratio (ACR). The ACR is a measurement that when too low can indicate poor kidney function and a high risk for heart disease.

Study authors report people who drank more lowfat milk and milk products had a reduced risk for kidney dysfunction. The milk group was the only food group that they evaluated that showed a significant benefit on its own. Study authors say this benefit could be connected to milk protein, vitamin D, magnesium and calcium that could be beneficial to heart health.

Researchers also say there was a 20 percent lower ACR for those that had an overall healthy diet. A healthy diet included lowfat milk, whole grain, fruits and vegetables.

SOURCE: American Journal of Clinical Nutrition, 2008;87:1825-1836



FOREVER 39 - STAY FOREVER YOUNG

Apple cider vinegar contains the healthy goodness of apples, concentrated into a golden liquid. The liquid is packed with essential amino acids and healthful enzymes. Some individuals claim that the vitamins and minerals in apple cider

will cure all ailments of mankind and would extend life and youthfulness. Our bodies require a diet rich in an assortment of nutrients, and the safest way to get what the body needs is to eat a varied diet. It should meet all known nutritional requirements with lots of trace elements.

Apple cider vinegar has the reputation of being an almost magical tonic. A teaspoon of the golden liquid supplies a generous portion of vitamins, minerals and essential amino acid. Some of the old beliefs about what apple cider vinegar can do include the following old folk remedies: Memory can be improved by drinking a glass of warm water before each meal with a teaspoon of apple cider stirred in, or a glass of warm water with one teaspoon of honey and one teaspoon of vinegar three times a day a half hour before each meal.

These remedies are from a book on vinegar and are intended as a record of folklore and historical solutions. The book is composed of tips, suggestions and remembrances. Nothing is intended as to the safety or endorsing the effectiveness of any remedies in this collection.

<http://www.pineandlakes.com>



35 WAYS TO EAT AND SHOP ON A BUDGET

Stretch it out! Simple tips for grocery shopping and cooking smart

Let's face it: We're all hurting. Food prices have risen across the board by more than 5 percent over the last year, according to the U.S. Department of Agriculture in a May 2008 report — milk hikes (13 percent) are rivaling those of gasoline, and cheese and eggs are up 12 and 30 percent respectively. Even cereals and baked goods have risen 8.9 percent since last year. The result? Most of us are looking for ways to stretch our food budget.

Hope is at hand. While no one's expecting prices to drop in the near future, there are many easy ways to trim food expenses without feeling the pinch or sacrificing on flavor. Take a tip from us when planning your weekly food budget: We will tell you how to shop and cook smart, so that you can continue to enjoy delicious — but inexpensive — meals. Here are 35 simple ways to eat well with less.

SHOPPING TIPS

1. Do research online first

Before you plan your shopping, check your store's Web site to see what the week's specials are, if there are any coupons, and what items are seasonal and abundant, and thus good value. Compare prices between different supermarkets in your area.

2. Plan ahead

Decide what your weekly meals will be in advance so that you can use leftovers from one dinner in the following day's lunch or dinner. (Our Dinner Rush menu planner can help!) Before shopping, check that you have all the necessary staples (flour, sugar, etc.), and jot down anything else you need for the week. Try making up an easy spreadsheet for a shopping list and food budget, then simply update it each time you head to the store.

3. Eat before you shop

When you're hungry, everything looks good!

4. Try to shop alone

When you're distracted by children or friends, you tend to make impulse purchases or don't take time to compare prices.

5. Wear blinders

Only walk down aisles with items you need so you won't be tempted to stray from your list.

6. Seek out local produce

Try to buy mostly local fruits and veggies that are in season — it's better for the earth and oftentimes cheaper. Farmers market vendors may also have end-of-day sales.

7. Ask for deli products to be sliced thin

Does your family load up on cold cuts? Thin meats and cheeses can go further.

8. Avoid eye-level products

Supermarkets usually place more expensive items right in front of you. Do a little stretching and bending to find bargains.

9. Buy generic

Many store-brand staples taste the same as brand-name products, so choosing the store's label is an easy way to save. Experiment with the store's cereals, coffee, veggies — your family may not even notice the difference.

10. Compare unit prices

Unless you're a math whiz, it's impossible to compare prices and values across different sizes. The unit price makes it easy. (And you may find that sometimes the bigger package is not the best bargain.)

11. Check the sale rack

If the supermarket has too many items near their expiration date, they slash prices to make sure they move. Examine discounted produce and meats carefully, and freeze any you can't eat soon.

12. Use coupons

While this can save cash, you may still be better off buying the generic version rather than the higher-priced brand. It's work, but if you watch for store coupons as well as the ones in the newspaper, you can do well — and some stores double coupons. Just make sure you only clip coupons for products you actually need.

13. Apply for a store card

This gives you extra savings on sale items and means you don't need to clip coupons. Some stores give you purchase points to use toward a turkey at Thanksgiving or other rewards.

14. Shop with cash

Some strict budgeters advocate only taking cash to the store so you keep better track of your purchases and reject extras. Using a debit card is another option.

15. Bring your own bag(s)

Some stores give a discount for each bag you bring — and you're saving the planet as well as your own green.

DIY BUDGET-STRETCHING TIPS**1. Do your own prep**

While it's tempting to buy those prepared fruit salads, precut vegetables and precleaned greens, you can save a lot by doing a little bit of the work. Same goes for cheese: Buy a

chunk and slice or grate it yourself.

2. Invest in a freezer

This lets you buy meats and vegetables in bulk or on sale, divide them into smaller serving sizes, and store safely for later use. It also helps you avoid expensive last-minute dinner purchases because you have nothing in the house. Frozen veggies and fruits come in handy for quick stir-fries or desserts.

3. Make your own cold cuts

One of our biggest purchases at the supermarket is convenience. Sometimes it's worth buying time, but often you'll eat better — and definitely less expensively — if you get creative. If you see ham or turkey breast on sale, it may be worth roasting it and slicing for sandwiches. Too much meat? Freeze extra slices for later.

4. Mix up drinks

Brew your own tea and ice it, or mix seltzer with fruit juice for a light and refreshing spritzer. If you use milk only for your coffee or tea, a slightly weaker flavor milk won't be obvious — so stretch your milk dollar with a mixture of the powdered variety enhanced with the real thing from its carton cousin.

5. Try your hand at canning

When produce is in peak season and you have a glut (and prices are typically at their lowest), stock up and preserve them. It's inexpensive, convenient, and a great way to enjoy tasty fruits and veggies throughout the year.

6. Bring lunch

Cook up batches of pasta, quinoa, stir-fry vegetables and the like so you have a few days' worth of lunches to microwave at work. If you're not that organized, at least throw together a sandwich and snack or fruit instead of buying a much more expensive version.

7. Waste not

Overripe bananas can be frozen and used later for banana bread or smoothies. If you roast a chicken, save the bones and make your own homemade stock. Stems from parsley and basil are great for flavoring soups and stocks. Keep the rind from Parmesan and other hard cheeses and use to flavor soups. Stale bread can be used for bread crumbs or meatball filling.

8. Freeze properly

Label freezer packs with contents and date. Invest in containers or special freezer bags — you're not saving money if your food gets freezer burn and has to be tossed out. Squeeze as much air as possible out of freezer bags before sealing.

9. Grow food

You don't need a big yard — even window boxes or planters will work for herbs and some veggies.

10. Compost

Save landfill space and also make your own nutrient-filled soil for growing those veggies.

COOKING TIPS**1. Cook batches**

If you have time over the weekend, make large quantities of your favorite dinners. Set aside enough to serve the next night, and freeze additional batches for days when dinner's a rush. (Freeze promptly so teenagers don't polish off the extras ...)

Lasagna and chili are easy to make and freeze.

2. Go meatless a few days a week

You won't miss meat in these tasty vegetarian meals: Rice and wheat berry pilaf with baby spinach, Papardelle with bean bolognese sauce, and Angel-hair pasta with fresh tomato sauce. Plus, you'll save money and reap health benefits, too.

3. If you do buy meat ...

Buy the tougher cuts, which are less expensive, and stew, roast or marinate to tenderize and add more flavor. Slow cookers make deliciously rich and tender pork-shoulder and beef-chuck dishes. Also, try grilling skirt steak or flank steak this summer — cut the meat against the grain and serve with a zesty sauce or salsa.

4. Use whole grains

While brown rice and quinoa are delicious and nutritious in their own right; you can also use them as fillers in soups and stews. A handful of brown rice will stretch a pot of Vegetable sausage soup. Adding extra cooking broth and some quinoa to Moroccan slow-cooked lamb stew will make for a hearty dinner with enough leftovers for lunch or dinner the next day.

5. Buy beans

Dried or canned legumes like white beans, chickpeas, and lentils are an inexpensive way to add protein to your diet. You can use them to make a tasty pot of chili go farther, or you can make a salad topping by combining white beans with some extra-virgin olive oil, chopped garlic, and crushed red pepper. Other delicious recipes for beans include cauliflower, white bean, and feta salad, Tuscan beans, and tagliatelle with fava beans and pecorino romano.

6. Make a pot of soup

Easy, nutritious, filling, and inexpensive, soup is the ultimate money-stretcher. Throw in leftover veggies or protein, homemade stock, pasta or rice, and lentils or beans. Heat yourself up in winter with a hearty lentil soup, or chill with an icy gazpacho in the dog days of summer. Add a side of crusty whole-wheat bread, and it's a meal.

7. Boost salad

A simple salad dressed up with easy additions such as cold roast chicken, shrimp, ham, or chunks of tuna can be an entrée rather than a side. Chicken-walnut salad with potato salad, tomatoes, and kalamata olives is delicious, and so is this unusual couscous and shrimp salad with tangerines and almonds.

8. Experiment with herbs

Fresh herbs add a flavor boost to any dish. If you find you have extras, whip up a quick sauce or pesto for use later in the week. Parsley oregano sauce can be served over roasted meat, fish, or rice, and you can experiment with a classic pesto to brighten up pastas, soups, and even sandwiches. If you prefer to freeze your herbs for later use, finely chop them, place them in an ice cube tray, cover with oil, and then plastic wrap and freeze. When frozen, pop out the cubes and place them in a freezer bag for easy storage. Next time you need herbs for soups, pastas, sauces, or other preparations, just add a cube to your recipe.

9. Make your own snacks

You can reduce your food bill by reducing your snacking. Packaged snacks are expensive, often loaded with sugar and fat, and full of chemicals you can't even pronounce. If you're a compulsive snacker, switch to homemade treats such as homemade party mix. Another good choice? Ginger-garlic hummus is a dip-with-a-kick for dunking baby carrots or pepper slices.

10. Employ leftovers quickly

Don't push leftovers to the no-man's-land at the back of the fridge. Make sure you use them promptly, either for lunch or another dinner. Turn leftover roast chicken into chicken enchiladas, a small piece of steak into hearty steak salad sandwiches, and day-old rice and vegetables into a quick and delicious stir-fry.

<http://www.msnbc.msn.com/id/25413449/page/3/>



HEALTHY EATING FOR LIFE

Forty-five percent of the U.S. population is suffering from at least one chronic disease, such as heart disease, asthma and diabetes. These conditions are often preventable through diet, but with new fads continually popping up, eating healthy can sometimes be confusing.

One of the healthy-eating rules Cindy Geyer, M.D., the medical director of Canyon Ranch in Lenox, Mass., abides by is eating from the color wheel, or eating fruits and vegetables that come in a variety of hues. She says eating different colors will provide you with a variety of disease-fighters like phytonutrients and antioxidants. For example, green plants contain calcium, chlorophyll, fiber, folate and lutein, among other nutrients while yellow and orange plants contain beta-carotene, flavonoids, lycopene, potassium, and vitamin C. The most nutritionally-beneficial foods may be those that are black, such as black beans, black cod, black mushrooms and black rice.

As a healthy model for a good diet, Dr. Geyer also recommends following a Mediterranean diet, which involves consuming large amounts of vegetables, legumes, fruits, fish, cereal, and unsaturated fatty acids while restricting saturated fats, dairy, meat and poultry. Mild to moderate alcohol consumption is also a key element of the diet. "This is emerging as one of the healthiest diets that we see," Dr. Geyer told Ivanhoe.

The health benefits are widespread. One study found men with metabolic syndrome who followed a Mediterranean diet for two years improved their erectile dysfunction. The diet combined with moderate exercise has also been shown to reduce elevated C reactive protein (CRP) levels by 72 percent. CRPs are inflammation markers that have been linked to diseases like colon cancer and macular degeneration. A Mediterranean diet has also been found to reduce the risk of Alzheimer's disease by 40 percent.

To ensure your meals are well-balanced and nationally-dense, remember this plate trick: fill half of your plate with vegetables, a quarter with lean protein like chicken or fish and a quarter with a healthy starch or grain. "For dessert, think fruit," Dr. Geyer said.

SOURCE: Ivanhoe Newswire



THE BEST WAY TO LOSE WEIGHT

Following a weight loss programme combined with going to the gym is the best way to lose weight, the results of a new study indicate.

A team of US researchers compared the weight loss programme, Weight Watchers, with a fitness programme, to discover which method was more beneficial to health. According to the findings, both systems have pros and cons and a combination of the two produced the best results.

Participants who attended Weight Watchers for 12 weeks lost an average of 5% of their body weight. However Prof Steve Ball of the University of Missouri found that much of this lost weight was lean tissue, rather than fat. "Participants' body fat percentage did not improve at all because they lost a much higher percentage than expected of lean tissue. It is advantageous to keep lean tissue because it is correlated with higher metabolism. Losing lean tissue often slows metabolism," Prof Ball explained.

The researchers noted that the majority of previous studies involving Weight Watchers did not consider body fat percentage change and only focused on body weight. "This is one aspect of our study that makes it unique. We used a sophisticated measure of body composition to look at what type of weight was lost - lean or fat," Prof Ball said. He also pointed out that the study had used CT scans to investigate the changes in abdominal fat, which is a greater predictor of heart disease. While the participants who took part in a fitness programme did not lose much weight, they probably improved their health because they lost a significant amount of intra-abdominal fat, which is fat that sits around vital organs.

These results imply that exercise may have a positive influence on metabolism, irrespective of the number on the scales.

The study also found that group support is very significant to weight loss. Most of the Weight Watchers participants stuck with the programme during the duration of the study, while many of the fitness centre participants quit.

According to Prof Ball, joining a fitness centre with the intent of weight loss or body fat change is likely to fail without support. "Nearly 50% of people who start an exercise programme will quit within six months," he highlighted. He said that the overall results show the need for a 'multi-pronged approach in order to lose weight and body fat, and gain health benefits'.

The results of the study are published in the Journal of Exercise Physiology.



YOUR BELLY FAT COULD BE MAKING YOU HUNGRIER

Researchers in London, Canada identify new source of appetite stimulant

The extra fat we carry around our middle could be making

us hungrier, so we eat more, which in turn leads to even more belly fat. Dr. Yaiping Yang and his colleagues at the Lawson Health Research Institute affiliated with The University of Western Ontario found abdominal fat tissue can reproduce a hormone that stimulates fat cell production. The researchers hope this discovery will change in the way we think about and treat abdominal obesity.

Yang identified that the hormone Neuropeptide Y (NPY) is reproduced by abdominal fat tissue. Previously, it was believed to only be produced by the brain. Yang believes this novel finding may lead to new therapeutic targets for combating obesity. Their findings were reported in a recent issue of The FASEB Journal.

The traditional view is that one of the main reasons why overweight people eat more food is because their brains produce the hormone NPY in excessive amounts. NPY is the most potent appetite stimulating hormone known, sending signals to the individual that they are constantly hungry. However, Yang, a Professor in the Departments of Obstetrics & Gynaecology and Physiology & Pharmacology at the Schulich School of Medicine & Dentistry at The University of Western Ontario, has provided evidence that in obese rat models NPY is also produced locally by abdominal fat.

A fat cell cannot replicate itself. But the researchers found NPY increases fat cell number by stimulating the replication of fat cell precursor cells, which then change into fat cells.

Yang says "this may lead to a vicious cycle where NPY produced in the brain causes you to eat more and therefore gain more fat around your middle, and then that fat produces more NYP hormone which leads to even more fat cells."

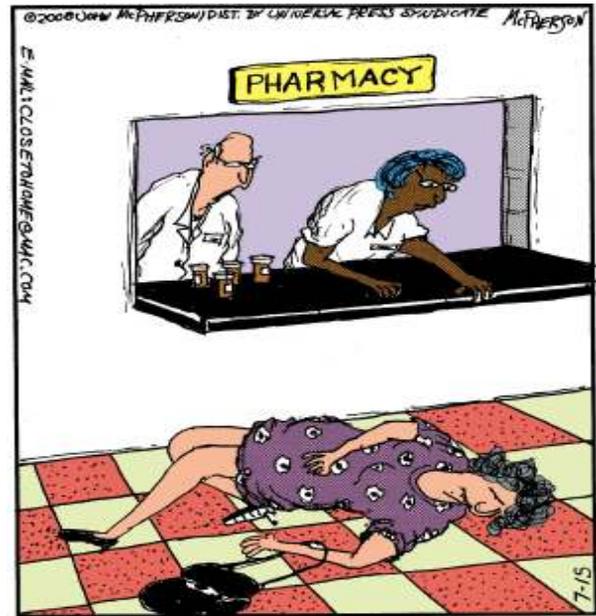
Being overweight, regardless of where the fat is located, is unhealthy. However, because of its anatomical location and its byproducts, abdominal fat or the apple-shape is known to be the most dangerous. People predisposed to the apple shape are at an elevated risk for heart disease, Type 2 diabetes, hypertension and some cancers.

Next, the researchers will be investigating whether NPY produced by fat is released into the body's circulatory system. "We want to know if NPY could potentially be transported in the blood to the brain where it in turn has an impact on the brain to stimulate feelings of hunger," says Yang. If the researchers find that NPY is in fact transported in the blood circulation then it may be possible to develop a simple blood test to detect increased levels of NPY. "If you can detect NPY early and identify those at risk for abdominal obesity we can then target therapy to turn off NPY. It would be much easier to use drugs to prevent obesity than to treat the diseases caused by obesity."

<http://tinyurl.com/4s5zbu>



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.



"She's going to need a prescription for light-headedness. She fainted when I told her how much her meds cost."

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