

EFFORTS



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Emphysema Takes Your Breath Away

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COPD PATIENTS WITH ACID REFLUX TWICE AS LIKELY TO EXPERIENCE EXACERBATIONS

A new study shows an association between acid reflux symptoms and chronic obstructive pulmonary disease (COPD) exacerbations. Using a questionnaire-based, cross-sectional survey, researchers from the University of Florida, Jacksonville, investigated the prevalence and effect of acid reflux symptoms, formally known as gastroesophageal reflux disease (GERD), on the rate of exacerbations in 86 patients with COPD (57 percent men, mean age 67).

ROLE OF GASTROESOPHAGEAL REFLUX SYMPTOMS IN EXACERBATIONS OF COPD*

Abstract

Background and aims: The impact of gastroesophageal reflux disease (GERD) on exacerbations of COPD has never been evaluated. The aims of this investigation were to determine the prevalence of gastroesophageal reflux (GER) symptoms in COPD patients and the effect of GER on the rate of exacerbations of COPD per year.

Methods: A questionnaire-based, cross sectional survey was performed. Subjects were recruited from the outpatient pulmonary clinics at the University of Florida Health Science Center/Jacksonville. Included patients had an established diagnosis of COPD. Exclusion criteria were respiratory disorders other than COPD, known esophageal disease, active peptic ulcer disease, Zollinger-Ellison syndrome, mastocytosis, scleroderma, and current alcohol abuse. Those meeting criteria and agreeing to participate were asked to complete the Mayo Clinic GERD questionnaire by either personal/telephone interview. Clinically significant reflux was defined as heartburn and/or acid regurgitation weekly. Other outcome measures noted were frequency and type of COPD exacerbations. Statistical analysis was performed using the Fisher exact test for categorical data and the independent t test for interval data.

Results: Eighty-six patients were enrolled and interviewed (mean age, 67.5 years). Male patients accounted for 55% of the study group. Overall, 37% of patients reported GER symptoms. The mean FEV1 percentage of predicted was similar in those with or without GER. The rate of exacerbations of COPD was twice as high in patients with GER symptoms compared to those without GER symptoms (3.2/yr vs 1.6/yr, $p = 0.02$).

Conclusions: The presence of GER symptoms appears to be associated with increased exacerbations of COPD.

ACID REFLUX ADDS TO COPD COMPLICATIONS

Chronic obstructive pulmonary disease (COPD) patients who also have acid reflux are twice as likely to experience COPD exacerbations, says a study in the October issue of the journal *Chest*. The University of Florida, Jacksonville study included 86 COPD patients, average age 67.5 years. Of these patients, 37 percent had acid reflux, also known as gastroesophageal reflux disease (GERD). In this study, clinically significant reflux was defined as weekly heartburn and/or acid regurgitation. The patients with GERD were twice as likely to experience COPD exacerbations compared to patients without GERD.

Another study in the same issue of the journal found that winter viruses have a major impact on the health of COPD patients. The study of 2,215 COPD patients at 20 U.S. Veterans Affairs Medical Centers found that they experienced significant changes in lung function during the winter flu season.

Source: American College of Chest Physicians



FLU HARD ON COPD PATIENTS

During influenza season, patients with COPD who catch colds or flu use more healthcare resources and have increased breathing difficulties, worse functional status and impaired quality of life, a study finds. But the study also suggests that getting two flu vaccines -- a flu shot and flu nasal mist -- appears help with COPD symptoms.

COPD -- short for chronic obstructive pulmonary disease -- is a progressive lung illness caused by smoking that includes emphysema and chronic bronchitis. It is characterized by airflow limitation that is not completely reversible. In a review of 585 acute respiratory illnesses occurring in COPD patients during a recent flu season, investigators found that these illnesses were associated with a drop in lung function, worsening of disease severity scores on a standard index, and hospitalization.

Ninety-four of the illnesses were confirmed as being influenza-related and such illnesses were predictive of adverse effects on lung function and severity of disease, note Dr. Geoffrey J. Gorse, from the Saint Louis University Health Sciences Center, and colleagues in a report in the journal *Chest*. But they also note that a two-vaccine approach was associated with better disease severity scores than a one-vaccine strategy.

Patients with chronic obstructive pulmonary disease (COPD) experience significant changes in lung function during the winter

influenza season, according to a new study. Researchers from 20 US Veterans Affairs Medical Centers enrolled 2,215 veterans with COPD, all of whom received the TIV vaccination. In addition, subjects were randomly assigned to receive either the LAIV vaccination (TC group) or a placebo (TP group). Clinical evaluation, spirometry, and serum collection were then performed for 3 to 4 weeks following immunization. In this double-blind study, subjects with influenza-caused illness (LDI) were compared with those who had non-LDI respiratory illness or no illness. Subjects were evaluated when they experienced either three symptoms of acute respiratory illness or fever plus two symptoms, and severity of illness was assessed via the chronic lung disease severity index (CLDSI). Researchers found that in this influenza-vaccinated population, non-LDI illness contributed to longer-term effects of respiratory disease, while LDI was associated with worse changes in obstruction to airflow and functional status. Patients in the TC group also showed better CLDSI scores. This study appears in the October issue of CHEST, the peer-reviewed journal of the American College of Chest Physicians. SOURCE: Chest, October 2006

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HELIUM-HYPEROXIA IMPROVES EXERCISE TOLERANCE IN COPD

Breathing a mixture of 40% oxygen and 60% helium delays dynamic hyperinflation, improves respiratory mechanics and thus increases exercise tolerance in patients with COPD, Canadian researchers report in the October issue of the American Journal of Respiratory and Critical Care Medicine. To determine whether these approaches might have an additive influence when used together, the researchers studied 10 male volunteers with COPD and lung function (FEV1) of 47% predicted.

When breathing air, mean exercise time on a cycle ergometer was 9.4 minutes. With hyperoxia (oxygen 40%, nitrogen 60%), this rose to 17.8 minutes and with normoxic helium (oxygen 21%, helium 79%) exercise time was 16.3 minutes. However, when the modes were combined (oxygen 40%, helium 60%) exercise time rose to 26.3 minutes. All three gas approaches reduced dyspnea and both helium mixtures significantly increased inspiratory capacity and tidal volume. However, only helium-hyperoxia significantly reduced the resistive work of breathing and the work to overcome intrinsic positive end-expiratory pressure.

Summing up, Dr. Eves told Reuters Health that breathing a helium and hypoxic mixture "should reduce dyspnea, increase the ability to exercise, and that could mean improved outcomes from pulmonary rehabilitation programs for patients with COPD."

SOURCE: Am J Resp Crit Care Med

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INGEN TECHNOLOGIES, INC., announced today that production of its newest OxyView(TM) medical device has commenced. Deliveries are scheduled for October 2006. Ingen's OxyView(TM) is a proprietary medical device that provides a visual signal of gas flow through a conduit. In particular, OxyView(TM) is a pneumatic flow meter that provides a visual cue, viewable with the human eye, as to the

flow of gas through a cannula, which conventionally employs very low pressure and gas volume to the patient wearing it. The Company's proprietary device is adapted to be engaged between the nose or mouth-mounted cannula, where a compressed oxygen supply is delivered to the cannula through a flexible conduit. OxyView(TM) delivers an easily readable confirmation of actual continuous flow and volume of oxygen.

SOURCE: www.ingen-tech.com

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MANY COPD PATIENTS GOING WITHOUT TESTS

Chronic obstructive pulmonary disease (COPD) and congestive heart failure (CHF) are two of the most common causes of hospitalization among older adults, but COPD patients are much less likely to be tested for that disease, says a study in the October issue of Respiratory Care. There are accepted standards for the diagnosis and management of both conditions, but this study found that there was a substantial difference in the use of primary confirmatory tests -- recommended both for diagnosis and assessment of disease severity -- between COPD and CHF.

Guidelines state that diagnosing COPD and determining treatment based on its severity is dependent on spirometry, a simple test that measures lung capacity and how fast air can be expelled from the lungs. This study found that, over a six-month period, only about a third of patients admitted to Boston's Caritas St. Elizabeth's Medical Center with a diagnosis of COPD had a spirometry test in the hospital or in the preceding eight years. This means that most of the patients hospitalized for COPD did not have the specific test required to confirm the diagnosis, the researchers said.

In contrast, 78 percent of patients admitted to the hospital for CHF had an echocardiogram, the standard test used to confirm that diagnosis. The findings suggest a major difference in the quality of diagnosis -- and possibly also in the appropriateness of disease management -- between patients hospitalized for COPD and CHF, the researchers said. COPD affects 10 million to 20 million Americans. Each year in the United States, about 120,000 people die from COPD, making it the nation's fourth leading cause of death.

SOURCE: American Assoc for Resp Care

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RESEARCHERS CHECK IF LUNGS ARE SELF-HEALING

Researchers from several U.S. universities found evidence that lungs of patients with chronic obstructive pulmonary disease attempt to repair themselves. The researchers found an increased synthesis of elastin, a gene linked to elastic fiber growth, in moderately diseased tissue of COPD patients, the American Physiological Society said in a news release. Elastic fibers allow the lung to expand and contract while breathing. The finding is important because it could lead to the development of a drug that stimulates genes to grow new alveoli, air sacs that assist in the exchange of oxygen and carbon dioxide between the lungs and

the circulatory system, said the Bethesda, Md.-based organization.

In their preliminary study, the researchers examined diseased lungs removed from end-stage COPD patients who underwent lung transplants, the society said. COPD develops after exposure to toxins such as cigarette smoke resulting in inflammation to the small airways and the destruction of elastic fibers within alveoli. The team used magnetic resonance imaging to distinguish between moderately and severely affected areas of the lungs, the physiological society said. It found that new elastin synthesis had begun in moderately diseased regions.

SOURCE: MDLinx.com

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THREE-DIMENSIONAL, MINIATURE ENDOSCOPE CAN GO WHERE OTHER TOOLS CANNOT REACH

Massachusetts General Hospital (MGH) researchers have developed a new type of miniature endoscope that produces three-dimensional, high-definition images, which may greatly expand the application of minimally invasive diagnostic and therapeutic procedures. In the October 19 issue of *Nature*, the team from the Wellman Center for Photomedicine at MGH describes their prototype device and a demonstration of its use in a mouse model.

"This new ultraminiature endoscope is the first to allow three-dimensional imaging of areas inside the body," says Guillermo Tearney, MD, PhD, of the MGH Wellman Center, the report's senior author. "Its ability to go places that other imaging tools cannot reach opens new possibilities for medical diagnosis and eventually treatment."

Standard miniature endoscopic devices - which give physicians access to hard-to-reach internal organs and structures - utilize bundles of optical fibers to supply light to and transmit images from the areas of interest. Larger endoscopes that use image sensors to produce high-quality, two-dimensional images can be a centimeter or more in diameter. Existing miniature endoscopes using smaller fiber bundles may be more flexible but have difficulty producing high-quality images.

The new device developed at MGH-Wellman uses a technology called spectrally encoded endoscopy (SEE). Multicolored light from a single optical fiber - introduced through a probe about the size of a human hair - is broken into its component colors and projected onto tissue, with each color illuminating a different part of the tissue surface. The light reflected back is recorded, and the intensity of the various colors decoded by a spectrometer, which analyzes the wavelengths of light. Another device called an interferometer, which calculates structural information based on the interaction between two waves of light, provides the data required to create three-dimensional images.

To demonstrate the device's application in a live animal, the researchers used the system to image metastatic ovarian tumors on the abdominal wall of a mouse. The SEE probe was passed into the abdominal cavity through a fine-gauge needle. The resulting three-dimensional image showed several raised areas of tumor nodules, the presence of which was confirmed by histologic analysis of the tissue.

"The most important feature of this new endoscope is the ability to obtain three-dimensional images, something we don't believe is offered by any commercially available miniature endoscope system," says Dvir Yelin, PhD, first author of the *Nature* paper. "While the image resolution we achieved in this demonstration is similar to existing small-diameter endoscopes, with further optimization of the optics it is possible to obtain images with 10 times the number of pixels provided by other miniature endoscopes."

"This new technology will offer physicians and surgeons the capability to bring many more procedures into outpatient settings, reduce anesthesia requirements and minimize tissue damage," Tearney adds. "The device's size and flexibility should allow safer navigation through such delicate structures as the salivary ducts, the fallopian tubes and the pancreatic duct. Fetal and pediatric procedures may also benefit from this tool. Eventually, SEE could give rise to new procedures that permit diagnosis and microsurgery in previously inaccessible areas of the body."

SOURCE: medicalnewstoday.com

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SWEEPING CHANGES NEEDED AT US FOOD AND DRUG ADMINISTRATION

Five current or former members of the Drug Safety and Risk Management Advisory Committee to the U.S. Food and Drug Administration (FDA) called today for Congress to make sweeping changes to deal with a large number of longstanding problems at the agency. "The current FDA system of regulating drug safety has serious limitations and is in need of changes," they say in *Archives of Internal Medicine*, released today. Since Congress is ultimately responsible, "it is up to Congress to take the steps necessary to reinvigorate the FDA's ability to assure the public that approved medical products are safe." Curt D. Furberg, M.D., Ph.D., professor of public health sciences at Wake Forest University School of Medicine and the lead author, said the five decided to write the analysis after becoming discouraged by the FDA's inability to fix its own problems. "Congress has not provided adequate funding and authority to the FDA," he said. The group cites eight major problems impacting FDA performance, including:

- The system of initial approval of drugs often fails to detect serious adverse drug reactions.
- The same FDA center that approves drugs also has the responsibility of taking safety actions, creating a conflict-of-interest situation.
- The FDA is overly dependant on user fees from drug companies.
- The FDA is short on expertise in drug safety and public health.

"The key features of today's media stories about questionable drug safety are the same as with previous drug tragedies," Furberg said. "New drugs are introduced on the market with inadequate safety documentation; serious adverse drug reactions are later reported from the marketplace, and a large number of patients are unnecessarily injured before the drugs are withdrawn or better managed. The only difference is the name of the culprit drug." Furberg and his colleagues recommend that Congress make five changes:

- "Give the FDA more direct legal authority to pursue violations." The FDA's own report says that drug companies committed to 1,231 post-marketing safety studies that are incomplete; 797 were never started. *
- "Authorize the adoption of a conditional drug-approval policy, at least for selected drugs.
- "Provide additional financial resources to support the safety operations.
- "Mandate a reorganization of the agency with emphasis on strengthening the evaluation and proactive monitoring of drug safety.
- "Require broader representation of safety experts on FDA's advisory committees."

"Larger and longer clinical trials ought to be required for drugs that will be given for chronic conditions such as high blood pressure, diabetes and coronary heart disease," said Peter A. Gross, M.D., chairman of medicine at Hackensack University Medical Center and professor of medicine and public health at UMDNJ-New Jersey Medical School and a coauthor. "Trials should be required to have adequate numbers to assure the tested drugs are reasonably safe."

"Safety evaluation should be given the same priority as efficacy evaluation," the authors wrote, calling for the creation of a Center for Drug Safety within FDA "for continuous post-marketing surveillance and regulation." They say the center should be given adequate funding and staff to take advantage of the valuable data for safety monitoring already collected in private and public databases. The conditional drug-approval policy could be modeled on programs in other countries for those drugs that have clear benefits but also have lingering safety concerns, requiring a re-review after two to three years. "A time-limited conditional approval status would place pressure on the sponsors to conduct and report post-marketing safety studies they commit to," said Furberg.

SOURCE: medicalnewstoday.com

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PULMONARY DISEASE POSES RISK TO HEARTS

Chronic obstructive pulmonary disease is an independent risk factor for heart disease, according to researchers attending the CHEST conference. Currently, COPD, as it's called, is the fourth-leading cause of death. By 2020, it is expected to be No. 3 because the incidence is growing. More than one-fourth of smokers develop COPD, leading to 119,000 deaths in the United States and 1.5 million emergency room visits a year. It costs billions and billions of dollars, according to Dr. Ronald Grossman, chief of medicine at Credit Valley Hospital in Mississauga, Ontario, Canada, who moderated a press briefing on new diagnosis and treatment tools for COPD. Lung diseases such as COPD are associated with inflammation and decline in lung function.

Statins, used to reduce cholesterol, offer smokers and ex-smokers protection from lung disease such as emphysema (a type of COPD), although the three-year follow-up of the study doesn't promise that the protective effects don't taper off over time, said Dr. Walid G. Younis of the University of Oklahoma Medical Center in Oklahoma City. Up to this point, he said, no medication has slowed smoking-caused lung

damage. But he said that some smokers, current and past, who have emphysema or other lung disease, see "significant" improvements in lung function when they take the statin Simvastatin. "It's possible that the statin is preventing inflammation," he said, but added that the research did not look at the mechanism, just the result. And he cautioned it offers no protection against lung cancer, which kills more smokers than any other smoke-related cause. Smokers still need to break the habit.

Unrelated statin research released at the conference suggests statins also reduce the incidence of stroke, heart attack or other causes of death in patients who have severe carotid artery disease. Meanwhile, researchers from Montefiore Medical Center in New York City said that preliminary data indicate that the high number of pulmonary syndromes developed by rescue workers from the New York City Fire Department after terrorists brought down the World Trade Center in 2001 may result at least partially from genetic Alpha-L Antitrypsin deficiency that sped up lung function decline. The protein deficiency can lead to both chronic lung and liver disease.

The rescue workers who had the protein deficiency and were exposed to environmental irritants at the Twin Towers site showed "more rapid decline" in lung function compared to colleagues with normal levels of the protein, which is involved in how well the lungs and the liver control their healing processes. Lending credence to the results, said Montefiore's Dr. David Prezant, was a correlation between the level of protein deficiency and the degree and rate of lung-function decline. Their preliminary findings indicate that about one-fourth of the "most-exposed group" of rescue workers suffers from pulmonary syndromes, including nonsmokers who developed emphysema. Although he said the results should be viewed cautiously, Prezant said it indicates lung disease should be "looked at for a combination of genetics and environmental factors."

At the same briefing, Dr. Daniel H. Sterman of the University of Pennsylvania Medical Center announced the results of a clinical trial showing that a device called an IBV valve improved the quality of life for patients with severe emphysema. The umbrella-shaped valve was used in the trial as an alternative to lung-volume reduction surgery, where the most diseased sections of the lung are cut out. The investigational device, not available outside of clinical trials, is a one-way valve that directs air to the healthier parts of the lung, without blocking secretion removal. Most of the patients received six or seven IBV valves placed in the upper lung lobes using flexible bronchoscopy.

SOURCE: deseretnews.com

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PREVALENCE OF ANEMIA IN CHRONIC OBSTRUCTIVE PULMONARY DISEASE: *Comparison to other chronic diseases*

Abstract

Chronic obstructive pulmonary disease (COPD) is a multisystemic inflammatory disease characterized by pulmonary and extrapulmonary symptoms. The impaired lung function has long-term implications on metabolism and homeostasis of many organ systems such as the skeleton, heart, brain and skeletal muscle.

The occurrence and prevalence of anemia in COPD has rarely been studied. Anemia is such a common and simple clinical finding that we may underestimate its physiological relevance in COPD. The aim of the study was to retrospectively investigate the prevalence of anemia in a large population of COPD patients and to compare it to patients with chronic heart failure, renal insufficiency, cancer and asthma. A population of 7337 patients that was treated in the University Hospital Charité, Berlin, Germany, from 1996 to 2003 was subsetted according to the ICD-9/10 code of the discharge diagnoses into the above-mentioned diagnoses groups. The overall prevalence of anemia in COPD patients was 23.1%. It was comparable to the prevalence of anemia we found in patients with chronic heart failure (23.3%). Patients with renal insufficiency and cancer presented the highest anemia frequencies.

The high prevalence of anemia in hospitalized COPD patients that were treated mostly for exacerbations gives evidence that anemia is also a comorbidity in COPD and may contribute to exercise limitation and dyspnea.

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ANXIETY AND DEPRESSION IN COPD PATIENTS:

The roles of gender and disease severity

SUMMARY

Background

The aim of our study was to assess the prevalence of anxiety and depression in the whole chronic obstructive pulmonary disease (COPD) population and in subgroups according to sex and severity classification. A secondary objective was to evaluate the possible differences between patients with and without a significant high level of anxiety, depression, or both, and finally to find out a correlation between psychological aspects, symptoms, functional parameters, and quality of life (QoL).

Methods

Two hundred and two COPD patients were enrolled. Their levels of anxiety, depression, dyspnea, and QoL were assessed using specific questionnaires. One hundred and fourteen sex- and age-matched healthy subjects were used as the control population.

Results

The prevalences of anxiety and depression were high (28.2% and 18.8%) in COPD even when it was of mild degree, compared to the control group, in which the prevalence of anxiety and depression were 6.1% and 3.5%, respectively. Female patients had higher levels of anxiety and depression and worse symptom-related QoL. Female patients reported a higher level of dyspnea than males for the same level of ventilatory impairment. Dyspnea was more strongly correlated with depression in women than in men.

Conclusions

Anxiety and depressive symptoms are common in patients affected by COPD, even when their disease is mild in terms of FEV1 and respiratory symptoms. Female patients appear to be more exposed to psychological impairment, which correlates well with some specific symptomatic aspects of the disease,

such as dyspnea. Psychological aspects need to be carefully assessed in COPD patients, particularly in females.

SOURCE: ScienceDirect.com

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COMPUTERS A BOON TO ICU RESPIRATORY CARE

A computerized system may outperform doctors when it comes to certain aspects of care for patients with acute respiratory failure treated in the ICU, a new study finds. Compared with the traditional physician-directed weaning process, the electronic system can significantly reduce the duration of mechanical ventilation and length of stay in the ICU for these patients, European researchers report. The study included 74 patients who were weaned off ventilation using the computer-driven system and 70 patients managed with the usual doctor-controlled method. The computerized process reduced the duration of mechanical ventilation from 12 days to 7.5 days and ICU stay from 15.5 days to 12 days.

"The computerized protocol included an automatic gradual reduction in pressure support, automatic performance of spontaneous breathing trials and generation of an incentive message when the patient's spontaneous breathing trial was successfully passed," researcher Dr. Laurent J. Brochard, of the Hopital Henri Mondor in Creteil, France, explained in a prepared statement.

The study also found that patients weaned using the computerized process had a 30 percent reduction in the total number of ventilator-related complications, including reintubation; self-removal from ventilator assistance; need for noninvasive ventilation; mechanical ventilation longer than 21 days; and tracheotomy.

The findings were published in the October issue of the American Journal of Respiratory and Critical Care Medicine. "The (computerized) system used in the study was developed several years ago and has been repeatedly evaluated since then. It ensures that the desired ventilation protocol is applied," Brochard said.

SOURCE: American Thoracic Society

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PHYSICIANS HAVE CURE FOR SENIOR'S MEDICATION BILL WOES

A recent study directed by Mount Sinai School of Medicine (MSSM) suggests that seniors with low incomes or no prescription coverage were less likely to use generic cardiovascular drugs than more affluent seniors and those with prescription drug coverage. The study, which appears in the October 2006 issue of The American Journal of Managed Care, is the first nationally representative study that examines the association of income and prescription drug coverage with generic medication use by Medicare beneficiaries. "Since the implementation of the new Medicare prescription drug benefit, the burden of navigating benefit waters to realize savings on medications has fallen mainly on seniors" says Alex D. Federman, M.D., M.P.H., Assistant Professor of Medicine at Mount Sinai School of Medicine and lead author of the study. "One obvious cost-saving approach is the use of generic medications." Dr. Federman and colleagues examined generic cardiovascular drug use in a nationally representative sample of elderly Medicare beneficiaries with hypertension. Hypertension

was chosen as a model of chronic disease because of its high prevalence in the United States, the wide availability of generic cardiovascular drugs, and the large prescription drug expenditures associated with this condition. The findings showed that older patients with cardiovascular diseases often used costly brand name drugs when equivalent but lower cost generic versions are available. "The patients that we were concerned about are low-income and underinsured seniors. Our findings show this group in-particular are missing opportunities to save money on prescription drugs without sacrificing quality of care," noted Dr. Federman. "Physicians must take an active role to address this problem by prescribing equivalent, lower cost generic versions when available."

SOURCE: medicalnewstoday.com

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FDA APPROVES SEPRACOR'S BROVANA(TM) (ARFORMOTEROL TARTRATE) INHALATION SOLUTION FOR CHRONIC OBSTRUCTIVE PULMONARY DISEASE

Sepracor Inc. announced that the U.S. Food and Drug Administration (FDA) approved its New Drug Application (NDA) for BROVANA(TM) (arformoterol tartrate) Inhalation Solution 15 mcg (micrograms) as a long-term, twice-daily (morning and evening), maintenance treatment of bronchoconstriction in patients with chronic obstructive pulmonary disease (COPD), including chronic bronchitis and emphysema. BROVANA is for use by nebulization only.

BROVANA is the first long-acting beta2-agonist to be approved as an inhalation solution for use with a nebulizer, which is a machine that converts liquid medication into a fine mist that is inhaled through a mouthpiece or mask.

"We are very excited about the approval of BROVANA," said Rudolf A. Baumgartner, M.D., Vice President, Respiratory and Immunology at Sepracor. "BROVANA is the only FDA-approved, nebulized, long-acting beta2-agonist for patients with COPD, and we are looking forward to providing these patients with this new treatment option for managing their bronchoconstriction." SOURCE: www.genengnews.com

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FOUR SHORT WALKS A DAY EASE BLOOD PRESSURE

Taking four short walks a day to lower your blood pressure may be more effective than one long walk, a new study finds. Reporting in the September issue of the Journal of Hypertension, Indiana University researchers compared the effects of four 10-minute walks to one 40-minute walk in reducing blood pressure in 20 people with prehypertension. Prehypertension, in which blood pressure ranges from 120-139 mm Hg over 80-89 mm Hg, is an elevated blood pressure level that will usually progress to high blood pressure. High blood pressure is associated with heart attack, heart failure, kidney failure, stroke and blindness.

The researchers found that while the short walks and long walk decreased the participants' blood pressure by the same amount, the effect lasted for 11 hours after the short walks, compared to seven hours after the long walk. "We had no idea

the short bouts would be better," Janet Wallace, professor in the Department of Kinesiology at the Indiana University School of Health, Physical Education and Recreation, said in a prepared statement. "Most studies found in the literature report the long, continuous session as more effective for many variables."

But these findings may motivate people who cannot seem to fit long bouts of activity in their schedule. "The biggest problem for most people is that they don't have time," Wallace said. "You might think, 'I don't have the time to go to the gym or work out for 40 minutes, but I might have the time to do 10 minutes here, 10 minutes here and another 10 minutes here.' Four 10-minute walks would be ideal."

SOURCE: Indiana University

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'LAUGH TILL IT HURTS' TAKES THE PAIN AWAY

Brenda Celmer has a credential for this: "We're going to pretend like we have ants in our pants," she said, then put her hands on her behind and jumped and squirmed. And laughed like crazy. Soon most of the 45 or so men and women in the room, many of them breathing with the help of oxygen tubes, did the same. Celmer, a respiratory therapist for Christ Medical Center in Oak Lawn, traveled to Canada for a two-day course to become a "certified laughter leader."

She recently introduced a battery of goofball exercises to her monthly Easy Breather sessions at the Oakview Recreation Center in Oak Lawn. As if to convey, "I am not crazy," Celmer distributed copies of a 2005 article reporting related results of a study at the University of Maryland School of Medicine. Laughter, the researchers found, dilates the inner lining of blood vessels and eases blood flow. It's particularly helpful, Celmer said, for the people in her group, sufferers of chronic respiratory diseases like emphysema and pulmonary fibrosis. The laugh exercises work their diaphragms and encourage deep breaths. And it's emotionally uplifting, she said. "It's not a stand-up comic routine," Celmer said. "I teach people to laugh at nothing and yet at everything." She doesn't need funny material to make people laugh. The laughter itself is contagious.

"She's hilarious -- you have to laugh at her," said Alsip resident Janis Kelsey, who is 64. In one routine, the members turn to their neighbors and greet one another with "Aloha-hahahahaha," trailing the salutation into laughter. In another, they ride an imaginary roller coaster, throwing hands in the air and whooping loudly. Each time, the laughing is phony at first and becomes genuine and hysterical as everyone laughs at the silliness.

Alice Cullina, 79, of Beverly, said she suspects her shortness of breath could come from a variety of punishment to her lungs: coal-fired heat, lab fumes during her career as a chemistry teacher and cigarettes, though she quit 30 years ago. Whatever the cause, the laughter helps, she said. "You can breathe easier after you do it," Cullina said. "And everyone was having such a good time."

SOURCE: www.dailysouthtown.com

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MUTUAL RECOGNITION PROCEDURE COMPLETED FOR SYMBICORT® MAINTENANCE AND RELIEVER THERAPY (SYMBICORT SMART®) IN THE EU

AstraZeneca announced that it has successfully completed the European Union Mutual Recognition Procedure (MRP) for Symbicort® Maintenance And Reliever Therapy (Symbicort SMART®). This new asthma treatment approach allows patients to use just one inhaler for both maintenance and relief of asthma symptoms. Symbicort SMART is licensed for use in adults with a need for ICS/LABA combination treatment. National approvals are expected to be issued throughout the EU over the coming months. With Symbicort SMART, the underlying inflammation is treated with every inhalation, making it a more effective treatment than traditional gold standard therapy, improving daily symptom control and reducing asthma attacks. The Symbicort SMART treatment approach is possible only because Symbicort combines the two components budesonide, an inhaled corticosteroid (ICS) providing anti-inflammatory effect, and formoterol, a unique bronchodilator (LABA) that is both rapid and long lasting, in one inhaler. Patients on Symbicort SMART receive a maintenance dose of Symbicort in line with normal practice to establish asthma control and take additional inhalations 'as needed' of Symbicort if symptoms occur, to provide both rapid symptom relief and increased asthma control. A separate short-acting bronchodilator is no longer needed.

Dr John Patterson, Executive Director, Development for AstraZeneca said, 'We are pleased that the mutual recognition procedure for Symbicort SMART has been successfully completed as this new treatment approach has the potential to improve the lives of a great many asthma patients in Europe. By reducing both symptoms and the number of attacks they experience, patients can now achieve excellent asthma control using only one inhaler.' Symbicort SMART has been tested in a wide clinical trial program involving over 14,000 patients with mild to severe persistent asthma. These studies consistently show that Symbicort SMART, irrespective of asthma severity, reduces the risk of patients developing potentially life-threatening asthma attacks significantly better than fixed dosing with either higher doses of ICS alone or with an ICS/LABA combination therapy plus a short-acting bronchodilator.

This extensive clinical trial programme includes COMPASS1, a large, double-blinded, head-to-head study involving 3,335 patients with moderate to severe asthma, comparing Symbicort SMART to a double maintenance dose of Symbicort and a similar dose of Seretide™ (fluticasone/salmeterol). When compared to Seretide, Symbicort SMART was shown to reduce the risk of a severe asthma attack (primary endpoint) by 33 per cent and to significantly reduce the total number of severe asthma attacks by 39 per cent. Similar effects were reported with Symbicort SMART when compared to double the maintenance dose of Symbicort. Symbicort SMART patients had equal levels of daily asthma control compared to both fixed dose treatment approaches, yet received a lower overall steroid load during

the six-month study period. No differences were seen in the safety of these treatment approaches.

Further data from the SMILE study, recently published in The Lancet, showed for the first time a positive effect of giving an inhaled steroid for daily maintenance and as-needed, i.e. to both prevent and treat symptoms. SMILE evaluated the benefits of different as needed therapies: budesonide/formoterol, formoterol or terbutaline on top of Symbicort maintenance therapy, in preventing asthma attacks. The use of as-needed budesonide/formoterol provided increased protection from severe attacks compared with terbutaline as-needed on top of Symbicort maintenance therapy. In addition, the use of budesonide/formoterol as-needed was significantly more effective than formoterol as-needed on top of Symbicort maintenance therapy. Symbicort is currently approved in more than 90 countries; sales were \$585 million in the first half 2006 (up 24 percent on 2005 figures) and have now reached more than five million treatment years.

-- Symbicort SMART is previously approved in Argentina, Australia, Brazil, Mexico, the Philippines, Switzerland and Thailand.

-- Symbicort SMART is a new approach to managing asthma. Symbicort SMART is Symbicort used for both maintenance and symptom relief. With Symbicort SMART, the underlying inflammation is treated with every inhalation, making it a more effective way to manage asthma. No separate short-acting bronchodilator is no longer needed

-- Symbicort received FDA approval in the US in July 2006 for maintenance treatment of asthma.

-- Asthma is a chronic inflammatory condition of the airways characterized by reversible airway obstruction. It is a variable condition that can change both daily and seasonally.

-- Most asthma patients require maintenance treatment with an inhaled corticosteroid, which suppresses the underlying airway inflammation, and a bronchodilator, which relaxes the smooth muscle of the airways.

SOURCE: medicalnewstoday.com

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CAN YOU REALLY CHANGE YOUR METABOLISM? *Revving up the rate your body burns calories key to weight-loss success*

A 40-year-old female patient came to me stressed over her inability to lose weight. As a busy law student she ate on the run, often skipping meals. She wasn't losing weight on 1,200 calories a day. She envied her husband's ability to shed weight more easily. Another frustrated client found himself 40 pounds overweight after having knee surgery. After getting back into body building and working out, he was having trouble controlling his appetite. "I am eating more than before — what do I do?" he asked.

Like many of you, these dieters were ignoring a key factor in managing weight: metabolism. Your metabolism, the amount of energy your body uses each day, can determine whether you will be successful in losing weight and keeping it off. Controlling your weight is easier if your metabolism is faster because you can eat more calories. So, is it possible to speed up your

metabolism? Yes, although your metabolism is usually fairly stable, there are several things you can do to help rev it up.

Exercise is No. 1

Working out builds muscle. Muscle speeds metabolism. As the body works more efficiently, it processes food faster and your appetite increases. This is why my client who had been body building was having trouble controlling his hunger. Men, being the more muscular sex, generally burn more calories than a woman of the same weight. This is why the law student was having a harder time losing weight than her husband.

Don't skip meals

Space meals 3-4 hours apart. That way you have enough energy throughout the day and you'll be free of the headaches, hunger pangs or mood swings you get when you're famished. Eating erratically signals the body to burn slower and conserve fat. This is why the law student who has been skipping meals is not losing weight on 1,200 calories. She would be better off having smaller, balanced meals and snacks throughout the day. The way to lose more fat than muscle is to follow a balanced nutrition and exercise plan which promotes an average weight loss rate of 1-2 pounds per week.

Food affects mood

What you eat influences your metabolism and mood, making you either sluggish or energetic. Foods high in sugar, saturated fats, artificial sweeteners and low in water and fiber will slow digestion, can cause weight gain and leave you feeling like a couch potato. Whole grains, vegetables, fruits, beans and legumes, fresh herbs and spices provide the proteins, carbohydrates and fats that give you energy and even blood sugar levels. Healthy fats (olive oil, avocado, fish oils, seeds, nuts, soybeans) promote longer-lasting, stable energy levels. Lean proteins (fish, soy foods, white meat poultry, lean meats and low-fat dairy) offer essential proteins for better digestion and muscle building. By drinking eight glasses of water each day, you will have better digestion (better emptying of the stomach and intestines, less gas, bloating, constipation) and a flatter tummy. Staying hydrated also reduces headaches and fights fatigue. You should also get pleasure from eating. Even if adding a piece of dark chocolate is your wish, go for it, one square at a time, as it aids in happy brain chemistry and adds a natural bitter which aids digestion. Improving digestion this way also strengthens the liver, kidneys and lungs, all which facilitate a healthier metabolism.

Stay cool

Colder weather increases metabolism in order to keep the body warm, although it can be a challenge to maintain your weight during the holidays and colder months when exercise levels tend to drop and pounds often pile on. By keeping indoor temperatures cooler and exercising outdoors, you can burn more calories. As your metabolism increases, you'll feel more energetic, lighter — and hungrier. But don't worry. As digestion improves, the stomach empties more regularly and you feel thinner in the waistline and less full in the chest. People who have a faster metabolism have fewer food cravings and feel more in control of their eating.

Don't get stuck in a rut

Some dieters get stuck at a certain weight. To keep your weight from plateauing, you must make small changes to keep your body from adapting to a routine of eating the same amount of calories. If you can't lose those last five pounds, add a couple hundred calories more a day for two weeks and then return to a lesser amount. Over time this strategy will allow you to increase the amount of calories you can eat and continue to lose weight. Be patient

It may take you some time to increase your metabolism — three months is a reasonable timeframe to expect to see changes. If you are having a hard time losing weight, you might consider having your metabolism tested by a professional nutritionist. The key is to be persistent, have confidence and be patient. Soon you will feel healthier and stronger, and in time you will see the results of a toned, healthier body. Best of all, you will have a clearer understanding of what makes your body feel and work better, so you will be able to more effectively control your weight for years to come.

Both my law student and body builder clients achieved results this way. A regular routine of having easy meals and snacks on hand and spreading her calorie intake throughout the day gave the lawyer-to-be increased, longer-lasting energy levels. And the body builder lost weight by eating more regular, balanced meals and including more whole grain, fruits, vegetables and healthy fats into his snacking routine.

HEALTHY SNACKING

If you get hungry before lunch, try:

- 1 ounce low-fat cheese
- 1 small pear

If you drag in the afternoon, try:

- 1 cup of skim cow or soy milk, a small bunch of grapes
- 10 almonds, baby carrots
- Stay hydrated. Thirst is often confused with hunger.

BOOST YOUR METABOLISM

If you skip breakfast, try one of these:

- 1 slice multigrain bread 4 Tbsp. 1 percent fat cottage cheese or 1 Tbsp. peanut butter 1 small apple Sprinkle cinnamon
- Hard-boiled egg with toast and a fruit
- Wheat germ smoothie with banana and plain yogurt (not frozen)
- 1 package of oatmeal, cooked 1 cup skim milk ½ cup berries 1 Tbsp. crushed walnuts Sprinkle cinnamon
- Don't forget healthy fats, such as: 1 Tbsp. chopped nuts, nut butter, avocado or an egg yolk

SOURCE: Lisa C. Cohn-MSNBC Interactive

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Calorie-burning drink: Too good to be true? Medical experts say Coca-Cola's new tea is no quick fix

Health experts Friday dismissed claims that a new green tea-based drink that claims to burn calories by speeding up the drinker's metabolic rate would help people lose weight. Beverage giant Coca-Cola Co. unveiled plans on Thursday to start selling Enviga, a sparkling, caffeinated soft drink, claiming that consuming three 12-ounce cans over 24 hours could burn off between 60 to 100 calories. Coke has developed the drink, which

will come in three flavors — green tea, berry and peach — in partnership with Swiss food giant Nestle SA.

But Marion Nestle, a nutrition professor at New York University, said the claims were based on a research study that was in experimental stages with no proof this drink would help normal people under normal conditions burn calories. “The idea that this drink will help people lose weight is just ridiculous,” Nestle told Reuters. “It is an example of the lengths to which companies will go to sell products.”

Atlanta-based Coca-Cola said Enviga contained green tea extracts, calcium, and caffeine. The product will go on sale in the U.S. northeast in November and roll out nationally in January. A spokeswoman said the Nestle Research Center in Lausanne, Switzerland, studied the benefits of green tea for decades as part of its global tea business. A recent study by the center conducted with the University of Lausanne revealed that consuming the equivalent of three cans of Enviga a day boosted calorie burning by speeding up the metabolism and increasing energy use. Studies showed that healthy subjects in the lean to normal weight range could burn up an extra 60 to 100 calories a day. “Enviga contains the optimum blend of green tea extracts, caffeine and naturally active plant micronutrients designed to work with your body to increase calorie burning, thus creating a negative calorie effect,” Rhona Applebaum, Coca-Cola’s chief scientist, said in a statement.

Lona Sandon, national spokeswoman for the American Dietetic Association, said the high mix of caffeine and green tea could possibly raise people’s metabolic rate and burn a few extra calories, but it would not lead to any weight loss. “We are kidding ourselves if we think we can drink this and melt the pounds away. These companies are just playing on people’s desires for a quick fix for weight loss,” Sandon said. “This won’t make up for a poor diet and lack of exercise and this amount of caffeine could even cause problems for people who are sensitive to caffeine.” SOURCE: MSNBC.com

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ALTANA AG SAID IT HAS RECEIVED APPROVAL TO MARKET ITS respiratory drug Alvesco in Canada by Canadian authorities. Alvesco® is a once daily inhaled corticosteroid with effect equivalent to the twice daily use of fluticasone or budesonide. The drug is to be marketed in Canada from the fourth quarter on. So far the treatment is approved in 39 countries around the world, but not in the U.S. Altana’s partner for Alvesco, Sanofi-Aventis SA (SNY), filed for U.S. approval in 2003. The U.S. Federal Drug Administration sent an approvable letter on October 2004 and requested more data. Altana spokesman Stefan Schmidt said Tuesday: “Sanofi-Aventis will file these data as fast as possible,” without elaborating any further. Also, a ciclesonide based nasal spray (Omnaris) has just been approved in the USA and distribution will begin in 2007. And finally, a fixed combination product of ciclesonide with formoterol is in Phase II development.

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BLACK TEA REALLY DOES HELP ALLEVIATE STRESS

If you drink black tea you will de-stress faster because your levels of cortisol, a stress hormone, will go down more quickly, say researchers from the University College London. This study applies only to black tea. The researchers observed 75 volunteers. They were all male, non-smoking, regular tea drinkers. For a period of six weeks one group was given 4 cups of black tea per day while the other was given a placebo that tasted, looked and smelt the same. Both groups had to refrain from drinking other teas, coffees and herbal and/or caffeinated beverages during this period.

All the volunteers were exposed to stressful tasks while the researchers monitored their cortisol levels, blood pressure, blood platelet levels, and how they subjectively rated their levels of stress. The scientists found both groups experienced similar increases in heart rate and blood pressure during the stress-inducing situations. Levels of cortisol 50 minutes after each stressful task dropped 47% among the black tea drinkers and just 27% among the placebo drinkers. The black tea drinkers also had lower levels of blood platelet activation. The black tea drinkers also expressed themselves in a more relaxed way 50 minutes after a stressful task, when compared to the placebo drinkers.

The scientists are unsure which black tea ingredients help people recover from stress. The team emphasized that black tea does not lower stress levels while the stressful event is taking place. It helps you get over it more quickly.

SOURCE: medicalnewstoday.com

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SPRING IN YOUR STEP HELPS AVERT DISASTROUS STUMBLES, SCIENTISTS SAY

From graceful ballerinas to clumsy-looking birds, everyone occasionally loses their footing. New Harvard University research suggests that it could literally be the spring, or damper, in your step that helps you bounce back from a stumble. The work, published in the journal Proceedings of the National Academy of Sciences, sheds new light on how legged animals maintain a remarkable degree of stability on uneven terrain, highlighting the dynamic elastic and dampening roles of ankles, feet, and other distal extremities in helping us recover after stumbling. It could also help engineers develop better prosthetics and robots robust enough to navigate terrain that would leave today’s automatons spinning their wheels. “Limbs perform wonderfully on uneven terrain,” says author Andrew A. Biewener, the Charles P. Lyman Professor of Biology in Harvard’s Faculty of Arts and Sciences. “Legged animals routinely negotiate rough, unpredictable terrain with agility and stability that outmatches any human-built machine. Yet, we know surprisingly little about how animals accomplish this.”

Together with colleague Monica A. Daley of Harvard’s Department of Organismic and Evolutionary Biology, Biewener conducted experiments wherein helmeted guinea fowl (*Numida meleagris*) stepped unexpectedly into a concealed hole while running. Even though the hole’s 8.5-centimeter depth equaled some 40 percent of the length of the birds’ legs, the fowl remained stable and managed to maintain forward velocity,

albeit most often by speeding up. By monitoring the real-time forces exerted by the limb on the ground, as well as the angles and locations of key joints at the hip, knee, and ankle, Biewener and Daley determined that the stumbling birds' movements were consistent with a mass-spring model that treats the body as a mass balanced atop legs serving as springs. This springiness of the leg was concentrated at its distal end, near the ankle and foot, with only moderate effects seen at the knee and little change occurring at the hip. "Ordinary walking is a patterned movement of repeating, predictable motions," Biewener says. "Our work suggests that even falling into a hole while running does not significantly disturb the regularity of hip motion. By contrast, the distal ankle and tarsometatarsophalangeal joints act as dampers, absorbing energy when the limb contacts the ground at an unexpected steep angle and shorter limb length, or as springs, returning energy when the limb contacts the ground at an unexpected shallow angle and more full extension."

These dynamic processes occur with astonishing speed: In the case of the guinea fowl, the leg modulates itself within 26 milliseconds as it falls into an unexpected void. The lower limbs' spring action helps the birds retain energy and momentum, stabilize their center of mass, and continue forward motion through the hole. Biewener says this work could help create better prosthetic legs and more stable robots. Most current legged robots engage the proximal "hip" joint to generate limb work but do not incorporate dampening or modulated spring-actuation functions into more distal joints, making the machines more likely to tumble over in an irregular landscape.

SOURCE: medicalnewstoday.com

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VEGETABLES, NOT FRUIT, HELP FIGHT MEMORY PROBLEMS IN OLD AGE

Eating vegetables, not fruit, helps slow down the rate of cognitive change in older adults, according to a study published in the October 24, 2006, issue of *Neurology*, the scientific journal of the American Academy of Neurology. In determining whether there was an association between vegetables, fruit and cognitive decline, researchers from Rush University Medical Center studied 3,718 residents in Chicago, Illinois, who were age 65 and older. Participants completed a food frequency questionnaire and received at least two cognitive tests over a six-year period.

"Compared to people who consumed less than one serving of vegetables a day, people who ate at least 2.8 servings of vegetables a day saw their rate of cognitive change slow by roughly 40 percent, said study author Martha Clare Morris, ScD, associate professor at Rush University Medical Center in Chicago, Illinois. "This decrease is equivalent to about 5 years of younger age."

Of the different types of vegetables consumed by participants, green leafy vegetables had the strongest association to slowing the rate of cognitive decline. The study also found the older the person, the greater the slowdown in the rate of cognitive decline if that person consumed more than

two servings of vegetables a day. Surprisingly, the study found fruit consumption was not associated with cognitive change.

"This was unanticipated and raises several questions," said Morris. "It may be due to vegetables containing high amounts of vitamin E, which helps lowers the risk of cognitive decline. Vegetables, but not fruits, are also typically consumed with added fats such as salad dressings, and fats increase the absorption of vitamin E. Further study is required to understand why fruit is not associated with cognitive change." Morris says the study's findings can be used to simplify public health messages by saying people should eat more or less of foods in a specific food group, not necessarily more or less of individual foods.

The study was supported by grants from the National Institute on Aging. SOURCE: medicalnewstoday.com

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OLIVE OIL'S NEWFOUND BENEFITS

Olive oil is a cornerstone of Mediterranean diets, which are renowned for being good for the heart. Many nutritionists have attributed that benefit to the oil's high proportion of monounsaturated fatty acids. However, a European study suggests that olive oil's fatty acid makeup is only part of the story. The study indicates that lightly processed olive oils—the virgin types common in Mediterranean diets—offer additional ingredients with a cardiovascular advantage: abundant antioxidants known as polyphenols.

When healthy men incorporated a virgin olive oil especially rich in these polyphenols into their diets, characteristics of their blood changed in many beneficial ways. Before eating polyphenol-rich oil, the men had consumed a diet low or devoid of the olive antioxidants.

María-Isabel Covas of the Municipal Institute for Medical Research in Barcelona and her colleagues report their findings in the Sept. 5 *Annals of Internal Medicine*. The researchers conclude that olive oil "is more than a monounsaturated fat." The new data are "evidence to recommend the use of polyphenol-rich olive oil—that is, virgin olive oil"—beyond the benefits provided by its fatty acids. Nor is this the only newfound benefit from olive oil. Another European research team reported this month on a test-tube study showing that compounds in oil from the skin of olives trigger the death of human-cancer cells.

What is a Mediterranean diet?

Epidemiologic studies have shown that many people from Mediterranean countries can eat fatty diets and yet not have a high risk of heart disease. Spaniards José Mataix of the University of Granada and Francisco Javier Barbancho of the University of Extremadura in Cáceres observe in a new book that the Mediterranean diet "is based on products derived from wheat, olive, and grape, these constituting the Mediterranean triad of bread, oil, and wine." In fact, Covas' group points out that several additional features characterize diets common to the region. Among them: several daily servings of vegetables and fruits, only a small serving (100 to 150 grams) of red meat per day, few or no carbonated drinks, at least three weekly meals including shellfish or legumes, few commercially prepared pastries or sweets, servings of fowl or rabbit instead of pork or

other red meats, and plenty of peanuts and other nuts. Some studies have pointed to the alcoholic component as a substantial contributor of such diets' cardiovascular benefits. However, others have found that people who drink as much wine and other alcoholic beverages as do Mediterranean eaters fail to get as many health benefits if they don't follow the rest of the diet. For instance, a separate team of all-Spanish researchers that included Covas recently reported such data in early results from the PREDIMED Study. This trial is ultimately slated to track for 4 years some 9,000 men and women at elevated risk of heart disease. Each volunteer is being randomly assigned to eat a low-fat diet or a higher-fat diet in which much of that fat, Mediterranean style, comes from either olive oil or nuts, which also are rich in heart-healthy monounsaturated fats. In the July 4 *Annals of Internal Medicine*, Ramon Estruch of the Hospital Clinic in Barcelona and his colleagues report results from 770 recruits during the first 3 months of their participation in PREDIMED. People eating either version of the Mediterranean fare had lower blood glucose concentrations, lower blood pressures, lower LDL cholesterol concentrations, and fewer markers of inflammation than did people eating the low-fat diet. All these factors indicate a reduced risk of heart disease. Acknowledging that the trial so far is too small and the findings too preliminary to validate that Mediterranean diets lower heart-disease incidence, the authors nevertheless point out that data such as these already support the Mediterranean diet "as a useful tool in managing individuals who are at high risk for coronary heart disease."

What polyphenols do

In the more-recent *Annals of Internal Medicine* study, Covas and her team recruited 200 healthy men, ages 20 to 60. Each man ate the same diet, except for getting differing types of olive oil for cooking or adding to their food. The men were randomly assigned to receive 25 milliliters (about 5 teaspoons) a day of one of three different olive oils: a virgin olive oil containing 366 milligrams of polyphenols per kilogram of oil, a highly refined olive oil with a polyphenols concentration of just 2 mg/kg, or a mixture of these two oils with a polyphenol concentration of 164 mg/kg. During each segment of the trial, the men received a different oil, so that by the end, all had consumed each oil for one 3-month period. A 2-week "washout" period, during which the recruits were asked to avoid olives or olive oil, separated trial segments. The researchers conducted the trial, financed by the European Union, in six research centers in five European countries: Spain, Denmark, Finland, Italy, and Germany. Its implications, therefore, shouldn't be confined to any one ethnic group, say the researchers. The men's good, or HDL, cholesterol was modestly different — varying by some 1.75 milligrams per deciliter of blood—in the three trial segments, but showed a clear correlation: highest when they took in the most olive-oil polyphenols and lowest

when they took in the least. Covas calls this trend "the most striking" of the study. The new report notes that previous studies by others have shown even a 1 mg/dl increase in HDL could translate into a 2 to 3 percent reduction in cardiovascular risk across a treated population. The polyphenols also appeared to reduce the chemical oxidation of bad, LDL cholesterol. "Oxidation of LDL is considered a risk factor for coronary heart disease," notes Covas, a clinical biochemist who focuses on nutrition as a means to fight heart disease. In this study, the higher the polyphenol content of the oil, the lower the signs of LDL oxidation in the men's blood. Concentrations of triglycerides—fats in the blood—decreased with all olive-oil types, compared with values in the men prior to the trial. This suggests that this particular effect is attributable to something in olive oil other than polyphenols.

Antioxidant benefits

Earlier research by Covas' group had also indicated that polyphenols reduce LDL oxidation. In a study published in the Feb. 15 *Free Radical Biology and Medicine*, the researchers recruited a dozen men in their early 20s and had them eat a breakfast of bread and 40 ml of olive oil on each of three occasions 10 days apart. At each breakfast, the olive oil was different—with a low, medium, or high concentration of polyphenols. Blood sampled in the hours immediately after each meal was evaluated to assess whether the LDLs' chemistry and composition changed from one test day to the next. The blood tests showed that the men's LDLs picked up olive polyphenols in proportion to the amounts present in the oil. Moreover, the researchers found that oxidative stress, as indicated in the men's blood, increased after the low- and medium-polyphenol breakfast, but not after the breakfast featuring the high-polyphenol oil.

Olives vs. cancer

Olive oil's benefits appear to extend beyond heart health. For instance, M. Emília Juan of the University of Barcelona and her colleagues report finding that triterpenes — waxy hydrocarbons that coat olive skins—shut down the runaway proliferation of human colon cancer cells. Juan's team notes that epidemiologic studies have suggested that regular consumption of olive oil diminishes cancer risk. Although many scientists had suspected that the fatty acids in olive oil were responsible for the effect, Juan's team wondered about the possible role of triterpenes. The researchers isolated the triterpenes from oil and other compounds by immersing olives for a minute in a solvent. They then purified the compounds and added them to the growth serum for test-tube colonies of cancer cells. The extracted chemicals didn't poison the cells, but they did inhibit proliferation of the cells by triggering them to undergo a natural process of cell death—something cancer cells typically avoid—the researchers report in the October *Journal of Nutrition*. Moreover, Juan and her colleagues note that concentrations of triterpenes needed to achieve this effect appear comparable to what people would obtain from the daily intake of



THE OIL WITH MORE. New studies indicate that trace ingredients in olive oils may fight major chronic diseases

olives and olive oil typical of Mediterranean diets—i.e. about 10 medium-size olives and about 6.6 teaspoons of oil.

Bottom line

On several grounds, virgin olive oil appears to represent a healthy dietary fat. However, all fats are high in calories and a potential source of oxidative stress to the body. That's why Covas—and nutritionists generally—recommend that olive oil be substituted for other fats in the diet, not added to them.

Although virgin olive oil, which is usually the product of cold-pressed olives, is the most flavorful, it can be bitter enough to deter people from using it. Another group of Spanish researchers has been working to counter this problem. They've shown that giving olives a 3-minute hot bath prior to pressing converts strongly bitter oils to ones that are only slightly bitter.

SOURCE: Science News, Vol. 170, No. 16, Oct. 14, 2006

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RECIPES FOR A LIQUID DIET

Sometimes it's necessary to follow a liquid diet if solids are not being digested properly. These recipes are tasty and nutritious.

Fruity Yogurt Sipper

1 large ripe banana or 2 medium peaches, peeled and pitted
 1½ cups whole milk
 1 carton of vanilla yogurt (8 oz)
 1-2 tbsp. powdered sugar
 ½ cup ice cubes

Cut fruit into chunks. Blend all ingredients except ice in a blender until smooth. Add ice one cube at a time, blending until smooth.

Yield: 2 cups Serving size 1 cup

With banana:

Per serving: calories, 2330; carb: 37 g; Protein, 12 g; Fat: 10 g; Sat fat 5 g; Chol, 34 mg; sodium, 125 mg; fiber, 3 g.
 Carbohydrate choice 2½

With peaches:

Per serving: cal, 310; carb, 32 g; protein, 13 g; fat, 10 g; sat fat, 5 g; chol, 34 mg; sodium, 125 mg; fiber, 2 g
 Carbohydrate choices: 2

High Protein Shake

1 cup protein-fortified, reduced-fat (2%) milk
 ½ cup regular ice cream
 ½ tsp vanilla extract
 2 tbsp butterscotch sauce, chocolate sauce or fruit syrup

Put all ingredients in a blender. Blend at low speed for 10 seconds. For variety, try adding ½ cup banana or 1 tablespoon smooth peanut butter with 2 teaspoons sugar.

Yield: 1½ cups Serving size: 1 cup

With butterscotch sauce:

Per serving: Cal, 252; carb, 39 g; Protein, 9 g; fat, 8g; sat fat, 3 g; chol, 35 mg; sodium, 209 mg; fiber, 09g
 Carb choices: 2½

With Chocolate sauce:

Per serving: cal, 276; carb, 36g; protein, 10g; fat, 11g; sat fat, 6g; chol, 35g; sodium, 201 mg; Fiber, 0g
 Carb choices 2½

With fruit syrup:

Per serving: calories, 257; carb, 40g; protein, 8g; fat, 8g; sat fat, 5 g; chol, 35 mg; sodium, 113 mg; fiber 0g
 Carb choices: 2½

With banana and chocolate sauce:

Per serving: calories 317; carb 49g; protein 10g; fat 8g; sat fat 5g; cholesterol 35 mg; sodium 201 mg; fiber 1g
 Carb choices: 3

With peanut butter, sugar and chocolate sauce:

Per serving: cal 367; carb 43g; protein 10g; fat 145g; sat fat 10 g; cholesterol 35 mg; sodium 248 mg; fiber 1gm
 Carb choices: 3

SOURCE: Diabetes Self-management

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HACKERS, TAKE NOTE: NIH STUDY FINDS APPLES MAY REDUCE CHRONIC COUGH *Study Is Latest to Suggest Apples May Improve Lung Function, Promote Lung Health*

Hackers (and we don't mean the computer kind), take note: A new study from the National Institutes of Health (NIH) reports that eating foods rich in fiber and flavonoids — found most abundantly in apples — may reduce your chronic productive cough and other respiratory symptoms.

Researchers analyzing whether diet might impact chronic productive cough — commonly experienced in persons with chronic respiratory symptoms such as chronic obstructive pulmonary disease (COPD) — reported that high consumption of fiber and fruits, specifically apples, appears to be associated with a lower incidence of cough. Their findings suggest that promoting a high-fiber, high-flavonoids diet may help reduce chronic respiratory symptoms, both in smokers and non-smokers.

Reporting in the August issue of the peer-reviewed American Journal of Respiratory and Critical Care Medicine, Dr. Lesley Butler of NIH and her colleagues noted they found an inverse association between fiber consumption and the incidence of productive cough — that is, the more fiber consumed, the lower the reported incidence of cough. Fiber consumption appears to reduce the incidence of cough even in non-smokers, as well as smokers. While fruits, vegetables and grains are the top dietary sources of fiber, an association was found only for non-citrus fruit — the higher the consumption of fruit, the lower the reported incidence of cough plus phlegm. (Source: Butler,

L.M., Koh W-P. et al. American Journal of Respiratory and Critical Care Medicine August 2004; vol. 170, no. 3, pp 279-287. The paper can be accessed online at <http://ajrccm.atsjournals.org/cgi/content/abstract/170/3/279>.)

Of all the foods examined, the most significant relationship was seen with apples. The association for apples was also seen independent of fiber, suggesting that other apple nutrients besides fiber may offer lung protection. Researchers suggested that antioxidant phytonutrients such as flavonoids may be at work.

Apples are one of the top dietary sources for fiber and flavonoids. One medium, tennis ball-sized apple contains five grams of fiber, and apples are the top fruit source of flavonoids.

"Cough and phlegm are frequently associated with [COPD], which may be caused by oxidative stress-mediated inflammation and tissue damage in the lung," wrote Butler and her colleagues. "Fruits and vegetables are the major food sources of antioxidants that may protect the lung from oxidative stress. We observed the strongest inverse dose-response associations for apples, pears and grapes." That means the more of these foods that were eaten, the greater the benefit was, with the benefit increasing in direct correlation with the amount of fruit consumed.

"Our findings suggest that flavonoids may play a crucial role," Butler and colleagues wrote. "Flavonoids may protect the lung on the basis of their antioxidant and anti-inflammatory properties."

The prospective cohort study involved 571 persons aged 45-74 reporting a productive cough, who were identified from the ongoing Singapore Chinese Health Study, a large 49,140-person epidemiological study that began in 1993. The study was supported by NIH and the National Institute of Environmental Health Services.

Diet May Impact Chronic Lung Disease

According to the American Lung Association (ALA), COPD is the fourth leading cause of death in the United States, claiming the lives of 107,146 Americans annually. ALA reports that 80 to 90 percent of COPD cases are caused by smoking; other leading causes are second-hand smoke and exposure to air pollutants.

"Our data from the Singapore Chinese Health Study provide evidence that promoting a diet high in sources of fiber and flavonoids, such as fruit and soy, may be an important contribution to primary prevention strategies for chronic respiratory symptoms, both in smokers and nonsmokers," the authors wrote.

Latest Study to Link Apples, Lung Health

The NIH study is the latest of many to suggest we might breathe easier — literally — by eating apples.

-Last fall, Australian researchers reported that eating apples and pears may protect against asthma, another growing lung health risk.

-In December 2001, London-based researchers reported that people who ate at least two apples per week had a 22-32 percent lower risk of developing asthma than people who ate

fewer apples, based on their population-based case-control study.

-In May 2001, researchers at the U.K.'s University of Nottingham reported that apple eaters had better lung function and lower risk of respiratory disease, such as asthma, than non-apple eaters.

At the same time, researchers at the University of Groningen in the Netherlands reported that smokers eating moderate amounts of fruits and vegetables — and particularly apples — cut their risk of developing COPD nearly in half.

In January 2000, researchers at London's St. George's Hospital also documented a possible link between apples and lung function.

-Researchers at the University of Hawaii and Finland's National Public Health Institute both linked apple consumption with a reduced risk of lung cancer in separate studies published in 2000 and in 1997, respectively.

SOURCE: US Apple Association.

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KEEP POUNDS OFF WITH DAILY WEIGHING AND QUICK ACTION

Most successful dieters regain the weight they lost. But new research shows that stepping on a scale every day, then cutting calories and boosting exercise if the numbers run too high, can significantly help dieters maintain weight loss. The study, conducted by researchers at The Miriam Hospital and Brown Medical School, reports results of the first program designed specifically for weight loss maintenance. The study appears in the New England Journal of Medicine. Unlike other obesity studies, which focus on how to lose weight, the clinical trial called STOP Regain tested a method that taught participants how to keep those pounds from coming back - regardless of what method they used to lose the weight in the first place.

Led by Rena R.Wing, PhD, Director of the Weight Control and Diabetes Research Center at The Miriam Hospital and Professor of Psychiatry and Human Behavior at Brown Medical School, the study taught successful dieters a technique called "self-regulation." With the goal of maintaining their weight within five pounds, participants were taught to weigh themselves daily and to use the information from the scale to determine if they needed to adjust their diet or exercise routine.

The intervention worked: Significantly fewer participants regained five or more pounds during the 18 month long program. The program was most successful when delivered in face-to-face meetings, although the Internet also proved a viable delivery system to help participants maintain their weight loss. "If you want to keep lost pounds off, daily weighing is critical," Wing said. "But stepping on the scale isn't enough. You have to use that information to change your behavior, whether that means eating less or walking more. Paying attention to weight - and taking quick action if it creeps up - seems to be the secret to success." "We know that losing weight and keeping weight off is very tough for many people," said Robert J. Kuczmarski, Dr. P.H., R.D., director of the Obesity Prevention and Treatment Program at the National Institutes of Health. "However, the results of STOP Regain show that there are definite actions that people can take before their weight begins to creep upward.

Weight control and better health are not one-shot deals and this study will help people see that," he adds.

In the study, Wing and her team enrolled 314 participants who'd lost at least 10 percent of their body weight - averaging nearly 20 percent of their body weight or 42 pounds - within the last two years. A third of participants were assigned to a control group, and received quarterly newsletters about eating and exercise in the mail for the duration of the study period. The other two-thirds were assigned to groups that would test the weight maintenance program. One third received the intervention over the Internet, the final third in face-to-face group meetings. Whether delivered over the computer, or in person, the education and support program was virtually identical. Participants were taught strategies specific to preventing weight regain, many gleaned from Wing's National Weight Control Registry, a registry of more than 5,000 people who have successfully lost weight and kept it off for at least one year. Strategies taught in the trial included eating breakfast, getting an hour of physical activity each day and regular weighing - participants were given a scale and urged to use it daily. They also reported their weight weekly, either over the Internet or by phone, depending on the study group.

Participants were also introduced to a weight-monitoring system based on color zones. If they were within three pounds of their starting weight after the weekly check-in, they were in the "green zone" - and received encouraging phone messages and green rewards, from mint gum to a dollar bill. If they'd gained between three and four pounds, they landed in the "yellow zone" and were instructed to tweak their eating habits or exercise routine. If they gained five pounds or more, they were in the "red zone" and encouraged to restart active weight-loss efforts. They were urged to pull out a red toolbox they received at the start of the program that included items such as a meal replacement shake, a pedometer, a diet diary - and their own weight success loss story. Participants who were in the "red zone" also had the chance to get one-on-one counseling by phone, email or in person. Both groups attended weekly meetings for the first month of the study period, then monthly meetings either in groups or via a computer chat room. Internet participants received a laptop computer, an Internet connection and technical support.

Results were resounding: In the control group, 72 percent of participants gained five or more pounds during the year and a half study period. But only 55 percent of Internet participants - and 46 percent of participants in the face-to-face group - gained back that much weight. "The Internet intervention worked, but the face-to-face format produced the best outcomes," Wing said. "Both were successful because the message that people got - pay attention to your weight, then take action to maintain it - was effective. People were told to take personal control of their health and were given the tools to do it. And they kept off the weight."

The authors note that daily weighing was strongly associated with prevention of weight gain, but only in the Internet and face-to-face groups. Intervention participants who weighed themselves daily had an 82 percent reduction in the

odds of regaining five or more pounds compared to those who did not weigh daily. However, daily weighing in the control group had little effect on the amount of weight regained. "This suggests that participants in the intervention groups were able to use the information from the scale to make constructive changes in their eating and exercise behaviors," says Wing. "It's further evidence that getting on the scale each day is only part of the solution." Wing and her team conclude that the concept of an intervention exclusively designed for weight-loss maintenance is an important approach to the successful treatment of obesity. Future studies should examine ways to refine the Internet format, as well as test interventions designed to last longer than 18 months.

SOURCE: medicalnewstoday.com

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GRANDMA'S SAUSAGE TURKEY STUFFING TRANSFORMED

12 oz 50% less fat bulk pork sausage
Nonstick cooking spray
½ cup chopped onion
1 cup chopped celery
8 cups herb-seasoned stuffing cubes
1 - 1/12 cups water

Preheat oven to 350 deg.F. Brown the sausage in a heavy skillet, chopping it into small pieces with a spoon. Place in a colander to drain, and pat with a paper towel to absorb the grease. Wipe the skillet out with another paper towel, and place over medium to high heat. Spray with nonstick cooking spray. Add onion and celery, cooking until tender but not brown. If the pan dries out, add a small amount of water. Toss in sausage and bread cubes. Drizzle with enough water to moisten. Spray a two-quart casserole with nonstick cooking spray and fill with stuffing. Bake for 30 minutes.

This recipe will also fill the cavity of a 10 lb turkey.

Prep time: 25 minutes

Baking time: 20 minutes (or suggested cooking time for a stuffed turkey)

Yield: 7 cups Serving size: ½ cup

Per serving:	Exchanges per serving:
Calories: 190	2 starch, 1 fat
Carbs: 27 g	Carb choices: 2
Protein: 8 g	
Saturated fat: 2 g	
Cholesterol: 15 mg	
Fiber: 3 g	
Sodium: 620 mg.	

Source: Diabetes Self-Management

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BUTTERNUT SQUASH AND APPLE CASSEROLE

- a.. 1 small butternut squash, about 2 pounds
- b.. 2 apples, cored, peeled, sliced
- c.. ½ cup brown sugar, firmly packed
- d.. 1/4 cup cold butter
- e.. 1 tablespoon flour
- f.. 1 teaspoon salt
- g.. 1/4 teaspoon ground cinnamon
- h.. 1/4 teaspoon ground nutmeg

Peel squash, scoop out seeds, and cut in small pieces.

Place squash and apple slices in oblong baking dish (7x11-inch). Blend remaining ingredients with fork or pastry cutter until crumbly.

Distribute over squash and apple.

Cover and bake butternut squash casserole at 350° for about 45 to 50 minutes.

Butternut squash recipe serves 6 to 8.

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GRANNY SMITH CARAMEL APPLE WEDGES

Serves 2; 1 apple and about 3 tablespoons topping per serving
Drizzle fat-free caramel apple dip over tart green apples, then top them with sprinkles of coconut, dried cranberries and pumpkin seeds.

- 2 medium Granny Smith apples, cored and cut into wedges
- 2 tablespoons fat-free caramel apple dip or fat-free ice cream topping, such as caramel, hot fudge or butterscotch
- 8 dried banana chips (about 3 tablespoons)
- 2 teaspoons dried cranberries
- 2 teaspoons unsweetened shredded coconut
- 2 teaspoons unsalted, toasted pumpkin seeds

To assemble, put apple wedges in two small bowls. Drizzle 1 tablespoon dip over each serving. Arrange 4 banana chips on each. Sprinkle with the cranberries, coconut and pumpkin seeds. Serve immediately.

Cook's Tip on Fat-Free Caramel Apple Dip: Fat-free caramel apple dip is located near the apples in the grocery store produce section.

Cook's Tip on Toasted Pumpkin Seeds: Look for unsalted, toasted pumpkin seeds in bulk in the produce, baking or candy section of your grocery store. During the fall, when pumpkins are available, you can toast your own seeds. Preheat the oven to 375°F. Put 2 cups of pumpkin seeds in a colander and rinse well to remove any pumpkin flesh. Dry the seeds thoroughly with paper towels. Lightly spray a nonstick rimmed baking

sheet with vegetable oil spray. Spread the seeds (the hulls are safe to eat) in a single layer, then lightly spray the tops with vegetable oil spray. Bake for 25 to 30 minutes, or until the seeds are lightly golden brown, stirring every 10 minutes. The seeds may pop during cooking. Put the baking sheet on a cooling rack and let cool for 20 to 30 minutes.

Nutrition Analysis (per serving)

Calories 180; Total Fat 3.0 g; Saturated 1.0 g; Polyunsaturated 1.0 g; Monounsaturated 0.5 g; Cholesterol 0 mg; Sodium 61 mg; Carbohydrate 37 g; Fiber 4 g; Protein 2 g

SOURCE: American Heart Association Low-Calorie Cookbook

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VELVET PUMPKIN BREAD

Serves 16; 1 slice per serving

The name says it all — this bread has a wonderful texture. And just wait until you smell it baking!

Vegetable oil spray

1 cup canned pumpkin

1/3 cup fat-free milk

Egg substitute equivalent to 2 eggs, or 2 large eggs, slightly beaten

2 tablespoons corn oil stick margarine

1 tablespoon canola or corn oil

2 cups all-purpose flour

2 teaspoons baking powder

1 teaspoon ground cinnamon

½ teaspoon ground ginger

1/4 teaspoon ground nutmeg

1/4 teaspoon salt

½ cup chopped pecans, dry-roasted

½ cup sugar

½ cup firmly packed light brown sugar

Preheat the oven to 350°F. Lightly spray a 9 ´ 5 ´ 3-inch loaf pan with vegetable oil spray. Set aside.

In a medium bowl, whisk together the pumpkin, milk, egg substitute, margarine, and oil.

In a large bowl, sift together the flour, baking powder, cinnamon, ginger, nutmeg, and salt.

Stir the remaining ingredients into the flour mixture. Make a well in the center of the flour mixture.

Pour the pumpkin mixture all at once into the well. Stir until just moistened. Don't overmix. Pour the batter into the loaf pan.

Bake for 1 hour, or until a cake tester or toothpick inserted in the center comes out clean. Turn out onto a cooling rack.

Nutrition Analysis (per serving)

Calories 158; Total Fat 4.5 g; Saturated 0.5 g; Polyunsaturated 1.5 g; Monounsaturated 2.0 g; Cholesterol 0 mg; Sodium 129 mg; Carbohydrates 27 g; Fiber 1 g; Sugar 14 g; Protein 3 g

Dietary Exchange

2 Starch; ½ fat

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**“Many people believe that laughter is the best medicine,
so the government has declared a ban on all laughing
until further studies can be done.”**

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