



NSU College of Pharmacy
Drug Information & Resources Center
N e w s l e t t e r

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In the News

Question of the Day

What mucolytic drug is used in the adjuvant treatment of pulmonary diseases associated with increased viscosity of bronchial secretions and has been shown to prevent radio-contrast induced renal toxicity?

hint...

Smells like rotten eggs. APA overdose? C'mon already.

In the News

Echinacea Ineffective for Treating Common Cold

<http://health.discovery.com/news/afp/20021216/echinacea.html>

Echinacea, the herb widely touted as a booster for the immune system, appears to be ineffective in combating the common cold, according to a new study. In a study of 142 students with an upper respiratory tract infection, the 50 percent who were given large daily doses of Echinacea took just as long as the placebo group to shake off the infection. Both groups took about six days to recover from the infection, according to the study by University of Wisconsin-Madison, published Tuesday in the *Annals of Internal Medicine*. The researchers concluded that the form of Echinacea used by their volunteers "provides no benefit for common cold symptoms in young, healthy adults." The students who took the herbal supplement used a version that was a mixture of unrefined Echinacea purpurea herb (25 percent) and root (25 percent) and E. angustifolia root (50 percent). They took six grams in one-gram doses per day for the first three days of the illness, and three grams each subsequent day of illness for a maximum of 10 days. The Wisconsin team cautioned that other preparations of the herb might have different results, and that older individuals or people with compromised immune systems might benefit more from the herbal supplement. Previous studies investigating involving Echinacea and the common cold have yielded

somewhat more encouraging results, ranging from a 40 to 50 percent reduction in severity and duration of symptoms to more modest reductions of 10 to 30 percent in the most recent studies, according to background information in the study. But virtually all of the studies have suffered from limitations, notably the lack of an objective way to validate self-reported symptoms.

Thiazide-Type Diuretics Superior in Preventing One or More Forms of Cardiovascular Disease

<http://www.docguide.com/news/content.nsf/news/8525697700573E1885256C9200694A99?OpenDocument&id=9F874D6C503400D485256AFD0071B610&c=Hypertension&count=10>

A major study in the United States including 33,357 participants treated at 623 North American centres indicates that thiazide-type diuretics are superior in preventing one or more major forms of cardiovascular disease. The diuretics should be the preferred first-step therapy in hypertension treatment, say investigators with the Antihypertensive and Lipid-Lowering Treatment to Prevent Heart Attack Trial (ALLHAT). They note that thiazide-type diuretics are also less expensive than either calcium channel blockers (CCBs) or angiotensin-converting enzyme (ACE) inhibitors. "The results of ALLHAT indicate that thiazide-type diuretics should be considered first for pharmacological therapy in patients with hypertension," say researchers led by Dr. Barry Davis from the University of Texas-Houston Health Science Centre in Houston. "They are unsurpassed in lowering blood pressure, reducing clinical events and tolerability, and they are less costly." "Who is John Galt?" The investigators say first-step therapy with CCBs and ACE inhibitors could be considered for patients who cannot take a diuretic - "which should be an unusual circumstance" - as long as there is due regard for the higher risk of one or more major cardiovascular disease manifestations involved. "Since a large proportion of participants required more than one drug to control their blood pressure, it is reasonable to infer that a diuretic be included in all multi-drug regimens, if possible," they suggest. ALLHAT participants were aged 55 years or older. They were randomly assigned to receive 12.5 milligrams per day to 25 mg/d of chlorthalidone (15,255 patients), 2.5 mg/d to 10 mg/d of amlodipine (9,048 patients) or 10 mg/d to 40 mg/d of lisinopril (9,054 patients). Planned follow-up was for approximately four to eight years. Mean follow-up was 4.9 years. The primary outcome measure was combined fatal coronary heart disease or non-fatal myocardial infarction. Secondary outcomes included all-cause mortality, stroke, combined coronary heart disease (primary outcome, coronary revascularisation or angina with hospitalisation) and combined cardiovascular disease (combined coronary heart disease, stroke, treated angina without hospitalisation, heart failure and peripheral artery disease). Primary outcome occurred in 2,956 participants. There was no difference between treatments on primary outcome or in all-cause mortality. The investigators report, however, that "Neither amlodipine (representing

CCBs) nor lisinopril (representing ACE inhibitors) was superior to chlorthalidone (representing thiazide-type diuretics) in preventing major coronary events or in increasing survival. "Chlorthalidone was superior to amlodipine (by about 25 percent) in preventing heart failure, overall, and for hospitalised or fatal cases, although it did not differ from amlodipine in overall cardiovascular disease prevention. Chlorthalidone was superior to lisinopril in lowering blood pressure and in preventing aggregate cardiovascular events, principally stroke, heart failure, angina and coronary revascularization."

JAMA, 2002; 288: 2981-2997.

Results in Hypertensives with Elevated Cholesterol Similar with Pravastatin, Usual Care

<http://www.docguide.com/news/content.nsf/news/8525697700573E1885256C920078C2>

1D?OpenDocument&id=9F874D6C503400D485256AFD0071B610&c=Hypertension&count=10

There is no significant difference between pravastatin therapy and usual care in reducing all-cause mortality or combined fatal and non-fatal coronary heart disease (CHD) in older, moderately hypercholesterolaemic patients with well-controlled hypertension, suggest the results of a major study in the United States. Investigators with the lipid-lowering trial (LLT) component of the Antihypertensive and Lipid-Lowering Treatment to Prevent Heart Attack Trial (ALLHAT) point out, however, that their results are consistent with evidence from other large trials. "Indeed, the overall findings from the nine large, long-term statin trials (including ALLHAT-LLT) leave little doubt regarding the broad efficacy and safety of this treatment in the prevention and treatment of atherosclerotic cardiovascular disease," say researchers led by Dr. Barry Davis from the University of Texas-Houston Health Science Centre in Houston. They suggest the results could be due to the modest differential in total cholesterol (9.6 percent) and low-density lipoprotein cholesterol (LDL-C) (16.7 percent) between participants receiving pravastatin and those receiving usual care in this study, compared with prior statin trials of cardiovascular disease prevention.

"In the absence of evidence for increases in any category of non-cardiovascular mortality, the ALLHAT-LLT results should be interpreted as consistent with current recommendations for cholesterol control in the prevention and treatment of cardiovascular disease," the investigators note. They also say their results emphasize the need to adequately reduce LDL-C in clinical practice when lipid-lowering therapy is implemented. The 10,355 ambulatory patients, aged 55 years or older, who participated in ALLHAT-LLT were a subset of participants from the ALLHAT trial. They were treated at 513 North American clinical centres. Mean age for ALLHAT-LLT was 66 years, 49 percent of participants were women, 14 percent had a history of CHD, 35 percent had type 2 diabetes, 38 percent were black and 23 percent were Hispanic. Participants had LDC-C levels of 120 mg/dL to 189 mg/dL, or 100

mg/dL to 129 mg/dL if they were known to have CHD. Triglycerides levels were lower than 350 mg/dL. A total of 5,170 participants were randomised to pravastatin and 5,185 received usual care. Usual care was defined as treatment for LDL-C lowering according to the discretion of a primary-care doctor. Mean follow-up was 4.8 years. Results indicate that during the trial, 32 percent of the usual-care participants with CHD and 29 percent without CHD started lipid-lowering therapy. At year-four follow-up, total cholesterol levels were reduced by 17 percent in the pravastatin group and 8 percent in the usual-care group. A random sample of participants had LDL-C levels assessments. Levels were reduced by 28 percent in the pravastatin group and 11 percent in the usual-care group. All-cause mortality rates were similar in the two groups. There were no significant differences between groups in rates of CHD events.
JAMA, 2002; 288: 2998-3007.

FDA Approves Pediarix, First US Combination Vaccine to Protect Infants Against Five Diseases

http://story.news.yahoo.com/news?tmpl=story2&cid=571&ncid=751&e=3&u=/nm/20021216/hl_nm/vaccine_infants_dc

The US Food and Drug Administration has approved a five-in-one combination vaccine, Pediarix, which could result in 24 million fewer injections a year for US infants, the vaccine's maker GlaxoSmithKline said Monday. The FDA approved Pediarix for protection against diphtheria, tetanus, pertussis, hepatitis B and polio (news - web sites) in infants 2, 4 and 6 months of age, the UK company said, resulting in up to six fewer injections under the current recommended schedule. At present, the company noted that children receive approximately 20 injections in the first two years of life, including nine shots to protect against diphtheria, tetanus, pertussis (whooping cough), hepatitis B, and polio alone. Pediarix was developed to protect against these diseases with only three injections, easing the burden on parents and doctors to comply with the recommended vaccination schedule, the company said. "The introduction of a combination vaccine like Pediarix marks a milestone for the United States immunization program," said Dr. Joel Ward of the University of California in Los Angeles, who served as the principal clinical trial investigator. GlaxoSmithKline said Pediarix was proven safe and effective in numerous worldwide clinical trials, involving 7,028 infants who received a total of 20,739 doses. The administration of Pediarix was associated with higher rates of fever relative to separately administered vaccines, the company added. But the most common side effects were similar to the other vaccines, such as injection-site reactions, fever and fussiness, the drugmaker said. GlaxoSmithKline spokeswoman Ramona DuBose told Reuters Health the company plans to launch the vaccine in early January and would market it at a price comparable to the total cost of the individual vaccines. GlaxoSmithKline estimated that about 3 million infants

in the US would qualify for the vaccination and predicted that further development of such combination vaccines may also make it easier to add new vaccines to the immunization schedule.

FDA approves Bayer's once-daily Cipro

<http://www.reuters.com/newsArticle.jhtml?type=topNews&storyID=1911668>

Germany's Bayer AG BAYG.DE said on Monday the U.S. Food and Drug Administration had approved a new once-a-day version of antibiotic Cipro, its single biggest pharmaceutical product. Bayer said the new formulation of the drug, known as Cipro, XR, had been developed as a treatment for uncomplicated urinary tract infections and would be available to patients in the United States from January. The introduction of the new patented version of the medicine will help lessen the blow of looming generic competition to the original form of Cipro, which is due to lose patent protection in the all-important U.S. market in 2003. Cipro XR is expected to be used by a significant number of patients, due to its dosing convenience, despite the advent of cheap copycat generics. Bayer is hoping to get approval for a higher dosage once-daily version of Cipro XR for more complex infections by the end of next year. UBS Warburg analysts estimate 2003 sales of Cipro will reach 1.75 billion euros (\$1.79 billion). The medicine shot to fame at the end of last year when sales surged as Americans turned to the drug as a treatment for anthrax following the discovery of the germ warfare agent in the postal system. Bayer shares were 1.35 percent higher at 21.78 euros by 0940 GMT, outperforming the European healthcare index .SXDP which was up 0.3 percent. Lehman Brothers said the approval for Cipro XR had been expected by the market but the FDA decision had come through slightly earlier than predicted following the product's filing with the regulator in March 2002.

Generic Norvasc Gets Nod; Pfizer To Appeal

<http://news.moneycentral.msn.com/ticker/article.asp?Feed=RTR&Date=20021218&ID=2189921&Symbol=US:RDY>

India's Dr Reddy's Laboratories said on Wednesday it won a U.S. court ruling against Pfizer Inc. that could allow it to sell a version of Pfizer's hypertension drug, Norvasc, in the United States. Dr Reddy's, one of India's leading generic pharmaceutical companies, expects to launch the drug next August after Pfizer's marketing exclusivity expires, assuming Dr Reddy's wins final U.S. regulatory approval. The U.S. District Court in Newark, New Jersey dismissed Pfizer's plea on the grounds that a patent extension on Norvasc until 2007 does not cover Reddy's version of the drug, Dr Reddy's said. Pfizer plans to appeal the decision. The court's decision is the second setback for Norvasc this week. On Tuesday a federal study showed that older diuretic drugs costing just pennies a day are as effective

as Norvasc and other expensive medicines in reducing high blood pressure and the risk of heart attack. Even so, some analysts expect Norvasc to remain popular because many people take several drugs to control their high blood pressure. Shaojing Tong, an analyst for New York research firm Mehta Partners, said Norvasc sales will likely peak next year at \$4 billion, then taper to \$3.8 billion by 2006. "Its sales will be slowed not only by possible competition from Dr Reddy's product, but because cheaper diuretics have now been shown to work as well as Norvasc," he said. Dr Reddy's amlodipine maleate differs chemically from Pfizer's amlodipine besylate form of the drug, which had sales of \$3.6 billion in 2001. Pfizer said it also discovered amlodipine maleate but to date it has not been approved or commercialized in any market in the world. The judge's decision is a "novel interpretation" of the patent term law and the issue should be resolved by review in higher courts, Pfizer said.

The company said it will "vigorously" pursue a Citizen's Petition it previously filed with the U.S. Food and Drug Administration objecting to Dr Reddy's application to market amlodipine maleate. The company said Dr Reddy's product improperly relies on proprietary safety and efficacy data that supported the approval of Norvasc. Dr Reddy's strategy of challenging the validity of a patent extension by producing a different salt of the drug is probably unique, said G.V. Prasad, the company's chief executive. "This victory will help us lay the foundations of a specialty drug business in the U.S.," he told Reuters by telephone from the southern city of Hyderabad. Dr Reddy's shares closed up \$2.02, or 12 percent, to \$19.02 on Wednesday, while Pfizer slipped 20 cents to \$30.28, both on the New York Stock Exchange. Dr Reddy's aims to make the transition from a generics producer to a specialty drug maker in the next five years, on the way to becoming a research-led multinational, he said. The company could look for an acquisition or alliance in the United States to help market the drug, since it has no field force currently in operation there, Prasad said. Indian companies have traditionally focused on making cut-price generics for the U.S. market, or exact copies of drugs that have gone off patent. Dr Reddy's has been one of the top proponents of this strategy, having sold more than \$100 million worth of a generic version of Eli Lilly's (LLY) antidepressant Prozac since August 2001. "Amlodipine should easily become Dr Reddy's biggest product in the United States," said one analyst with a foreign brokerage. Reddy's gains could be limited, however, by Pfizer's appeal and expected competition from other generics. Dr Reddy's filed for an application last December to market the drug in the United States. Analysts expect the court victory to open the door for other Indian companies to sell modified generics in the United States. "We've got at least three products under development to give our specialty pipeline sustainability," Prasad said.

Inhaled Steroids Can Lead to Falls Among Elderly

http://story.news.yahoo.com/news?tmpl=story2&cid=97&ncid=751&e=10&u=/hsn/20021219/hl_hsn/inhaled_steroids_can_lead_to_falls_among_elderly

Inhaled corticosteroids increase the risk of hip fractures in older people, says a British study in the latest issue of the American Journal of Respiratory and Critical Care Medicine. The researchers studied 16,341 hip fracture cases and 29,889 people without hip fractures in a control group. The median age of the people in the study was 79. The study found the risk of hip fracture associated with use of inhaled corticosteroids had an odds ratio of 1.26. The researchers suggest that people with asthma or chronic obstructive pulmonary disease should limit their doses of inhaled corticosteroids to what's needed to control their airflow obstruction. About one in 10 people in the United Kingdom are prescribed inhaled corticosteroids to manage asthma or chronic obstructive pulmonary disease. Previous research found the use of 1,200 micrograms per day of inhaled corticosteroid led to a reduction in bone mineral density in the lower lumbar spine and femur.

Walgreens Now Accepting AARP Cards

<http://news.moneycentral.msn.com/ticker/article.asp?Feed=BW&Date=20021217&ID=2185538&Symbol=US:ESRX>

Walgreens, the nation's largest drugstore chain, is now accepting the AARP MembeRx Choice and AARP Prescription Savings Service discount cards. The company announced that the discount cards will be accepted at its 3,954 stores in 43 states and Puerto Rico. Currently, 3.56 million AARP members hold the MembeRx Choice or the Prescription Savings Service discount card. The discount cards, provided by AARP Pharmacy Services, are managed by United HealthCare Insurance Company. Express Scripts (NASDAQ:ESRX), serves as the pharmacy benefit manager for the service. The programs produce average savings of 19 percent on prescriptions. "We're very excited by our new association with AARP and its 37 million members, many of whom are already Walgreens customers," said Jim Schmid, Walgreens' director of pharmacy operations. "United is very pleased that Walgreens has joined our retail network. We continually strive to improve access to pharmacies for our service participants and look forward to working closely with Walgreens," stated Thomas S. Paul, Chief Pharmacy Officer for AARP Pharmacy Services. "The program is the oldest pharmacy discount program in the nation and the service has provided over \$250 million in savings to AARP members this year alone." Walgreens opened more than 470 new conveniently located stores nationwide last year and expects to open an additional 450 new stores during fiscal 2003. The company reports that "drive-thru" pharmacies are available at 2,967 stores and 961 stores are open 24 hours - more than any other drugstore chain. Dawn Sweeney, President AARP Services, Inc. added, "We are proud to continue to add value and improve access to quality services for AARP members. Walgreens will be a terrific addition to our network and help us continue to meet our members' pharmacy needs by offering savings and convenience." "Express Scripts is pleased to help facilitate the

relationship with the AARP Pharmacy Services program and Walgreens because they are among the nation's most respected organizations," said Elizabeth Wingate, Vice President, Provider Relations for Express Scripts. AARP is a nonprofit, nonpartisan membership organization for people 50 and over. It provides information and resources; advocates on legislative, consumer, and legal issues; assists members to serve their communities; and offers a wide range of unique benefits, special products, and services for its members. These benefits include AARP Webplace at www.aarp.org, the AARP lifestyle magazines, the monthly AARP Bulletin, and Segunda Juventud, a quarterly, bilingual newspaper. Active in every state, the District of Columbia, Puerto Rico, and the U.S. Virgin Islands, AARP celebrates the attitude that age is just a number and life is what you make it. United HealthCare Insurance Company is part of the family of companies within UnitedHealth Group UNH. UnitedHealth Group (www.unitedhealthgroup.com) is a diversified health and well-being enterprise that provides a full spectrum of resources and services to help people achieve improved health and well-being through all stages of life. Express Scripts, Inc. (NASDAQ:ESRX), (www.express-scripts.com) is one of the largest pharmacy benefit management (PBM) companies in North America. Express Scripts provides integrated PBM services, including network pharmacy claims processing, retail network and mail pharmacy services, benefit design consultation, drug utilization review and formulary management.

Kytril Now Available in Oral Solution

<http://www.rocheusa.com/newsroom/current/2002/pr2002121701.html>

Roche announced today its antiemetic Kytril® (granisetron hydrochloride) is now available in an oral solution for chemotherapy (CINV) and radiation (RINV) induced nausea and vomiting. "We are very excited about this convenient new formulation which will offer healthcare providers another alternative for administering Kytril," said Dr. Andrew Coop, Medical Director, Roche. "Specifically, Kytril Oral Solution will give patients who have difficulty swallowing as a result of chemotherapy or radiation therapy a new treatment option." In clinical trials, a 2-mg dose of Kytril Oral Solution proved to be bioequivalent to the 2-mg dose of Kytril Tablets. Kytril Tablets provide a single dose protection against moderately and highly emetogenic chemotherapy agents and radiation therapy. Kytril Oral Solution can be given anytime within one hour before chemotherapy or radiation. In addition, there are no dosage adjustments recommended for the elderly, renal-failure or hepatically impaired patients and no restrictions in patients with cardiac conditions or hepatic impairment. For CINV, the recommended adult dosage of Kytril Oral Solution (2 teaspoonfuls, equivalent to 2 mg of granisetron) are given up to 1 hour before chemotherapy. In the 1 mg twice daily regimen, Oral Solution is given up to 1 hour before chemotherapy, and the second teaspoonful (5mL) of 12 hours after the first. Kytril Oral Solution is administered only on the day(s) chemotherapy is

given. For RINV the recommended adult dosage is 2 teaspoonfuls, equivalent to 2 mg of granisetron taken within 1 hour of radiation.

Acetaminophen Overdose Leading Liver Failure Cause

http://story.news.yahoo.com/news?tmpl=story2&cid=571&ncid=751&e=4&u=/nm/20021216/hl_nm/liver_acetaminophen_dc

Overdoses of acetaminophen, the active ingredient in Tylenol and other over-the-counter pain and fever relievers, are now the leading cause of acute liver failure in the US, researchers report. But there is scant evidence that the recommended dose of acetaminophen can harm the liver, according to the investigators. On average, people in the study who went into acute liver failure were taking three times the maximum daily dose of acetaminophen. Unlike chronic liver failure, which develops gradually, acute liver failure occurs when a person with no apparent liver disease suddenly experiences a severe deterioration in liver function. Each year an estimated 2,000 people in the US go into acute liver failure. During the past three decades, the leading cause of acute liver failure has been hepatitis infection, particularly hepatitis B. That no longer seems to be the case, according to a study of 308 people who experienced acute liver failure from 1998 through 2001 in the US. "Drug-induced liver injury makes up more than 50% of cases, and viral hepatitis appears on the decline as a cause of this acute liver function," the study's lead author, Dr. William M. Lee of the University of Texas Southwestern Medical Center in Dallas, told Reuters Health. "More importantly," Lee said, "acetaminophen constitutes nearly 40% of all cases, and this appears to be increasing over the past two decades." Acetaminophen overdoses were responsible for 39% of the acute liver failure cases in the study. Another 13% of cases were thought to be caused by the effects of other medications. About 12% of cases stemmed from hepatitis A or B infections, and another 17% were of uncertain cause. The findings are published in Tuesday's edition of the journal *Annals of Internal Medicine*. The results of the study do not mean that acetaminophen, which is the most popular over-the-counter pain reliever in the US, is unsafe. Eighty-three percent of patients who went into liver failure after taking acetaminophen had exceeded the maximum daily dose. Taking more than 4,000 milligrams per day (4 g/d) of acetaminophen is not recommended. According to Lee, acetaminophen overdose has been the leading cause of acute liver failure in the UK, where it is known as paracetamol and is implicated in 73% of cases of acute liver failure. "The study shows, Lee said, that "US numbers are beginning to approach those in the UK." The difference between the US and the UK, however, Lee pointed out, is that most acetaminophen overdoses are unintentional in the US. In the UK, cases of acetaminophen overdose are "largely suicidal," the Texas physician said. According to the US Food and Drug Administration (news - web sites), common causes of acetaminophen overdose include inadvertent use of multiple acetaminophen-containing products at the same time and the misinformed belief that larger doses will

lead to faster relief. One of the researchers received a Schering Research Fellowship from the American Association for the Study of Liver Diseases. *Annals of Internal Medicine* 2002;137:947-954.

Dextromethorphan in SoBe Green Tea and SoBe Energy Products Prompts Recall
http://www.fda.gov/oc/po/firmrecalls/sobe12_02.html

South Beach Beverage Company today announced the voluntary recall of as many as 5,678 cases of SoBe Green Tea and 1,458 cases of SoBe Energy in 20-ounce glass bottles due to the accidental presence of dextromethorphan, a substance commonly found in over-the-counter cold and cough medications. This manufacturing error imparts a slight to intense bitter taste and may alter the color of the affected beverages. If consumed in large quantities, this may cause lightheadedness, nausea or other reversible symptoms. If consumed in combination with certain medications, especially anti-depressants, e.g., monoamine oxidase inhibitors (MAOIs), the affected beverages may cause health risks. The potentially affected packages have been distributed primarily to convenience stores and other retail outlets in parts of 11 states: California, Illinois, Indiana, Iowa, Kentucky, Minnesota, Nevada, Oklahoma, Tennessee, Texas and Wisconsin. The only packages that may be affected are 20-ounce glass bottles of SoBe Green Tea with the production code SEP2203 XXXXFG09162A3 and 20-ounce glass bottles of SoBe Energy with the production code SEP2203 XXXXFG09172B3. Consumers who find bottles with either of the above-listed production codes can call SoBe Consumer Relations at 1-800-588-0548 to replace these products. A few consumers have reported nausea, vomiting, numbness and light-headedness for a short period of time after consumption, but no other serious complaints have been reported. Consumers who want more information can call SoBe Consumer Relations at 1-800-588-0548.

FDA CLEARS HOME GLYCATED HEMOGLOBIN TEST FOR DIABETICS
<http://www.fda.gov/bbs/topics/ANSWERS/2002/ANS01182.html>

The Food and Drug Administration (FDA) has cleared the first over-the-counter test that measures glycosylated hemoglobin in people with diabetes to help monitor how well they are managing their disease (glycemic control). The test, called Metrika A1c Now, is currently available by prescription only. Over-the-counter status means that the test can now be purchased without a prescription and used at home, with results on the spot, making it readily available to people with diabetes. Diabetes is a chronic disease in which blood glucose (sugar) levels are too high. Abnormally high levels of glucose can damage the small and large blood vessels, leading to blindness, kidney disease, amputation of limbs, stroke, and heart disease. Glycosylated hemoglobin is a unique substance created as a result of interaction between hemoglobin and glucose. The level of glycosylated hemoglobin provides

information on the average level of glucose in the body over a 90 to 120 day period of time. The glycated hemoglobin test should be performed two to four times a year to monitor long-term control over blood glucose levels. Glycated hemoglobin tests provide information to complement that obtained from daily finger stick blood glucose tests that measure glucose at a single point in time. To perform the Metrika A1c Now test, the patient takes a blood sample from his finger with a lancet and places it in a monitor. The monitor displays test results in eight minutes. Unlike some other products, there is no need to send the sample back to the physician to get results. The patient gets the results on the spot. FDA cleared the test for non-prescription use based on a clinical study conducted by the manufacturer, Metrika, Inc., of Sunnyvale, Calif. The study compared test results obtained by lay users of the device to test results obtained by medical professionals. In the study, 286 patients-271 diabetics and 15 non-diabetics-used the test without physician supervision. The results were comparable to those obtained by medical professionals. The Metrika A1c Now test has been certified by the National Glycohemoglobin Standardization Program, an independent certification body. About 17 million Americans have diabetes. Many of them may find the new home glycated hemoglobin test helpful.

Melts In Your Mouth Pills; The Next Big Thing

<http://www.washingtonpost.com/wp-dyn/articles/A55870-2002Dec14.html>

Like the woman in the new TV commercial for Excedrin, you can find another use for that cup of water -- like dumping it on your two-timing boyfriend -- now that you no longer need it to take your pill. By the end of December, at least 10 prescription and nonprescription drugs will come in a quick-dissolve-in-saliva formulation that eliminates the need to swallow a pill whole. The drugs include Claritin Reditabs, an allergy treatment; Alavert, a generic Reditabs competitor, due to hit store shelves later this month; Immodium, for diarrhea; NuLev, for symptoms of irritable bowel syndrome; a version of the migraine drug Zomig; the antidepressant Remeron; and Excedrin QuickTabs. Pop one in and it dissolves on the tongue in seconds, like those fizzy candies of your childhood. The quick-dissolve formulations, usually either mint- or fruit-flavored to mask the taste of disintegrating tablet granules, are absorbed into the bloodstream after being broken down in the gastrointestinal tract, just like their swallow-them-whole cousins. But at least one company, Cardinal Health, has in development a version of the Parkinson's drug Eldepryl (selegiline) that would be absorbed by cell membranes in the mouth and go directly to the bloodstream. That would allow patients taking the medication to realize therapeutic effects with less drug, and therefore fewer likely side effects, says Martin Waymark, head of business development for the company. Quick-dissolve tablets offer easier compliance (patients don't have to be within easy reach of water) and added convenience, especially for older

people who have trouble swallowing generally or swallowing pills, says Steven Heffner, an analyst with Kalorama Research, a New York drug research firm. Some five years after the concept's sales debut, the company projects the \$1.5 billion per year worldwide market for quick-dissolve drugs will grow to \$5 billion by 2005. Don't expect every drug to come in a melt-in-your-mouth option, says John Siebert, president of Cima Labs, whose quick-dissolve technology is used in Alavert and about 20 drug versions in development. Siebert says that for now the technology works only with tablets, not capsules. Also, drug makers tend not to try to recoup the added cost of producing these versions. Drugstore.com's price for 30 tablets (15 milligrams each) of Remeron Soltab, the quick-dissolve version of the drug, is \$7 lower than for 30 of the conventional version. Excedrin is an exception, with the quick-dissolve formula priced at more than twice the cost of the standard version. Swallowing quick-dissolve drugs is not advised, says Cynthia LaCivita, clinical affairs associate for the American Society of Health System Pharmacists, especially for drugs like selegiline that may come formulated as a lower than usual dose because little drug is lost in the G.I. tract. Swallowing it may cause some of the needed drug to be excreted, and result in a dose too low to be effective. She also advises consumers to keep the candy-tasting medicines out of children's reach.

Italian Surgeons Remove Liver to Treat Cancer

http://story.news.yahoo.com/news?tmpl=story2&cid=571&ncid=751&e=6&u=/nm/20021218/hl_nm/italy_liver_dc

Italian scientists have taken a new approach to treating liver cancer by removing the organ, dosing it with radiation and then replacing it in the patient. A 48-year-old man who was the first patient to have the innovative treatment at the San Matteo Hospital in Pavia, Italy is cancer-free a year after he was treated during the 21-hour operation for more than 14 tumors in his liver. "The out-of-body operation allows doctors to administer high doses of radiation to widespread tumors without affecting other organs," New Scientist magazine said Wednesday. Surgeon Aris Zonta and physicist Tazio Pinelli of the National Institute of Nuclear Physics in Italy, who co-ordinated the procedure, are awaiting approval to treat six other patients with multiple tumors. The original patient had cancer of the colon, which had spread to the liver. The cancer did not respond to chemotherapy and was so widespread that conventional radiotherapy would have destroyed the liver. The Italian scientists decided to try boron neutron capture therapy which they have been working on since 1987 and which was first attempted in the 1950s. It involves injecting a fluid containing boron atoms into the patient and using a low-energy neutron beam to split the boron into particles that kill the cancerous cells. But an even dose of neutrons is needed to treat the entire organ and bones in the body can block the beam so the surgeons removed the liver, treated it and then replaced in the body. "By explanting the organ, we could give a high and uniform dose to all the

liver, which is impossible to obtain inside the body without serious risk to the patient," Pinelli told the magazine. Although the treatment, which has been dubbed TAORMINA, was successful and could give new hope to seriously ill patients it would only be suitable for patients whose cancer has spread to only one other organ and if they are strong to survive the operation. "The technique is currently being tested on patients with otherwise untreatable brain tumors -- obviously without removing the organ in question," the magazine added.

Better than Fiction...

Santa Steals Oxy From Drug Store

http://story.news.yahoo.com/news?tmpl=story&u=/ap/20021216/ap_on_fe_st/santa_claus_robbery_2

Police are looking for a man with a familiar description who robbed a drug store at gunpoint: long white hair and beard, a white-fur-trimmed red suit and hat, black boots, prominent belly. Police Capt. Mike Spraker said the Santa Claus lookalike obtained an undisclosed amount of the painkiller OxyContin from an Eckerd Drug Store in Chester, VA on Saturday night. "An individual dressed as Santa - beard, hat, the whole works - just walked to the back of the store to the pharmacist, displayed his weapon and asked for the OxyContin," he said. Spraker said the robber fled on foot. A canine unit tracked his trail to the parking lot of a nearby apartment complex, where police believe he got into a car and drove away. "No reindeer or sleds were observed in the area," said Spraker, who said he wanted any children hearing about the incident to know "we immediately contacted the North Pole and verified Santa was there. This Santa was definitely an impostor."

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RXinsider.com

<http://www.rxinsider.com/>

A pretty neat website that has all types of free programs including, an HIV quick review, a pharmacy technician orientation and training program (i.e. prescriber handwriting recognition), and a vitamin quick review. The site has extensive monographs on disease states, job listings for students, and even a Pharmacy Cheat Sheets page. Worth a look and possibly a bookmark.

Answer of the Day

Mucomyst, Acetylcysteine (NAC), is the N-acetyl derivative of the amino acid cysteine used to treat thick mucous secretions in chronic emphysema, bronchitis, pneumonia, cystic fibrosis and other related conditions. It is the drug of choice in acetaminophen overdose (along with activated charcoal) to prevent hepatotoxicity. Acetylcysteine has even been shown to prevent renal damage in patients with preexisting renal disease receiving radio-contrast dye. What a drug...however, it smells like rotten eggs and I hear it tastes nasty.