

HCV ADVOCATE WEEKLY NEWS REVIEW

Review of HCV, HBV and HIV/HCV Coinfection Related News and Highlights

*Alan Franciscus
Editor-in-Chief*

Week Ending: July 4, 2009

In This Issue:

- [56 villagers in NE China infected with hepatitis C](#)
- [Achillion Announces First-in-Human Dosing of ACH-1625 for Treatment of Hepatitis C](#)
- [Drug companies at odds with FDA over acetaminophen risk](#)
- [Enrollment For Hepatitis C Study In Taiwan](#)
- [Biolex Therapeutics Announces Completion Of Enrollment In SELECT-2 Phase 2b Trial Of Locteron\(R\) In Chronic Hepatitis C](#)
- [Hepatitis C, chlamydia increase in Monterey County](#)
- [Niles man to fight eviction for growing, using medical marijuana](#)
- [FDA Panel Backs 'Black Box' Warning for Acetaminophen Prescription Combos](#)
- [Request to move Hepatitis civil trials denied](#)
- [Hepatitis E Infection More Widespread in the U.S. than Previously Suspected](#)
- [U.S. orders suicide warnings on two anti-smoking drugs](#)
- [The European Association For The Study Of The Liver Renews Publishing Partnership With Elsevier](#)
- [A'burg tainted blood victim 'fought until his last breath'](#)
- [Board gives doctor light punishment in exchange for testimony](#)
- [Liver device helps man survive until transplant](#)
- [Local health officials back FDA plan](#)
- [Surgery tech may have exposed thousands in Colorado to hepatitis C](#)
- [DNA of Hepatitis B can predicts liver cancer risk](#)
- [Conatus Pharma begins second phase 2 trial of a novel drug candidate for HCV](#)
- [Examining Dietary Influences of Liver Disease](#)

- [Exercise Helps Patients With Non-Alcoholic Fatty Liver Disease](#)
- [Hepatitis C Under Diagnosed](#)

June 28, 2009

56 villagers in NE China infected with hepatitis C

<http://news.xinhuanet.com>

HARBIN, June 28 (Xinhua) -- At least 56 people in two adjacent villages in northeast China's Heilongjiang Province were diagnosed with the infection of hepatitis C virus, health authorities said.

Fifty-six out of 408 people who voluntarily had blood tests in Ninggu and Gucheng villages in Hailin City, were confirmed to be infected with hepatitis C, according to the Mudanjiang City Disease Control and Prevention Center.

Ninggu and adjacent Gucheng, have a population of 579. The hepatitis C infection cases began to be found as early as 2003 in the two villages.

The center said the village's clinic had poor sanitation and its doctor used medical equipment which either failed to have strict disinfection or exceeded their expiration dates.

Villagers said the exact number of the infected cases should be bigger as some refused to take the tests for fear of discrimination. Some put the total number at 98.

Hepatitis C is a major cause of acute hepatitis and chronic liver disease, including liver cancer.

June 28, 2009

Achillion Announces First-in-Human Dosing of ACH-1625 for Treatment of Hepatitis C

<http://www.globenewswire.com>

NEW HAVEN, Conn., June 29, 2009 (GLOBE NEWSWIRE) -- Achillion Pharmaceuticals, Inc. (Nasdaq:ACHN), a leader in the discovery and development of small molecule drugs to combat the most challenging infectious diseases, today announced that the Company has begun dosing in a Phase I clinical trial of ACH-1625, a protease inhibitor for the treatment of hepatitis C virus (HCV) infection.

The Phase I clinical trial is a randomized, double-blind, placebo-controlled trial to investigate the safety, tolerability, pharmacokinetic profile and antiviral activity of ACH-1625 after single and multiple ascending oral doses in healthy volunteers, and oral ascending repeat doses in subjects with hepatitis C infection. The trial will take place in Europe and is designed to enroll 54 subjects including both healthy volunteers and HCV-infected patients. Data from the trial are anticipated to be announced later this year.

ACH-1625 is a potent small molecule inhibitor of HCV protease, an enzyme necessary for viral replication. The drug candidate was discovered and is being advanced by Achillion.

"This first-in-human clinical trial will be instrumental in establishing the safety profile of ACH-1625 in humans," stated Elizabeth A. Olek, D.O., Vice President and Chief Medical Officer of Achillion. "Importantly, it will also provide Achillion with preliminary efficacy data and important dose selection information for subsequent Phase II trials. We believe ACH-1625 has the potential to offer a convenient dosing schedule and an improved safety and tolerability profile compared to currently available treatments for HCV-infected patients."

"We are very excited to take ACH-1625 into the clinic to test the compound's safety and efficacy in humans," said Michael D. Kishbauch, President and Chief Executive Officer of Achillion. "With its potency and safety profile in preclinical studies, and its potential for once-daily dosing, we are eager to advance what we hope will be a best-in-class candidate."

About ACH-1625

ACH-1625 is an HCV protease inhibitor designed and synthesized based on crystal structures of enzyme/inhibitor complex. ACH-1625 is an open chain, non-covalent, reversible inhibitor of NS3 protease. In preclinical studies ACH-1625 has demonstrated potency, unique pharmacokinetic properties and a safe in vivo profile even at very high doses.

With its rapid and extensive partitioning to the liver, as well as high liver/plasma ratios demonstrated in vivo, Achillion believes that ACH-1625 can be dosed on a convenient schedule at a relatively low dosage. ACH-1625 has shown low single-digit nanomolar potency that is specific to HCV. It is equipotent against HCV genotypes 1a and 1b at IC50 ~1nM. High safety margins have been established in both single ascending dose and repeat dose studies in vivo. Overall, Achillion believes the compound is well tolerated with minimal side effects.

Drug companies at odds with FDA over acetaminophen risk

www.reuters.com

By Susan Heavey

ADELPHI, Maryland (Reuters) - Johnson & Johnson, Procter & Gamble and other manufacturers on Monday said cough and cold drugs with the pain reliever acetaminophen should stay on the market despite concerns from U.S. regulators.

While the Food and Drug Administration is weighing a ban on such combination products -- often marketed to consumers with colds or other mild illnesses, the industry instead urged a widespread effort to warn buyers about the risks of liver damage linked to the ingredient.

"We believe there is a clear public health benefit with OTC (over-the-counter) products containing acetaminophen," Consumer Healthcare Products Association (CHPA) President Linda Suydam, whose group represents the two companies along with others, told an FDA advisory panel meeting to discuss the risks.

Too much acetaminophen has been known to cause liver injury for decades, but FDA officials are worried that the rise of products that combine it with other medications can lead consumers

unknowingly to overdose by taking too much of a medication or taking too many different products at once.

The agency called for stronger liver warnings earlier this year but is seeking advice from outside experts at a two-day meeting on whether such over-the-counter and prescription combination drugs can safely remain on the U.S. market.

A total ban on combination products could dent sales of acetaminophen-containing products, which were \$2.6 billion in 2008, the FDA said, citing IMS Health. Nearly 80 percent of that stems from combination products sold directly to consumers, it said.

Impact could be especially significant for Johnson & Johnson's McNeil Consumer Healthcare division, which CHPA said makes up 27 percent of the sector with its Tylenol brand as well as its Sudafed and Benadryl products.

Some of Procter & Gamble's NyQuil, Vicks Formula 44 and other nonprescription medications contain acetaminophen. Other companies that make related products include Bayer AG, GlaxoSmithKline, Novartis, Perrigo Co, Schering Plough and Wyeth.

Some prescription medications also contain the ingredient, including Abbott Laboratories' Vicodin and Endo Pharmaceuticals' Percocet. Cadence Pharmaceuticals Inc is also seeking to sell injectable acetaminophen.

Other possible FDA actions include reducing the amount of medicine sold in packages, lowering the available strengths for over-the-counter products, and adding a strong, black-box warning on prescription medications.

Industry representatives said most overdoses result from people trying to commit suicide and that more deaths were seen with prescription versions than over-the-counter ones.

In April, the FDA ordered bolder warnings about the liver damage risk with acetaminophen products to highlight them better for consumers, and companies agreed to comply.

But a further ban on certain products would be "overly drastic," said Paul Desjardins, a vice president for Wyeth Consumer Healthcare.

Instead, the FDA should require approval of nonprescription acetaminophen products before they could be sold, Desjardins told the panel. Wyeth, known for its widely-used ibuprofen pain medication Advil, also sells Robitussin Cough Cold & Flu and Dristan Cold over-the-counter products with acetaminophen.

FDA officials consider the ingredient safe when taken as directed but worry that the number of liver failure cases that continue to be reported despite various interventions since the 1990s show "overdose remains a serious public health problem," the agency said in a memo released before the meeting.

Estimates vary, but a 2007 Centers for Disease Control and Prevention report found acetaminophen use was the most common cause of the estimated 1,600 cases of acute liver

failure that year, the FDA said. Alcohol use and liver disease can also increase a consumer's risk, experts say.

Products that combine the ingredient with cold and other drugs help consumers avoid juggling multiple medications and forcing people to take each drug separately may cause more complications, industry representatives said.

Edwin Kuffner, McNeil's senior director for medical affairs, said his company recommended changing the instructions for adults from taking two tablets every four to six hours to advising them to try one tablet first.

Panelist Ruth Day, a Duke University researcher, welcomed some of the industry's proposals but said she still had some concerns. If consumers cannot find or understand warnings on over-the-counter products, "what's the point?" she said, adding that certain label design changes could be an easy fix.

On Tuesday, the FDA panel will hear from other experts before providing its recommendation to the agency, which usually follows the advice of its panelists.

(Reporting by Susan Heavey, editing by Matthew Lewis)

Enrollment For Hepatitis C Study In Taiwan

www.medicalnewstoday.com

Amarillo Biosciences, Inc. (ABI) (OTCBB: AMAR) and CytoPharm, Inc. today jointly announced the start of enrollment for a study of ABI's oral interferon-alpha lozenges for chronic hepatitis C virus infection. The aim of the trial is to reduce the virologic relapse rate for those patients who have completed the standard combination therapy, which consists of high dose injectable interferon-alpha and Ribavirin. Although most patients respond to the standard therapy, up to 50% of those with certain "high-risk" viral genotypes relapse after treatment.

The study will be conducted under the direction of Dr. Chau-Ting Yeh at the Chang Gung Memorial Hospital in Taipei, Taiwan. A total of 165 patients who test positive for a "high-risk" hepatitis C viral genotype will receive one of two different doses of human interferon-alpha or placebo given daily for 24 weeks. Following completion of treatment, patients will be monitored for relapse for an additional 24 weeks. Full study enrollment is expected by the end of the year with study completion targeted for the 4th quarter of 2010.

Approximately 170 million people are chronically infected with hepatitis C virus worldwide, with an additional 3-4 million cases occurring each year. The incidence of cirrhosis in chronic hepatitis C patients is 10 to 20%, and 1 to 5% develop liver cancer. In addition to sexual and perinatal transmission, hepatitis C virus infection is common following direct contact with contaminated blood, typically due to inadequately sterilized needles and syringes. Currently, there is no effective vaccine against hepatitis C virus.

Separately, the companies announced that CytoPharm is planning a study of oral interferon lozenges in the treatment of influenza to be launched during the 2009/2010 flu season in Taiwan.

Biolex Therapeutics Announces Completion Of Enrollment In SELECT-2 Phase 2b Trial Of Locteron(R) In Chronic Hepatitis C

www.medicalnewstoday.com

Biolex Therapeutics, Inc. announced that it has completed patient enrollment in the SELECT-2 Phase 2b trial of its lead product candidate Locteron® for the treatment of chronic hepatitis C. Locteron, controlled-release interferon alpha 2b, is designed to improve patient care by providing a more convenient once-every-two week dosing schedule and by reducing the side effects, including flu-like symptoms, associated with pegylated interferons, the current standard of care.

The Phase 2b trial is being conducted in the United States and Europe in over 100 treatment-naïve, genotype-1, chronic hepatitis C patients. Patients were randomized into one of four dosing cohorts, the 320, 480 or 640 µg dose of Locteron (administered once every two weeks) or a control arm consisting of PEG-Intron® (1.5 µg/kg, administered every week), with all patients receiving weight-based ribavirin. Patients will be treated for 48 weeks and will be followed for an additional 24 weeks to determine the sustained virologic response (SVR) rate. The interim results after 12 weeks of treatment are expected to be used as the basis for the selection of the Locteron dose(s) for Phase 3 trials.

"We are pleased with the response to the SELECT-2 Phase 2b trial and the fact that we were able to rapidly complete enrollment using substantially less clinical sites than we originally anticipated," said Mr. Jan Turek, Biolex's President and Chief Executive Officer. "Locteron is the only controlled-release interferon alpha under development and research to date suggests that this attribute may reduce side effects and has the potential to improve patient compliance and to reduce discontinuation rates. Extensive market research recently completed confirms that there is a substantial commercial opportunity for Locteron if a tolerability advantage is demonstrated in more advanced clinical testing. We look forward to receiving key results from SELECT-2 during the fourth quarter of this year."

Locteron is an investigational therapeutic candidate and has not been approved for sale by the United States Food and Drug Administration or by any international regulatory agency.

Locteron Overview

Locteron is a controlled-release interferon alpha designed to improve patient care in the treatment of hepatitis C through a more favorable side-effect profile and dosing convenience compared to existing pegylated interferon products. In contrast to Locteron's controlled-release mechanism, the currently approved products, Pegasys® and PEG-Intron, and the investigational product Albuferon®, are immediate-release products that lack a controlled-release mechanism. Interferon alpha serves as the foundation of current combination therapy for hepatitis C patients, and all major hepatitis C drug candidates currently in clinical trials are being studied in combination with interferon alpha. It is estimated that worldwide sales of interferon products for the treatment of hepatitis C will approach \$6 billion by 2016.

Locteron incorporates an advanced controlled-release drug delivery technology that allows dosing once every two weeks, more convenient than Pegasys and PEG-Intron, each of which require dosing every week. More importantly, Locteron's controlled-release mechanism results in the gradual release of interferon alpha 2b to patients over the duration of two weeks and avoids the early peak plasma levels of the active interferon that characterize the pegylated interferons

and Albuferon. This controlled-release mechanism is designed to reduce the frequency, duration and severity of side effects, including flu-like symptoms, commonly experienced by patients treated with pegylated interferons and with Albuferon.

Source: Biolex Therapeutics

June 30, 2009

Hepatitis C, chlamydia increase in Monterey County

<http://www.thecalifornian.com>

By Leslie Griffy

Deputy health officer says new data collection partially led to rise in case of liver disease

Hepatitis C infections increased by 27 percent, and chlamydia cases jumped 18 percent in Monterey County last year, according to a report released Monday by the Health Department.

In 2008, there were 989 reported cases of hepatitis C in the county, up from 777 in 2007.

The increase in the blood-borne virus that attacks the liver is partially because of changes in the way it is reported, said Dr. Lisa Hernandez, deputy health officer.

Now, when laboratories spot a positive case, they report it to health officials. Before the 2008 change, epidemiologists relied on doctors to report the disease.

Health officials have long strived for a better accounting of the virus. The Centers for Disease Control and Prevention estimates there were 17,000 new infections in 2007, but only 849 cases of people sickened by the virus were confirmed that year.

"We are starting to see the true burden of the disease," Hernandez said.

The hepatitis C virus causes cirrhosis and liver cancer. It's spread through blood, including needle sharing. Often, infected people aren't symptomatic and don't know they have the disease. But they can give it to others.

Hepatitis C today reminds Jim Smith, director of education and prevention at John XXIII AIDS Ministries, of AIDS in the 1980s.

"There's not enough education. There's not enough hepatitis C testing. There's not enough treatment," Smith said. "That's where hep. C is today."

Working with the county, the ministries will begin offering hepatitis screening to high-risk groups this summer, he said. Even though some of those tested may not have access to medical care, Smith believes the testing can slow the virus' spread.

"The knowledge that they are positive could stop them from sharing syringes," he said.

Chlamydia a sexually transmitted disease that can cause infertility continued its spread in 2008.

Reported infections climbed to 1,359, up from 1,153 in 2007. The increase is part of nearly a decade-long trend; the number of cases in Monterey County has increased more than 50 percent since 1999, when there were 888 cases.

Young people ages 15 to 24 ' make up more than half of the county's chlamydia infections, said Linda McGlone, project coordinator for POSTPONE, a teen-pregnancy prevention program.

Her group emphasizes screening, condom use, limiting the number of sexual partners and not having sex at all. Education about sexually transmitted diseases is becoming less common in high schools, she said, as an emphasis on basics such as math and English pushes other topics out.

Unlike many other sexually transmitted diseases, chlamydia often has no symptoms to push patients toward screening.

"It's more silent," Hernandez said.

Without testing, infected individuals will not get treatment and will continue to infect others. Women are more often found to have chlamydia because many go for annual exams that can include screening for sexually transmitted diseases.

Niles man to fight eviction for growing, using medical marijuana

<http://www.southbendtribune.com>

By LOU MUMFORD

Tribune Staff Writer

NILES — Steve Allain has his answer, and it's not the one he would have preferred.

Allain is the 54-year-old Niles man who, in a Tribune story last month, acknowledged he uses marijuana to help him deal with Crohn's disease, hepatitis C and acute depression. To him, voter approval of the Michigan Medical Marijuana Act was a godsend, or so he thought.

Instead of buying marijuana from, as he put it, street vendors, he can now grow his own. A card he recently obtained from the state allows him to do just that.

So what's the hitch? As real estate agents might say: location, location, location. Allain lives in one of Niles' scattered public housing sites, putting him at the mercy of the U.S. Department of Housing and Urban Development and the Niles Housing Commission.

Last week, he was informed that his request to grow and use marijuana in his home, while OK with the state, isn't OK with HUD and the housing commission. He was ordered to vacate the premises by Friday.

Instead, he's staying put, at least for now. Allain said Monday he'll pursue the housing commission's grievance procedure, which entitles him to a hearing before Mary Ann Bush, who on June 4 became the commission's new executive director, and Scott Clark, the commission chairman.

If Allain is unsuccessful there, his next option would be a courtroom. That's where he expects his case will wind up, and where, he believes, he'll have his best chance to prevail, arguing he has done nothing illegal.

“That's the crux of our argument,” he said.

He pointed to a provision in his lease that he says the housing commission is using to evict him. The provision, under grounds for eviction, reads as follows:

“Any activity by tenant, household member, guest or other person under tenant's control, including sexual harassment, criminal activity that threatens the health, safety or right to peaceful enjoyment of the commission's public housing premises by other residents or employees, or any drug-related criminal activity.”

Certainly, growing and using marijuana is drug-related, he said. But is it a criminal activity? In his case, he argued it isn't, not when he has followed all the proper steps to register under the Michigan Medical Marijuana Act and is complying not only with the act but the Niles City Council's recently enacted ordinance intended to regulate it.

“I've talked to Betty Arndt, on the City Council, and I have no problems with the ordinance. This is commission policy,” he said, referring to the housing commission.

For her part, Bush said she sympathizes with Allain, but a check with HUD revealed a “zero tolerance” policy as far as marijuana. Allain has called about the eviction notice, she said, and has been made aware of his rights under the grievance process.

The housing commission director for less than a month, Bush indicated that issuing the notice wasn't easy.

“The heart and head get confused sometimes,” she said.

A former truck driver and Waste Management employee who gets by on disability benefits, Allain said in the earlier Tribune story it's a mystery how he developed hepatitis C. He also said marijuana has been his only effective and affordable means of pain relief, unlike other anti-depressants that left him with night sweats and night terrors.

The sole resident of the property except for his 17-year-old son, Allain displayed an indoor growing operation that currently features two plants just now in their flowering cycle. The plants are in a vulnerable stage, he said, explaining a disruptive light cycle associated with a move would likely ruin their effectiveness.

“I'd have crop failure,” he said, smiling. “Me? Physically, I'm worn out. Financially, my resources are depleted. Homeless people are doing better than me because they have no debt.”

He pointed out he keeps his operation under lock and key, as spelled out by the act and city ordinance.

Bush said she's unaware whether Allain's case is the first in the state where a tenant in public

housing is facing eviction for participating in the state's medical marijuana program. Allain said he doesn't know, either, but he's certain of something else:

“This is uncharted territory.”

FDA Panel Backs 'Black Box' Warning for Acetaminophen Prescription Combos

<http://www.medpagetoday.com>

By Emily P. Walker, Washington Correspondent, MedPage Today

ADELPHI, Md. June 30 -- An FDA advisory panel voted 36 to 1 to recommend a "black box" warning for prescription medications that combine acetaminophen with another drug.

If the FDA follows the advice, it would slap its strictest warning on prescription pain medications that combine acetaminophen with hydrocodone (Vicodin), oxycodone (Percocet), or codeine (Tylenol 3).

A joint panel of the Drug Safety and Risk Management Advisory Committee, Nonprescription Drugs Advisory Committee, and the Anesthetic and Life Support Drugs Advisory Committee voted for the warning after two days of hearings on ways to reduce acetaminophen's liver damage risk.

"History has been that some of these medications have [seemed] safe and effective and now we're saying they're not," said committee chairman Lewis Nelson, MD, an emergency medicine physician at New York University Medical Center.

The FDA does not have to follow the advice of its advisory committees, but it usually does -- particularly when there is a substantial majority behind a proposal.

About 42,000 people visit emergency departments each year with acetaminophen overdoses, half of which are accidental. They often occur when a consumer unknowingly takes more than one acetaminophen product.

One advisory panelist attributed 10% of fatalities from acetaminophen overdoses to combination products.

In a far less decisive vote, the committee voted 20 to 17 in favor of a more extreme recommendation to pull all prescription products containing acetaminophen from the market.

Because the split was so close, it is unclear whether the FDA will adopt the recommendation, but if it did, some options would be eliminated for pain patients. For instance, patients taking Vicodin would not have an acetaminophen-free option because there is no hydrocodone-only formula.

In addition, removing the acetaminophen from the Vicodin would move the drug into the more-strictly regulated "class II" schedule of narcotics from its current classification as a class III drug, creating additional barriers for physicians prescribing the drug to patients.

Sandra Kweder, MD, deputy director of the Office of New Drugs at the FDA, said that some patients increase their dosage of prescription narcotics, such as Vicodin, over time to get more of an effect from the hydrocodone. That, she said, could eventually deliver toxic doses of acetaminophen along with the narcotic.

"As many patients with chronic pain rely on these medications on a daily basis, the amounts of total acetaminophen consumed can be staggering," said Timothy Collins, MD, a pain specialist at Duke University Medical Center, who was not on the panel.

That may help explain why the committee came down on prescription acetaminophen drugs much harder than on over-the-counter combinations. It voted 24 to 13 against recommending that the FDA remove over-the-counter combination drugs from the shelves.

The prescription acetaminophen drugs may present a higher risk for liver damage than over-the-counter drugs because people tend to take the prescription drugs for longer periods of time said Dr. Kweder.

Lowering Doses and Limiting Options

Although it appears they'll keep their combination products on the shelves, makers of over-the-counter drugs were unhappy when the panel voted 21-16 to recommend that the FDA lower the maximum daily dose for acetaminophen below its current 4,000 mg.

The panel also recommended that the maximum single adult dose be lowered to 650 mg instead of 1,000 mg.

While there is a 650 mg extended-release acetaminophen tablet, the most common form is the 325 mg pill, so patients would be instructed to take no more than two at a time.

"We're disappointed that the panel chose to recommend lowering the dose," said Linda Suydam, president of the Consumer Healthcare Products Association, which represents makers of over-the-counter drugs.

"I think the committee voted in opposition to the data," she said.

Although the committee saw little data indicating smaller doses would protect against liver damage, the drug companies failed to present convincing data showing that a larger dose worked any better than the smaller one.

The committee voted 24 to 13 to recommend making the 500 mg pill available by prescription only. So, in order to get former maximum dose of 1,000 mg of acetaminophen at one time, a patient would need a prescription.

On the other hand, as a pediatric gastroenterologist and liver specialist pointed out, a patient could just take three of the 325 mg pills.

"I do not think this requirement for the 1,000 mg dose as a prescription product will have much impact since people will just use the 350 mg [times] three rather than 500 [times] two," said James Heubi, MD, of Cincinnati Children's Hospital Medical Center, when asked about the vote.

Dr. Heubi was not on the advisory committee.

If it chooses to accept the panel's recommendations, the FDA would have to go through its usual rule-changing process, including soliciting public comment, prior to changing dosing for acetaminophen products.

In a day of votes that represented little consensus among the diverse group of advisers, the committee unequivocally agreed on two things: the black box measure, and that parents are all too confused by the variety of liquid acetaminophen doses available for sick children.

So, the committee voted 36 to 1 to winnow the available liquid doses down to just one.

Committee Rejects Shrinking Containers

Despite testimony from British physicians who favored requiring acetaminophen pills to be sold in smaller packages, the committee wasn't convinced. In another close (20-17) vote, it rejected a proposal requiring manufacturers to downsize their pill packs and bottles.

The largest bottle of Tylenol that Johnson & Johnson's McNeil subsidiary sells contains 325 tablets, but some generic brands come in bulk bottles with as many as 1,000 pills.

Several of the panelist felt the giant bottles of pills sent a message that acetaminophen is safer than it is.

"I hope the committee doesn't take this 'no' vote as we support selling 1,000 pill containers at Costco," said Judith Kramer, MD, associate professor of medicine at Duke University Medical Center.

In the United Kingdom, when package size was reduced, overdoses decreased modestly, a London toxicologist told the panel. But the committee was not convinced that reducing the package size here would have a measurable effect on those who accidentally overdose.

The panel also voted against recommending that manufactures move to "unit-of-use" packaging, which measures out the exact amount a patient might need prior to delivering the drug to the pharmacy.

The FDA may also consider other changes on which the committee did not agree, such as stronger warnings against mixing alcohol and acetaminophen or lowering the amount of acetaminophen in prescription products.

July 1, 2009

Request to move Hepatitis civil trials denied

<http://www.ktnv.com>

A judge has rejected a request by lawyers for the doctor at the center of a hepatitis outbreak to move the first 22 civil trials against him to Carson City.

Clark County District Court Judge Elizabeth Gonzalez says venue challenges should be

addressed on a case-by-case basis.

Dr. Dipak Desai faces hundreds of lawsuits over the February 2008 revelation that up to 50,000 patients might have been exposed to hepatitis and HIV because of unsafe injection practices at clinics Desai owned.

Hepatitis E Infection More Widespread in the U.S. than Previously Suspected

<http://www.webwire.com>

Exposure to Hepatitis E Virus (HEV) appears to be common in the U.S., although disease following exposure is rarely reported, according to a study led by researchers at the Johns Hopkins Bloomberg School of Public Health. The study found antibodies indicating exposure to HEV in 21 percent of the U.S. population between 1988 and 1994. HEV is a major cause of viral hepatitis in many developing countries, but how it is spread in developed countries is not fully known. The study is published in the July 1 issue of the *Journal of Infectious Diseases*.

“Our study shows that animals could play an important role in the spread of HEV in the U.S. Having a dog or pet in the home or consuming meats like liver and other organs were significantly associated with increased odds of exposure to HEV,” said lead author Mark H. Kuniholm, PhD, a 2007 graduate of the Bloomberg School of Public Health.

For the study, the research team relied on data from the third National Health and Nutrition Examination Survey (NHANES III) conducted by the National Center for Health Statistics between 1988 and 1994. Blood samples from over 18,000 participants representing a cross section of the U.S. population were tested for antibodies for HEV. According to the results, HEV exposure was less common in children than in adults and generally increased with age. Males had higher prevalence of HEV antibodies compared to women. Individuals living in the South were less likely to be seropositive, while individuals living in the Midwest had the highest regional seropositive estimates.

“The very high prevalence of antibodies to the HEV among residents of the U.S. was quite surprising; however HEV-associated acute hepatitis has been increasingly reported among residents of Western European countries. In addition, HEV infections are an important cause of illness and even death among populations in developing countries—especially among women who are infected during pregnancy,” said Kenrad E. Nelson, MD, senior author of the study and professor in the Bloomberg School’s Department of Epidemiology.

The study was supported by a grant from the National Institute of Allergy and Infectious Diseases (NIAID), National Institutes of Health.

In addition to Johns Hopkins authors, “Epidemiology of Hepatitis E Virus in the United States: Results from NHANES III, 1988-1994” was published by Robert H. Purcell and Ronald E. Engle of NIAID, and Geraldine M. McQuillian and Annemarie Wasley of the Centers for Disease Control and Prevention.

U.S. orders suicide warnings on two anti-smoking drugs

www.reuters.com

Susan Heavey

WASHINGTON (Reuters) - U.S. health officials on Wednesday ordered Pfizer Inc and GlaxoSmithKline PLC to add strong "black box" warnings on their anti-smoking drugs to highlight the risk of serious mental health problems, including suicidal thoughts.

The warnings, which must be added to Pfizer's Chantix and Glaxo's Zyban, follow more than five thousand reports of depression, hostility and other behavioral changes, the Food and Drug Administration said.

FDA officials said there was still a need for the medications, their concerns tempered by smoking's health dangers, such as lung cancer and heart disease.

"We don't want to scare people off from trying to use the medication to stop smoking. We just want them carefully monitored," said Dr. Curt Rosebraugh, who oversees the FDA office that reviews smoking-cessation drugs.

Additionally, the FDA strengthened its caution about possible accidents and serious injuries with Chantix linked to loss of consciousness, mental confusion, dizziness and muscle spasms. But it stopped short of adding it to the boxed warning as some health advocates had urged.

Rosebraugh told reporters the FDA could not directly link the reported problems to the drugs, adding that withdrawal from nicotine in tobacco can also cause problems.

The agency is also requiring the companies to conduct additional clinical trials to help determine how serious a problem the mood disorders are, including among patients who already have depression or other similar conditions.

The warnings will limit Pfizer's ability to run some types of advertisements for Chantix, which the world's largest drugmaker had been counting on to help revive profits.

Instead, Pfizer has seen the drug's sales plunge over the last year amid safety concerns. Global first-quarter sales of Chantix fell 36 percent to \$177 million.

Thousand of Reports

FDA first alerted patients and doctors about possible mood changes with Chantix in November 2007, and has continued to receive reports of problems.

Overall, the agency received 4,762 reports of serious psychiatric events since Chantix's 2006 approval. For Zyban and its generic rivals, it received a total 527 reports, it said.

Specifically, the FDA said it received 98 reports of suicide and 188 reports of attempted suicide with Chantix and 14 reports of suicide and 17 attempts with Zyban and related generics.

Some analysts said investors have already factored in the continuing safety concerns. BMO Capital Markets analyst Robert Hazlett said he was lowering his estimated Chantix sales by \$50

million per year starting in 2010.

Pfizer shares finished down less than 1 percent at \$14.90 on the New York Stock Exchange on Wednesday. Glaxo shares gained 2 percent to close at \$36.04, also on the NYSE.

Chantix, also known as varenicline, is designed to stimulate a type of nicotine receptor in the brain while preventing nicotine from binding to another receptor.

Zyban includes the same active ingredient, bupropion, as Glaxo's antidepressant Wellbutrin, which already carries a boxed warning about suicide and other behavioral risks.

Both Pfizer and Glaxo said they would add the new warning to their products.

Pfizer said it has already begun studying Chantix in hundreds of schizophrenia patients and was planning another trial that would include people with and without psychiatric disorders.

"The benefits of Chantix outweigh the risks for many patients when used as directed," said Dr. Briggs Morrison, a Pfizer senior vice president.

But some consumer advocates said the FDA's Chantix warning was not strong enough for a drug that has been banned for use by pilots.

Thomas Moore, a scientist at the Drug Safety and Policy Institute for Safe Medication Practices, said making the accident caution more prominent was an improvement but it should be as strong as the one for mental side effects.

"Both doctors and patients should carefully weigh the risks and benefits of this drug... and consider alternatives" such as nicotine patches and gums, said Moore, whose group called attention to reported accidents and injuries last year.

(Reporting by Susan Heavey with additional reporting by Lisa Richwine in Washington and Ransdell Pierson in New York; editing by Maureen Bavdek, Richard Chang and Tim Dobbyn)

The European Association For The Study Of The Liver Renews Publishing Partnership With Elsevier

<http://www.medicalnewstoday.com>

Elsevier, the leading publisher of scientific, technical and medical information, is pleased to announce its renewed publishing partnership with The European Association for the Study of the Liver (EASL), the leading European association in the field of liver research. The agreement calls for Elsevier to publish the society's flagship journal, the Journal of Hepatology, for the next five years.

EASL is a society with over 1500 members. The society has given rise to a significant number of international clinical trials and research collaborations in liver disease for the benefit of patients all over the world. EASL's flagship journal - the Journal of Hepatology - requires high standard quality contents and is highly perceived in its field. The journal publishes original papers,

reviews, case reports and letters to the editor concerned with clinical and basic research in the field of hepatology.

"I am thankful to work with a professional learned society and also very grateful for its support and input over the last years. I look forward to working with the newly appointed Editor-in-Chief, Professor Didier Samuel and his editorial team. The management and cure of, for instance, infectious liver diseases like Hepatitis B and C as well as the advanced search for the basic mechanisms of liver failure are major and global challenges of the 21st century. Elsevier is confident to make the Journal of Hepatology a continuing and growing success for authors, readers and for EASL" commented Koos Admiraal MD, Publisher for Elsevier.

Source: Koos Admiraal, Elsevier

A'burg tainted blood victim 'fought until his last breath'

<http://www.windsorstar.com>

Frances Willick, The Windsor Star

Darryle Trealout had been living with Hepatitis C for most of his life since getting a blood transfusion when he was 19.

AMHERSTBURG, Ont. -- About six months ago, Darryle Trealout bought his wife a home and a car, as well as a camper that the couple never got to use.

The 58-year-old made the purchases with money issued by the federal government in compensation to victims of the tainted blood scandal.

Trealout died on Monday from cancer. He was diagnosed with hepatitis C in 1994, but his wife Mary-Ann believes he contracted the disease from a blood transfusion in 1969 when Trealout was 19. The disease eventually forced him to stop working and he underwent a series of surgeries, including a liver transplant.

"His spirit was so strong. He endured this whole thing and fought it until his last breath," said his niece, Irene Robbins. "That tells you how strong a man he was."

Trealout applied for compensation for his infection with hepatitis C, but didn't receive the money until about six months ago.

"He didn't say it, but we all felt it wasn't enough," said Robbins. "His life was taken. But he felt happy because he could buy his wife a nice home. When he passed, he was feeling like he was leaving something behind. He wanted to make sure that we were going to be OK, that his wife was going to be taken care of."

The Amherstburg man was an avid camper who, for about 15 years, spent five months every summer living at a nearby private campground.

"He was a very nice person," said Tony Gerrish, owner of Campers Cove in Wheatley. "He was a good family man. The kids really loved him. He was well thought of throughout the camp

here.”

Several of Trealout’s five children — as well as his wife — worked at the camp, and the whole family participated in its social activities.

Robbins said her uncle was very family-oriented. “He was like a dad to me. He took me in as his own — that was just how beautiful his heart was.”

But Trealout had his silly side, too, said Robbins. “He always made us laugh. He loved women — any size, any kind, any colour. He thought they were all beautiful. Even at the end, with the nurse coming in, he tried to flirt with her. He was a real ticket.”

Trealout’s nephew, Henry, said his uncle also loved classic cars. Just two months ago, Trealout bought a turquoise ’63 Thunderbird. He was too sick to travel far, but Henry said he played chauffeur for his uncle. “I took him out driving in it, just to spend time with him. He loved it. He was smiling from ear to ear.”

Robbins remembers that smile, too. “He had a smile on his face up until the last couple of days. He was one of those rides you don’t want to get off of.”

July 2, 2009

Board gives doctor light punishment in exchange for testimony

<http://www.lasvegassun.com>

By Marshall Allen

The Nevada State Board of Medical Examiners agreed to a settlement Wednesday that will lightly punish a doctor in exchange for his testimony against two other physicians, including Dr. Dipak Desai, majority owner of the clinic that caused last year's Hepatitis C outbreak.

Dr. Eladio Carrera will pay a \$15,000 fine -- a maximum of \$5,000 possible for three counts of bringing the medical profession into disrepute -- and be on probation for two years as part of the agreement.

"Our investigation shows he has a substantially different responsibility for the infections than the other two physicians involved," said Louis Ling, executive director of the medical board. "He is willing to testify truthfully against the other two doctors and give us a context for the case that nobody else can give us."

Ling said he could not comment on Carrera's testimony against Desai and Dr. Clifford Carroll, the physician allegedly responsible for allowing Hepatitis C to be transmitted from one patient to others.

It's believed the disease was transmitted when nurses reused syringes and single-use medicine vials, thereby contaminating the anesthetic that was given to patients. About 50,000 people who had procedures at the clinic, Endoscopy Center of Southern Nevada, were told to be tested for Hepatitis B, Hepatitis C and HIV.

A temporary restraining order and injunction that prevented Carrera from practicing medicine is lifted as part of the agreement.

Ling said that the settlement is necessary because the medical board owes it to the public to make sure the whole truth comes to light, so "we can show the public what happened, who is responsible and hold the parties responsible for the acts."

Liver device helps man survive until transplant

<http://www.sfgate.com>

Victoria Colliver, *Chronicle* Staff Writer

Eddie Lopez, a 50-year-old San Francisco man with cirrhosis, went into liver failure in March, arrived at California Pacific Medical Center in a coma and was put on life support.

Lopez was too sick to qualify for a liver transplant, even if a donated organ became available, making his odds of survival limited at best. The odds could have been worse, but the San Francisco hospital he was in happened to be one of only seven institutions nationwide testing a new device designed to take over the functions of the body's liver for a few hours or several days - long enough to give the patient a chance to stabilize.

For decades, researchers have struggled to create an artificial liver that would mimic both the liver's ability to filter toxins as well as create vital chemicals necessary to live. Unlike people with kidney dysfunction, who can rely on a dialysis machine to keep them alive, patients in acute liver failure have fewer options because of the organ's complex nature.

The latest device to be tested is called the ELAD, for extracorporeal liver assist device. It is considered the first to have human liver cells, which are contained in cartridges that the patient's blood passes through to provide the liver's crucial tasks. A once-promising device that used pig liver cells failed to receive Food and Drug Administration approval.

Because California Pacific was involved in the clinical trial for ELAD, the hospital's doctors let Lopez's family decide whether Lopez should participate - an opportunity his family decided he would want even if he didn't survive because it could help others.

Less than a day after he was hooked up to the machine, his sister Dianna Lopez said she noticed his color improved and he became alert. After three days, he had to be removed from the machine because he developed an infection, but he eventually became well enough to return home.

On Saturday, about five weeks after he left the hospital, Lopez got the call he was waiting for: A donated liver had become available for him. He received a liver transplant Saturday night and was recovering at the hospital's intensive care unit Wednesday.

"We believe the ELAD really did some good for him and helped for him to be stable enough to get a transplant," Dianna Lopez said.

It did its job

Dr. Todd Frederick, the medical center's principal investigator for the trial, said in Lopez's case, the ELAD did exactly what it was designed to do.

The ELAD is not meant to replace the liver, he said.

"The goal for him was to support him through a critical period, get him out of hospital and allow him to do the things he needed to do to get listed for a transplant," he said.

Four patients at California Pacific were hooked up to the ELAD during the phase II trial, which ended in April. All had acute failure on top of chronic liver disease. Only two, including Lopez, survived to leave the hospital. The other survivor, who had kidney disease and other health issues, eventually died from pneumonia, Frederick said.

Participants in the trial had to stay on the machine at least three to 10 days, which is often long enough to allow patients to receive a liver transplant or return home to wait. In some cases, patients may recover enough for the liver to regenerate, avoiding a transplant.

About 28,000 Americans die each year of chronic liver disease, according to the U.S. Centers for Disease Control and Prevention. The cause is often the result of alcohol abuse or Hepatitis C. There also can be other medical reasons. A much smaller number - about 2,000 people a year - go into acute liver failure without an underlying disease, the leading cause being an inadvertent overdose of acetaminophen, or Tylenol.

But donated livers are in short supply. Nearly 16,000 people are on the liver transplant waiting list, but only about 6,500 got the operation last year. The procedure most recently gained media attention when Apple CEO Steve Jobs underwent such a transplant.

"It's great opportunity because it's a totally underserved market," said Terry Winters, chief executive of Vital Therapies Inc., the San Diego company that makes the ELAD. "Their only competition is transplant and there are not enough livers out there to meet the demand."

The device uses cells derived from a liver tumor because those cells, unlike normal liver cells, have the ability to replicate and maintain functionality, Winters said. He said the machine's filtering device prevents those cells from reentering the patient's body.

Financial struggles

The hope for the promising therapy may explain why the ELAD has survived while its business side has struggled. The original Texas company formed in 1991 to create a machine using human liver cells went into bankruptcy in 1995, reformed in San Diego and went bankrupt again in 2003. It was quickly revived under the latest incarnation.

Winters said the ELAD's concept has been sound - the previous company had trouble coming up with an effective clinical trial design - allowing Vital Therapies to raise \$40 million in venture capital funding. The company received the latest round of funding in 2007, \$28 million led by Versant Ventures in Palo Alto.

So far, the device has been tested on about 70 patients at the seven U.S. hospitals. Earlier trials included patients from China, bringing the total to 119 patients worldwide.

Winters said results of the trials have not yet been published, but the findings have demonstrated "statistically significant results bridging patients to transplant." The company is designing trials for the third phase of testing.

E-mail Victoria Colliver at vcolliver@sfchronicle.com.

This article appeared on page C - 1 of the San Francisco Chronicle

Local health officials back FDA plan

<http://herald-zeitung.com>

By Ashlie McEachern

The Herald-Zeitung

Whether from a headache or cramp, pain sufferers generally seek relief in a medicine such as Tylenol.

While it has become a common and popular cure for pain, Tylenol or acetaminophen, has been linked to liver damage. According to the Food and Drug Administration, 200 people a year die from liver failure related to acetaminophen.

After a two-day conference, an FDA Drug Safety Advisory Committee comprised of medical experts recommended on Tuesday to lower the maximum daily and single dosage amounts for nonprescription acetaminophen.

Experts recommended a maximum single dose of 650 milligrams and to lower the maximum daily dose of four grams or eight pills of Extra Strength Tylenol. The current single dose of Extra Strength Tylenol is two pills or 1,000 milligrams.

While the FDA did not recommend a ban on over-the-counter products that contain acetaminophen, such as TheraFlu, NyQuil and Alka-Seltzer, it did call for stronger warning labels.

Local doctors and pharmacists said they were glad to see the FDA taking steps to inform consumers about the potential dangers of too much acetaminophen.

Doctor Ben Stevens of Well Med Clinic in New Braunfels said acetaminophen was actually a great drug because it did not cause gastrointestinal bleeding like anti-inflammatory drugs like aspirin or ibuprofen.

"The problem I see is that people prescribe themselves amounts of Tylenol and end up taking too much in a 24-hour period," Stevens said. "Another problem is that prescription drugs like Vicodin and Percocet are a combination of narcotics and acetaminophen, and some people might be taking too many of those prescriptions."

Mixing alcohol with acetaminophen is something else Stevens said people should avoid.

"Anyone who drinks on a daily basis or people with Hepatitis C, kidney or liver deficiencies

should be especially aware and talk to a doctor before taking acetaminophen,” Stevens said.

Dustyn Tysdal, pharmacy manager at Christus Santa Rosa Hospital New Braunfels, said he believed the FDA recommendations would be beneficial to the health and safety of Americans.

“I think better warning labels will make people more likely to read the directions and take acetaminophen properly,” Tysdal said. “I’d also like to see the FDA consider lowering the amount of acetaminophen in combination drugs like Vicodin and Hydrocodone.”

The most important goal, Tysdal said, was educate the public about the dangers that that medicines can bring if they are used incorrectly.

“We of course want the highest levels of safety for patients and consumers,” he said.

July 3, 2009

Surgery tech may have exposed thousands in Colorado to hepatitis C

<http://health.taragana.net>

Scrub tech may have exposed thousands to hepatitis

DENVER — A former surgery technician may have exposed thousands of Colorado patients to hepatitis C when she swapped her own dirty syringes for ones filled with a powerful narcotic, federal authorities said Thursday.

Kristen Diane Parker faces criminal charges for allegedly making the swaps while working at Audubon Ambulatory Surgery Center in Colorado Springs and Rose Medical Center in Denver.

Authorities say Parker admitted to changing out syringes containing a saline solution with ones filled with the painkiller Fentanyl. Parker injected herself with the drug, according to a complaint filed Thursday in U.S. District Court in Denver.

An affidavit by Mary F. LaFrance, an investigator for the U.S. Food and Drug Administration, says at least nine surgery patients at Rose have tested positive for hepatitis C, which is incurable. About 6,000 patients are being advised they may have been exposed and need to be tested.

Hepatitis C is a blood-borne disease that can cause serious liver problems, including cirrhosis or liver cancer. The illness is treatable, but there is no cure. Symptoms can include nausea, diarrhea, fatigue, pain and jaundice.

Rose Medical Center officials told a news conference Thursday night they were working with the Colorado Department of Public Health and Environment to determine whether Parker was the source of the virus.

It could not be determined Thursday night whether Parker had an attorney.

Parker worked at Rose from Oct. 21, 2008, until April. Hospital officials say she was suspended April 13, before they learned of the cases, and then fired. She had failed a drug test by testing

positive for Fentanyl.

Parker went to work for the Audubon surgery center shortly after being fired. She worked there from May 4 until Monday, Dr. J. Michael Hall, Audubon's medical director, told *The Gazette* in Colorado Springs.

If convicted of tampering with a consumer product and other charges, she faces up to 10 years in prison and a maximum \$250,000 fine on the most serious charge of tampering.

Information from: The Gazette, www.gazette.com

(This version CORRECTS UPDATES with hospital news conference, comment from Colorado Springs doctor. corrects that charges were filed Thursday sted Friday.)

DNA of Hepatitis B can predicts liver cancer risk

<http://health.taragana.net>

Hepatitis B virus mutations may help predict liver cancer ris

WASHINGTON - Scientists from Second Military Medical University in Shanghai have revealed that mutations in the DNA of hepatitis B virus (HBV) might help predict which patients are at increased risk of developing liver cancer,

HBV infection is a known cause of hepatocellular carcinoma (HCC), the most common form of liver cancer.

During the research, the team analysed 43 studies with a total of 11,582 HBV-infected participants, of whom 2,801 had HCC.

They found that certain mutations were associated with development of HCC, and more prevalent as chronic HBV infection progressed from the asymptomatic state to liver cirrhosis or HCC.

“Frequent examination of patients with chronic HBV infections for the presence of these mutations may be useful for identifying which patients require preventive antiviral treatment and for the prediction of HCC,” wrote the authors.

The study appears in *Journal of the National Cancer Institute*.

Source:ANI

Conatus Pharma begins second phase 2 trial of a novel drug candidate for HCV

www.pharmabiz.com

Conatus Pharmaceuticals Inc. announced the initiation of a second phase 2 clinical trial with a novel drug candidate for the treatment of liver disease associated with Hepatitis C Virus (HCV) infection. The trial will enrol patients for whom treatment with approved standard of care treatments is not currently advised. Results from an earlier clinical trial in HCV patients who failed standard of care treatment are expected to be reported later this year.

CTS-1027 is an oral, small molecule compound that inhibits the activity of key members of a class of protease enzymes, the matrix metalloproteinases or MMPs. CTS-1027 had previously been shown to be effective in multiple preclinical models of inflammatory liver disease and HCV infection.

The clinical trial is a double-blind, placebo-controlled trial testing an optimized dose of CTS-1027 alone or in combination with ribavirin. Dosing will last for up to twenty four weeks. The Company expects approximately 70 patients to be enrolled. The clinical trial will be conducted at up to twenty five medical centres in the US.

"Our recent preclinical studies suggest that CTS-1027 treatment has the potential to impact the second phase of HCV virus inhibitory kinetics in patients. This phase is associated with the gradual reduction and replacement of HCV infected cells by uninfected liver cells. Interestingly, ribavirin is also postulated to have the greatest impact on HCV second phase inhibition, leading us to evaluate CTS-1027 in combination with ribavirin," said Steven J. Mento, president and CEO of Conatus. "We believe that CTS-1027 represents a novel approach to treating HCV disease and look forward to developing this drug candidate to fill an important medical need in HCV-infected patients."

Conatus Pharmaceuticals Inc. is a privately-held specialty pharmaceutical company engaged in the development of innovative human therapeutics to treat liver disease.

Examining Dietary Influences of Liver Disease

<http://www.medicalnewstoday.com>

Diets high in protein and cholesterol are associated with a higher risk of hospitalization or death due to cirrhosis or liver cancer, while diets high in carbohydrates are associated with a lower risk. These findings are in the July issue of *Hepatology*, a journal published by John Wiley & Sons on behalf of the American Association for the Study of Liver Diseases (AASLD). The article is also available online at Wiley Interscience.

There are many reasons to suspect that dietary factors influence the development of hepatic steatosis and its progression to more severe liver disease. First, poor diet may lead to obesity, insulin resistance and diabetes, which are the most important known risk factors for hepatic steatosis. Also, dietary lipids may directly affect fat in the liver. Furthermore, a high cholesterol diet has been shown to induce serious steatosis in animal studies.

Researchers, led by George Ioannou of Veterans Affairs Puget Sound Health Care System in Seattle, investigated whether dietary nutrient composition was associated with the subsequent development of cirrhosis or liver cancer in a representative sample of the U.S. population. They utilized data from 9,221 participants in the National Health Examination Survey who had

completed a 24-hour dietary recall questionnaire. Participants were excluded if they suffered from cirrhosis or liver cancer at the start of the study, or received a diagnosis within five years.

During the follow-up period, an average of 13.3 years, 123 participants received a new diagnosis of cirrhosis (118 people) or liver cancer (5 people) according to hospitalization records and death certificates. These individuals were more likely to be older, more obese with more central fat distribution. They had lower educational attainment and higher alcohol consumption, and were more likely to be male, diabetic and non-white.

Dietary nutrient composition was a strong predictor of hospitalization or death due to cirrhosis or liver cancer in the U.S. population. "In particular, we identified that protein and cholesterol consumption were associated with elevated risk, whereas consumption of carbohydrates was associated with reduced risk of hospitalization or death related to cirrhosis or liver cancer," the authors report.

The association with cholesterol intake is potentially the most important finding of this study, the authors suggest. While cholesterol is well-known for its role in non-hepatic diseases like atherosclerosis, it has never before been linked to human liver disease. The findings suggest that drugs blocking intestinal cholesterol absorption might reduce the progression of fatty liver disease but this needs to be investigated in prospective studies.

"Subgroup analyses showed that the significant associations of protein, carbohydrate and cholesterol intake with cirrhosis or liver cancer that we described in the entire study population, were limited to overweight or obese persons," the authors report. "No such associations were observed in normal-weight persons." This suggests that the relevant dietary factors are more likely to have hepatic effects through obesity-related fatty liver disease.

"Our study raises the possibility that dietary factors may be important, modifiable, and hitherto unrecognized determinants of liver disease progression," the authors conclude.

Article: "The Association Between Dietary Nutrient Composition and the Incidence of Cirrhosis or Liver Cancer in the U.S. Population." Ioannou, George; Connole, Marah; Morrow, Olivia; Lee, Sum. *Hepatology*; July 2009.

Source: Sean Wagner, Wiley-Blackwell

Exercise Helps Patients With Non-Alcoholic Fatty Liver Disease

www.medicalnewstoday.com

Counseling patients with non-alcoholic fatty liver disease (NAFLD) on how to increase physical activity leads to health benefits that are independent of changes in weight. These findings are in a new study in the July issue of *Hepatology*, a journal published by John Wiley & Sons on behalf of the American Association for the Study of Liver Diseases (AASLD). The article is also available online at Wiley Interscience.

NAFLD is the most common form of chronic liver disease in developed countries. It is associated with the metabolic syndrome, which also includes obesity, insulin resistance and type

2 diabetes, and is characterized by elevated liver enzymes. Currently, patients with NAFLD are encouraged to alter their lifestyles, however the focus has been on weight loss through dietary changes. The effects of increasing physical activity alone have not been thoroughly investigated.

Researchers led by Jacob George of Sydney West Area Health Service in Australia, examined the health outcomes of patients who were counseled on how to increase physical activity. They prospectively enrolled 141 patients with NAFLD from the Sydney West Area Health Service. The participants were divided into a control group, a low-intensity lifestyle intervention group, and a moderate-intensity lifestyle intervention group.

The patients in the intervention arms worked with exercise scientists who provided individually tailored counseling on how to increase both planned and incidental physical activity. Walking was the main type of exercise discussed and patients were encouraged to be active for at least 150 minutes per week.

After three months, participants in the intervention groups were nine times more likely to have increased their physical activity by an hour or more per week, compared to patients in the control group. Those who were active for more than 150 minutes per week, and those who increased their level of fitness, also showed improvements in liver enzymes and other metabolic indices. The effect was independent of weight loss.

Interestingly, there was no dose-response effect for exercise increases above 60 minutes per week. However, those who increased exercise by at least 60 minutes per week had beneficial changes in liver enzymes, insulin resistance and metabolic risk factors.

While greater increases in exercise time appeared to be related to greater weight loss, there was no additional benefit to liver enzymes or glucose homeostasis. "The reason for this is unclear," the authors write, "but we hypothesize that the threshold for change in liver enzymes may be low so that even a slight increase in physical activity is sufficient to improve liver tests."

Patients who remained sedentary over the course of the study had no improvement in metabolic parameters, and even trended toward deterioration in these areas, even if they lost weight. "The metabolic pathway by which physical activity improves insulin sensitivity may be different to that of weight loss and this is particularly relevant for patients with NAFLD," the authors write. "Physical activity improves insulin resistance through positive changes in fatty acid metabolism in muscle which cannot be achieved through energy restriction."

"We have shown here that physical activity counseling can result in significant increases in physical activity and fitness and subsequent improvement in health, without the need for supervised exercise sessions," the authors conclude.

Article: "The Independent Effects of Physical Activity in Patients with Non-Alcoholic Fatty Liver Disease." St. George, Alexis; Bauman, Adrian; Johnston, Amanda; Farrell, Geoff; Chey, Tien; George, Jacob. *Hepatology*; July 2009.

Source: Sean Wagner, Wiley-Blackwell

Hepatitis C Under Diagnosed

<http://www.thedenverchannel.com>

Steve Saunders, 7NEWS Anchor

Early Treatment Is Crucial

DENVER -- The hepatitis C scare at Rose Medical Center has raised the profile of a disease that doctors say is under reported.

It is estimated that two percent of the population has the virus.

Steve Piper was diagnosed with the disease seven years ago. He believes he was infected with the virus as a teenager when he experimented with drugs.

He has since had liver cancer and a liver transplant, but is now doing well.

“It’s not a death sentence,” he said. “It’s a disease that is manageable, but you have to know that you have it.”

Dr. Gregory Everson of the University of Colorado Health Sciences Center specializes in liver disease and hepatitis C.

“It’s important not to bury your head in the sand,” he told 7NEWS.

About half the people with chronic hepatitis C respond to treatment. If that treatment begins early, patients have a much better outcome.