

Coffee and Liver Cancer



Alan Franciscus, Editor-in-Chief

In the past couple of years there have been quite a few news stories on the health benefits of coffee particularly when it comes to the liver. In the August 2007 issue of *Hepatology*, Francesca Bravi and colleagues reported on the association between coffee drinking and liver cancer in a paper titled “Coffee Drinking and Hepatocellular Risk: A Meta-Analysis” (DOI 10.1002.hep.21708). A meta-analysis is a review of previous studies using a variety of statistical methods to pool, combine, refine and come to a conclusion about an issue.

In this study a MEDLINE search was conducted on articles written between 1966 to February 2007 using terms such as “coffee,” and combinations of “hepatocellular” or “liver” and “carcinoma” or “neoplasm.” A total of 10 studies were reviewed (2,260 patients with liver cancer) – 6 case-control studies from southern Europe and Japan (1551 cases of liver cancer) and 4 cohort studies from Japan (709 cases liver cancer).

It was found that there was a 41% reduction in the risk of liver cancer (HCC) among the coffee drinkers. The authors pointed out that the favorable results were found in studies from Europe where coffee consumption is heavy as well as from Japan where coffee consumption is lighter,

which lends credence to the findings.

The exact way in which coffee helps to reduce the risk of acquiring liver cancer is unknown, but the researchers offered up some theories including:

- Certain chemicals in coffee (diterpenes, cafestol, and kahweol) may block the development of liver cancer.
- Caffeine and antioxidant substances found in coffee may provide protective qualities against the development of liver cancer
- Coffee may slow down liver disease progression which would protect against developing liver cancer

The authors also noted that even though the association between coffee consumption and the decreased risk of developing liver cancer has not been proven they make a strong case for the association by building into their analysis other cofactors to counter the potential bias, such as hepatitis B and C, cirrhosis, other liver diseases, social class indicators, alcohol drinking and tobacco smoking.

The authors concluded that “the results of this meta-analysis provide quantitative evidence of an inverse relation between coffee drinking and liver cancer,



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the third-most common cause of cancer death worldwide after lung and stomach, with about 600,000 deaths in 2002.” They also commented that “the interpretation of this association remains unclear, and the consequent inference of causality and worldwide public health implications remains open to discussion.”

ASSOCIATION IS NOT CAUSATION

Before we all start consuming massive amounts of coffee it is important to put this study in perspective. Please see the coffee article in this month’s issue for more information about the potential risks and benefits from drinking coffee. First and foremost it is really difficult to compare the studies because the definition of light, moderate and high consumption was different in the studies although the authors adjusted for

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COFFEE & CANCER

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the differences in their statistical analysis. Also information was not available on the way the coffee was prepared (percolated, French press or drip), strength of the coffee (how much caffeine), if the coffee was black, used with cream and/or sugar and if it was taken with food. Although it is doubtful, were the results misleading because people who started to develop cirrhosis stopped or reduced their coffee consumption because of gastrointestinal problems?

So the bottom line is that it is important to remember that when an association is found it doesn't necessarily mean that the study factor actually causes the problem or benefits the problem. In the above study the fact that a meta-analysis was performed leads us to believe that there is a likely association between coffee consumption and the reduced risk for liver cancer, but until science learns how coffee provides this benefit it is not a good idea to start drinking coffee – at least not as a primary reason to prevent liver cancer.



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HCV-796 Dosing Discontinued



Alan Franciscus, Editor-in-Chief

In the August 2007 issue of the *HCV Advocate* newsletter I wrote about the disappointing news that the FDA had put the current clinical trial of NM-283 on hold in July 2007. Unfortunately, there is more bad news about the clinical development of another HCV polymerase inhibitor – ViroPharma's HCV-796. On August 10, 2007 ViroPharma in a decision made with Wyeth Pharmaceuticals announced that the dosing of HCV-796 was being discontinued in their phase II study due to safety concerns.

SAFETY CONCERNS

The safety concerns stem from significant elevations of liver enzymes in eight percent (13 pts) of the study participants who received the triple combination of HCV-796, pegylated interferon and ribavirin compared to 1% of the participants in the study arm who received pegylated interferon plus ribavirin alone. In two of these patients the elevations were **10 times** the upper limit of normal range and the elevations were considered serious enough that they were withdrawn from the study. A spokesperson for ViroPharma commented that there is not enough data to know if the high elevations in enzymes are transient and whether or not they will resolve over time. These evaluations were only seen in patients after 8 weeks or more of the triple combination therapy. ViroPharma commented that there were no elevations of liver enzymes in the phase Ib study or at the 4 week mark of treatment.

RESULTS TO DATE

This is bad news because the preliminary data from the phase II study showed that HCV-796 has had a strong antiviral response against HCV when combined with pegylated interferon (Peg-Intron) plus ribavirin. In an analysis of a portion of patients who had received 12 weeks of triple therapy, it was found that 73% (27 of 37 pts) in the naïve treatment group and 23% (17 of 73 pts) in the null responder treatment group achieved undetectable HCV levels (< 10 IU/mL). A spokesperson for ViraPharma said that the patients in the trial would be eligible for continued treatment with pegylated interferon plus ribavirin alone for up to 48 weeks if significant antiviral response is observed at 12 and 24 week treatment intervals. In addition, all patients will be followed and monitored for an additional 24-week period to assess safety and treatment response.

THREE PRIORITIES

On a conference call the company set three goals as the result of the current findings:

1. To further understand the reason(s) for the elevated liver enzymes and what the findings mean for the future clinical development of HCV-796
2. To finish and analyze the data from the amended phase II study, and
3. In collaboration with Wyeth, to determine the next steps for the development of HCV-796

Reference:

Company press release and August 10, 2007 ViroPharma Webcast.



HIV/HCV Coinfection Updates from the International AIDS Society Conference



Liz Highleyman

About 50 oral and poster presentations at the recent 4th International AIDS Society Conference on HIV Pathogenesis, Treatment and Prevention, held July 22-25 in Sydney, Australia, provided new information on coinfection with hepatitis C or B in HIV positive individuals. Below are highlights from several of these studies. For conference abstracts, see <http://www.ias2007.org/pag>.

HEPATITIS C TREATMENT

Since HIV/HCV coinfecting people typically do not respond as well to interferon-based therapy as those with HCV alone, researchers have evaluated more intensive treatment regimens for this population. In a study by M. Polis and colleagues (*abstract MOPEB046*), 11 coinfecting patients received either a standard 48-week course of 180 mcg once-weekly pegylated interferon (Pegasys) for 48 weeks, or else twice-weekly Pegasys for four weeks, followed by once-weekly dosing for an additional 44 weeks; all also received 1000-1200 mg daily ribavirin. By Day 7, 72% in the double-dose arm achieved more than a 1-log reduction in HCV viral load, compared with 9% in the standard-dose arm. By Week 12, 72% and 45%, respectively, achieved HCV RNA < 600 IU/mL. Among those who completed treatment, subjects in the double-dose arm were more likely than those in the standard-dose arm to achieve end-of-treatment (45% vs 20%) and sustained virological response

(SVR; 40% vs 18%). Adverse side effects were similar in both groups.

Looking at the timing of treatment response, P. Pagani and colleagues (*abstract MOPEB047*) found that rapid virological response (RVR; undetectable HCV RNA at Week 4) predicted eventual sustained response in coinfecting patients with HCV genotype 3, as it does in HCV mono-infected individuals. SVR was observed in 74% of coinfecting patients with RVR vs 34% without RVR. However, coinfecting patients were less likely than HCV mono-infected individuals to experience rapid response (43% vs 80%, respectively), and the predictive value of RVR was not as high.

With regard to antiretroviral therapy, P. Khaykin and colleagues (*abstract MOPEB056*) found that patients whose anti-HIV regimens included no nucleoside analogs or “friendly” nucleoside analogs were more likely to achieve an end-of-treatment response to pegylated interferon plus ribavirin than those who used AZT (Retrovir), ddI (Videx), or d4T (Zerit): 66%, 48%, and 35%, respectively. Treatment guidelines state that ribavirin should not be used with ddI (due to risk of mitochondrial toxicity) or AZT (due to risk of anemia).

Looking at treatment of acute hepatitis C, G. Matthews and colleagues (*abstract MOPEB045*) studied 18 HIV/HCV coinfecting men (67% with HCV genotype 1) who received pegylated interferon plus ribavirin for 24 weeks. By Week 4, 56% had achieved RVR, and at

Week 12, 94% had undetectable HCV viral load. At the end of treatment, 89% had undetectable HCV RNA, and 91% achieved SVR. The researchers concluded that, “Treatment for acute hepatitis C in HIV positive subjects is safe and highly effective.”

Finally, A. De Bona and colleagues (*abstract MOPEB049*) reported that treatment with pegylated interferon plus ribavirin appears to reduce the rate of progression to liver cirrhosis in coinfecting patients, even if they do not achieve sustained response to therapy.

NATURAL HISTORY OF HEPATITIS C IN COINFECTIONED PEOPLE

H.H. Thein and colleagues (*abstract TUAB202*) performed a meta-analysis to estimate liver fibrosis progression in HIV/HCV coinfecting patients, reviewing 17 published studies. The combined probability of developing cirrhosis was 23% after 20 years and 75% after 40 years – higher than the progression rate observed in HCV mono-infected individuals. Progression was slower in coinfecting people with CD4 cell counts greater than 400 and those using HAART, despite some studies showing that certain antiretroviral drugs can contribute to liver injury.

In a related study, I. Poizot-Martin and colleagues (*abstract MOPEB039*) assessed liver steatosis (fat accumulation) in 243 HIV/HCV coinfecting patients. About 40% of liver biopsies showed some degree

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Hiv/Hcv COINFECTION

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of steatosis. Most subjects (78%) had Grade 1 steatosis (less than one-third of hepatocytes affected), while 18% had Grade 2 (30%-70% of hepatocytes) and 4% had Grade 3 (more than 70% of hepatocytes). Half had mixed macrovesicular and microvesicular steatosis, the former associated with metabolic abnormalities and the latter with drug toxicity. However, steatosis was not associated with HCV genotype or duration of antiretroviral therapy. The researchers recommended that coinfecting individuals should be screened for steatosis, especially if they have unexplained liver enzyme elevations (ALT and/or AST).

HEPATOTOXICITY OF ANTIRETROVIRAL DRUGS

Several studies at the conference looked at the association between antiretroviral drugs and liver toxicity. N. Marino and colleagues (*abstract MOPEB057*) studied nearly 400 HIV positive patients (half with HCV coinfection) taking various HAART regimens who underwent fibrosis assessment using FibroScan. About 5% overall experienced elevated liver enzymes; all cases were asymptomatic and none required changing therapy. Advanced liver fibrosis (stage F3/F4) – but not HCV infection *per se* – predicted a higher risk of drug-related hepatotoxicity.

D. Norris and colleagues (*abstract MOPEB059*) assessed nearly 900 participants in the KLEAN study, which compared two protease inhibitors, ritonavir-boosted fosamprenavir (Lexiva) and lopinavir/ritonavir (Kaletra), in combination with abacavir/3TC; 3% were HIV/HBV coinfecting, 10% were HIV/HBV coinfecting, and 0.5% had

all three viruses. In both treatment arms, serious liver enzyme elevations occurred more often in coinfecting patients: 1% or less in those with HIV alone, about 10% in those with HIV/HCV, and around 20% in those with HIV/HBV.

P. Garcia-Gasco and colleagues (*abstract MOPEB058*) examined the safety and pharmacokinetics of ritonavir-boosted tipranavir (Aptivus) – a recently approved protease inhibitor – in 66 patients with different stages of fibrosis. Tipranavir plasma levels were higher in people with stage F3/F4 fibrosis (unsurprising, since the drug is metabolized in the liver), and higher tipranavir levels were associated with ALT elevation. They recommended that noninvasive liver fibrosis assessment and therapeutic drug-level monitoring may help identify patients at risk for tipranavir overexposure.

Finally, L. Abdel-Kader and colleagues (*abstract MOPEA072*) assessed the safety of ritonavir-boosted atazanavir (Reyataz), another newer protease inhibitor, in 185 HIV/HCV coinfecting and 14 HIV/HBV coinfecting patients. After a median follow-up period of 11 months, 6% developed serious liver enzyme elevations and 15% experienced Grade 4 bilirubin elevation (a known side effect of atazanavir). Among participants with available fibrosis scores, about 10% with significant fibrosis and 8% with cirrhosis experienced liver enzyme elevations, compared to 4% of those with minimal fibrosis. Nevertheless, the researchers concluded that atazanavir is safe for patients with viral hepatitis, including those with cirrhosis. In a related study, H. Donate and colleagues (*abstract MOPEB060*) looked at 38 cirrhotic patients (eight with decompensated cirrhosis) who took atazanavir with or without ritonavir. Among sub-

jects with compensated cirrhosis, only one discontinued therapy due to drug toxicity, and none developed new liver decompensation.

NONINVASIVE FIBROSIS ASSESSMENT

The propensity of atazanavir to cause elevated bilirubin has ramifications for noninvasive liver fibrosis assessment. Y. Benhamou and colleagues (*abstract TUAB206*) compared three noninvasive fibrosis measures in 154 HIV/HCV coinfecting patients: APRI (AST-to-platelet ratio index), Fibrotest (an index incorporating alpha2-macroglobulin, haptoglobin, apolipoprotein A1, total bilirubin, and GGT), and FibroScan (transient elastometry). They found “poor to fair” agreement between the tests for grading significant or severe fibrosis, with APRI underestimating significant fibrosis compared with the other two tests. In 25% of patients with significant fibrosis and 31% with severe fibrosis, FibroTest and FibroScan disagreed by more than one stage. Usually FibroTest produced a higher estimate, and about half the time this was due to elevated bilirubin levels in patients taking atazanavir.

Coverage of HIV disease progression in HIV/HCV coinfecting patients and sexual transmission of HCV among gay men will appear in the October HCV Advocate.



HIV/HCV COINFECTION MATERIALS FROM HCSP

BE SURE TO CHECKOUT THE NEW HIV/HCV COINFECTION FACTS AS WELL AS THE NEW HIV/HCV COINFECTION POSTERS, AVAILABLE IN BOTH ENGLISH AND SPANISH. THESE CAN ALL BE DOWNLOADED IN PDF FORMAT FROM <http://www.hcvadvocate.org/hepatitis/materials.asp>

HealthWise:

Virology 101 (First in a four part series)



Lucinda K. Porter, RN

In last month's *Healthwise*, I discussed a controversial word – *cure*. I explored the argument of applying the word *cure* when describing a sustained virologic response (SVR) to hepatitis C treatment. Responding to my column, a reader asked if it is possible to cure a virus. Another way of asking this is: can we kill a virus, like an antibiotic can destroy bacteria?

Let's set aside the question, for the moment, and examine basic virology (the study of viruses). The word *virus* is used when describing various health problems, such as the common cold, the flu, and HIV. What is a virus? How does it live? How can we avoid them? I will start with some general information and end with the virus that is the reason for this newsletter – the hepatitis C virus (HCV).

Viruses have been around forever. We aren't sure how viruses came into being, although there are theories¹. *Virus* comes from the Latin word poison. The largest viruses are the size of the smallest bacteria. They have a simple structure. The core of the virus contains a *nucleic acid*, either DNA or RNA. Nucleic acids carry genetic information. Genes are made up of an assortment of nucleic acids.

Surrounding the nucleic acid is a protein coat, called a *capsid*. Some viruses have another coat covering the capsid known as an *envelope*. Viruses have different shapes and some envelopes are covered with spikes.

Viruses are not completely alive in that they cannot survive on their own – they need to reside in another cell in order to live and reproduce. These cells are called *host* cells. Once a virus infects a host cell, it takes control of that cell. Viruses are like hijackers or parasites.

Even though a virus is an unwelcome intruder, the host cell assists the virus by making more copies of the virus. This is called *replication*. Imagine an intruder who doesn't just steal your valuables but uses the electricity in the house to clone itself and manufacture zillions more intruders. These clones go out and

break into more houses, and so on.

Viruses are specialized and they look for the cell that has what they need in order to live and replicate. The term for this is *tropism*. Using intruders as an example, if an intruder could only open bank vaults or car locks, then that is where the intruder would go. Viruses look for cells that have the kind of lock which they can open.

Once a virus matches up and attaches to a cell, it can either enter the cell directly or insert its genetic material into the cell. It's the difference between an intruder going into your house or reaching through a window to steal your wallet. Either way, viruses use the cell's own machinery in order to replicate. The virus takes over the cell's own DNA or RNA, forcing it to make more copies of the virus. The virus may kill the cell or it could just hang out there and damage it while it uses the cell to replicate. In the meantime, new copies of the virus are unleashed.

Some viruses use DNA to replicate and some use RNA. DNA (*deoxyribonucleic acid*) stores genetic codes. It's the cell's instruction manual. RNA (*ribonucleic acid*) also carries genetic information, but it is transcribed from DNA. There are various types of RNA, but that is for Virology 401.

DNA viruses hijack cells in various ways. They may fuse their code onto the cell's DNA. The virus may also direct the DNA to make a *messenger RNA*. This messenger RNA tells the cell to make more viral copies. RNA viruses skip some steps and just tell the cell to make more viral copies. Retroviruses, such as HIV, more or less reverse the process.

The term *viral hepatitis* simply means a type of hepatitis caused by a virus. However, the viruses that cause hepatitis are as different as cats and dogs. Hepatitis B is a DNA type. Hepatitis A and C are RNA viruses. Although they are both RNA viruses, hepatitis A and C are different genetically and clinically. They aren't even in the same family.

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VIROLOGY 101

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HCV is an enveloped RNA virus that was identified in 1989. Visible only with an electron microscope, HCV looks like something from outer space. HCV is a member of the *flaviviridae* family; other members of this family of viruses are yellow fever, dengue fever, and West Nile virus. These viruses are more like distant cousins of HCV. For instance, mosquitoes transmit some of the viruses in this family, but not HCV. HCV is the lone species in its genus.

The main target for HCV is liver cells, aka *hepatocytes*. The virus enters the liver cell and uses the cell's RNA to replicate. It makes about a trillion copies a day. Not only is it a fast replicator, HCV *mutates*, changing the genetic material slightly during the replication process. This helps HCV escape detection by the immune system. It's similar to wearing disguises to fool the police. Since HCV replicates rapidly, it also mutates rapidly.

There are six different genetic strains of HCV, called *genotypes*. These are not the same thing as mutations. It is more like the differences between Granny Smith and Delicious apples. They are both apples, but they have separate features. If one of the Granny Smith trees starting producing some sweet Granny Smith's, that would be a mutation.

Most of the HCV in the U.S. is genotype 1, with some 2 and 3. The other genotypes are found here, but they are more prevalent in certain regions of the world. As far as HCV progression goes, no genotype is worse than the others are. However, treatment decisions are based on genotypes. Genotypes 2 and 3 have a much shorter course

of HCV treatment, respond better than genotype 1 does, and require lower doses of ribavirin (one of the two drugs used during treatment).

HCV is a blood borne virus. It is usually passed when the blood of someone with HCV has direct contact with someone else's blood. However, HCV may live on surfaces outside the human body. In a study conducted by Kris Krawczynski, et al, of the Centers for Disease Control, HCV remained viable for at least 16 hours but no more than 4 days.²

Back to the question, can we kill a virus? Yes, if the virus is outside the body. If properly applied, heat and disinfectants will destroy viruses. Once the virus is inside the cell, disinfectants and heat are not options, as these are harmful. However, there are ways to fight back. Tune in next month for information about a powerful weapon against viruses – the immune system.

- All the Virology on the WWW www.virology.net
- Bugs in the News <http://people.ku.edu/~jbrown/virus.html>
- Microbewiki microbewiki.kenyon.edu/index.php/MicrobeWiki
- Virus Basics <http://library.advanced.org/23054/basics/page2.html#1>

References

¹For more about the origins of viruses, see Oracle Thinkquest <http://library.thinkquest.org/26802/origin.html>

²See www.hcvadvocate.org for transmission prevention tips.



Disability Programs from Social Security

A new HCSP Training Module

This July, the first of a new series of HCSP Training Modules focussing on Disability, Insurance and Benefits issues was posted to the HCV Advocate website.

The online modules have been designed and written by Jacques Chambers, CLU, a Benefits Consultant and Counselor, who has been a contributing writer at the HCV Advocate for many years.

Jacques has spent the last ten years helping people dealing with disabilities understand and access their benefits. Prior to that he spent twenty-five years in the insurance industry, designing, selling, and servicing employee benefits programs.

Disability Programs from Social Security, will focus on

- Differences and similarities between Social Security Disability Insurance (SSDI or SSD) and Supplemental Security Income (SSI)
- Definition and determination of disability
- Financial eligibility requirements
- Navigating the application process
- Dealing with a claim denial
- Appealing a decision

To take this module, go to www.hcvadvocate.org and follow the instructions.

Disability & Benefits: *COBRA*



Jacques Chambers, CLU

EXTENDING YOUR EMPLOYER-BASED HEALTH INSURANCE

Passed in 1984, COBRA (Comprehensive Omnibus Budget Reconciliation Act) was originally a federal law that requires employers to allow employees and dependents losing health insurance to stay on the employer's plan.

Because small employers and certain other employee groups do not come under this federal law, many states have enacted "Mini-COBRA" statutes to extend coverage for some who are not covered under the federal law.

THE FEDERAL COBRA CONTINUATION LAW

Who is covered by the federal law? Almost all employers who provide health insurance to their employees except:

1. The federal government and its employees;
2. Churches and most religious affiliated employers such as church-owned hospitals; and
3. Employers with less than 20 employees.

NOTE: See state "mini-COBRA" laws in several states covered below.

How does the law work? If you are covered under an employer's health insurance plan and are losing coverage under your employer's health insurance because you are terminating employment by resig-

nation or firing or your hours are reduced so that you're no longer eligible, COBRA allows you to continue coverage under the employer's health insurance plan.

Your dependents also have a right to continue their coverage if you die or if your spouse divorces you or if your children are no longer eligible to be insured due to their age.

The only employees who cannot continue their coverage under COBRA are those who are terminated for "gross misconduct," which usually means due to a violation of law such as theft or embezzlement.

How long can I stay on my employer's health plan?

1. If you lose coverage due to termination or reduction in hours, you can stay on the plan for an additional 18 months.
2. If you are disabled when your coverage ends, you may stay on the plan for 29 months, which is how long it takes to get Medicare, provided you meet the requirements of that separate law.
3. If you are the spouse of an employee and lose coverage due to the death of the employee or due to divorce, you can continue coverage for an additional 36 months.
4. If you are the dependent child of the employee and you lose coverage due to passing the age limit for dependent children, you can continue the coverage

for an additional 36 months.

Can that time ever be cut short? Yes, you will lose your COBRA continuation rights before the time limit expires if:

1. You fail to make a premium payment by the due date and grace period. Coverage lost due to late premium payment is not normally reinstated.
2. Your employer stops all health insurance plans for all employees of all of their companies. If, for example, your former employer goes broke and lays off everyone, then there is no coverage left for you to continue.
3. You become eligible for another group health insurance plan from another employer that covers all of your pre-existing conditions.
4. You become eligible for Medicare. (**NOTE:** If you are on COBRA continuation and become eligible for Medicare, your right to COBRA continuation stops; conversely if you are on Medicare when you become eligible for COBRA continuation, you may keep both up to the maximum COBRA period.)

What are the benefits of the COBRA plan coverage? COBRA is only a law, not a plan. It says that you must be allowed to stay on exactly the same coverage you had when you were an active employee.

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COBRA

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If your employer allows employees to switch plans once a year in an open enrollment, you must be given the same privilege. This also means if your employer changes plans, your plan changes too.

Does this only apply to health insurance? It applies to all types of health insurance plus all health-related plans, such as dental, vision, or prescription drug benefits. It does NOT allow continuation of group life insurance or group long term disability coverage. See the plan document for those plans for any continuation they may provide.

Does my whole family have to take the Continuation? No, each insured member of your family has their own right to COBRA continuation and may decide to continue the coverage or not.

How much does it cost? This is the big problem with COBRA; to stay on your employer's plan, you must pay the entire cost of the insurance including what the employer used to pay on your behalf plus what you used to pay through payroll deduction plus a 2% administrative fee. For a single individual, this can be \$150 or more per month, and much more for the spouse and dependent children.

Is there any help with paying those premiums? If you qualify for Medicaid in your state, most states have a plan that will pay the insurance premiums for you. If you are also dealing with HIV/AIDS, many states have set aside some Ryan White funds to pay health insurance premiums. Some doctors and hospitals have been known to pay the premiums so their bills will continue to be paid, but it's not common.

How do I get on the COBRA continuation? If you are losing your employer's health insurance, the employer is required to mail you a notice that tells you about COBRA and how much the plan will cost. The employer must also give you the chance to continue the coverage, usually with an enrollment form.

You have 60 days from receiving the notice to accept the coverage. You will owe premiums all the way back to the date you lost coverage but you will have an additional 45 days to pay it from the date you notify the employer of your intention to continue.

STATE MINI-COBRA STATUTES

In addition to the federal law, over 40 states have enacted laws which permit some people not covered under the federal law to extend their coverage. These laws generally extend the right to stay on the employer's health plan but the similarity ends there. State laws vary on how long a person may stay on the employer's plan. They cover different groups of people although almost all states with such laws provide coverage for people working for groups with from 2 - 19 employees.

Please check out the web version of this article for a brief summary the various state laws: <http://www.hcvadvocate.org/news/newsLetter/2007/advocate0907.html>

Whether your state is listed above or not, it is important to check with your state's Department of Insurance as new states add coverage and existing laws may be substantially different from the federal COBRA provisions.

My health insurance is very important to me. What should I watch out for when continuing it under COBRA?

- Don't wait for the mailing from your employer. Ask for it when your coverage is about to stop. Some employers may insist on mailing it to you, but you will know when to expect it and can follow up if it doesn't arrive.
- Don't refuse the COBRA extension even if you know you won't take it. Let the 60 day period expire. That way, if there's a medical emergency during that 60 days, you can take the COBRA and have the coverage.
- Pay your premiums on time! If you are ever late, they can cancel you and they do not have to reinstate your coverage. When possible stay one month ahead so you have time to correct any mix-ups or lost payments.
- Make sure you keep a record of everything you send and everyone you talk to about your COBRA continuation. When possible, send materials Return Receipt Requested or deliver the documents and payments in person and get a written receipt.
- Be very careful if your employer hires a COBRA administrator to handle the COBRA Continuation. These companies operate with the goal of getting everyone off COBRA that they can legally get off.
- If you're disabled when your coverage stops, learn the rules for extending the COBRA to Medicare. They are complicated and most employers don't understand them.



Coffee

Alan Franciscus, Editor-in-Chief

In the process of researching the lead article on the potential benefits of coffee in regards to liver cancer, I came across a lot of interesting information about coffee that I thought I would share with our readers. Just so you know, I have been a coffee drinker for many, many years and my love of coffee can be viewed by some as creating a certain bias when writing about the potential health benefits of coffee.

HISTORY

Coffee consumption can be traced back to the ninth century in Ethiopia and its use spread to Egypt, Yemen and reached Persia, Turkey, and northern Africa by the fifteenth century.

It eventually spread to Italy where it was revered by the wealthy in Venice. From there coffee consumption spread to the rest of Europe and eventually the seeds of the coffee bean were obtained

and planted by the European colonialists in other parts of the world. In the U.S. coffee was not widely consumed until the Revolution-

ary War. The switch from coffee to tea was a necessity because the U.S. was at war with England – the largest supplier of tea to the colonies. In some circles switching from tea to coffee was considered patriotic. Today, coffee is one of the most widely consumed beverages in the U. S. and around

the world. Starbucks is probably the most well-known of the coffee store chains. In the near future, Starbucks will have as many stores as there are McDonalds in the U.S. If you want to get an idea of the popularity of Starbucks and coffee go to www.starbucks.com and enter your zip code into the store locator for a list of stores within a 5 mile radius. Probably the highest density of Starbucks of any city in the U.S. is in New York City. When I typed the NYC zip code 10036 the store locator listed a staggering 203 stores in a 5 mile radius.

COFFEE

The coffee plant is a member of the group of flowering plants called the Rubiaceae. A coffee plant can grow up to more than 16 feet tall. It has glossy green leaves and fragrant white flowers. The coffee beans are actually green berries that are processed and

roasted before they are consumed.

There are two main types of coffee – coffee **robusta** and coffee **arabica**.

The most popular type and the one considered to have the best flavor is arabica which accounts for about 75% of cultivated coffee. Robusta tends to have more of a bitter taste compared to the Arabica. Robusta is easier to grow because it is more disease resistant and also contains more caffeine

than Arabica. For these reasons and because it is cheaper to grow, it is the type that is usually used in more inexpensive forms of coffee.

Once the coffee beans are picked by hand, the seeds are processed to remove the pulp, dried and sorted. At this stage the seeds are green in color. The next step in the process is roasting the green coffee beans. This is the step that dictates the appearance and taste of the brewed coffee. The darker the color of the roasted bean the smoother the flavor. However, the lighter roasts contain the most caffeine.

CAFFEINE

Caffeine is a substance that is found in certain plants such as coffee. When a person drinks a cup of brewed coffee it is quickly absorbed into the blood stream and passes into the brain. Caffeine is used for quick “pick me ups” but, because it is not stored in the body, the effects are short term. However, caffeine is a stimulant so there is a potential for addiction, although it is considered a mild addiction in most people. Withdrawal from caffeine usually produces mild symptoms such as headache, drowsiness, nausea, and irritability. If possible slowly reduce the intake of caffeine to reduce any withdrawal symptoms.

The side effects of consuming excessive amounts of coffee can include nervousness, excessive urination, nausea, vomiting, anxiety, depression, upset stomach,

“Caffeine is used for quick ‘pick me ups’ but, because it is not stored in the body, the effects are short term.”

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New Mexico Organ Donor Registry

The state of New Mexico has a lenient organ donor program. First, family consent is not required in order to honor the donor's wishes. Second, the minimum age for donation is fifteen. Those under 15 may still donate their organs, but guardian or parental consent is required.

Minorities are more likely to be affected by serious diseases that may result in the need for a new organ. Nearly 4 out of 5 of the New Mexicans waiting for organs are minorities. However, the majority of donors are Caucasian. Transplant success is more likely if minority recipients receive organs from someone of the same ethnic background. To all of you in New Mexico – place the red heart sticker of life on your driver's license or state ID card. Help get the word out and get a *Donate Life* license plate for your car.

www.donatelifenm.org/donor.htm
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COFFEE

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appetite suppression, and difficulty sleeping.

DECAFFEINATED COFFEE

Decaffeinated coffee is processed in two ways – the European Process and the Swiss Water Process. The *European Process* involves soaking the beans in water and then washing them in methylene chloride to absorb the caffeine. After the beans are soaked they are rinsed off to remove the chemicals, and the beans are dried. The *Swiss Water Process* involves using hot water and steam to remove the caffeine from the coffee. The next step involves putting the water solution through activated charcoal filters to remove the caffeine. Once the caffeine has been removed, the beans are soaked in the decaffeinated solution which allows for the re-absorption of the fluid into the coffee beans and restores most of the flavor. It is interesting to note that the caffeine used in various products such as energy drinks, diet drinks, over the counter stimulants, and medications is the by or end-product of the decaffeination process.

PREPARING COFFEE

Coffee is purchased in whole beans or already ground up. Whole beans must be ground up before making a cup of coffee. Coffee purists will swear that the only way to truly make a good cup of coffee is to grind up the coffee just before brewing. The grind (course, medium, fine) will also influence the taste and texture of the brewed coffee.

Once the coffee is ground it can than be brewed by boiling (Turk-

ish), percolation (an old American standard), pressing (French press), espresso (forcing hot water under pressure through finely ground coffee), and, the most popular in this country, the drip process.

You will note that this article does not mention instant coffee – this is my bias because the thought of drinking instant coffee is abhorrent to me.

HEALTH CLAIMS

There have been many studies that have found various health benefits from consuming coffee. But many of these benefits have been refuted by other studies. Similarly, the health risks of drinking coffee have been widely studied, but there is also data that refutes the claims. However, the number of studies on the benefits of coffee on the liver suggests that there might be some truth in the notion that light to moderate coffee consumption may be healthy for the liver.

SAFE LEVELS

It is recommended that healthy adults can consume up to 3 cups (8 oz) a day without any health risks. It is also generally recommended that pregnant women and people with coronary heart disease or ulcers refrain from consuming caffeinated beverages. Children should be closely monitored so that they don't consume too much caffeine. It is important to remember that caffeine can be in other food and drinks including sodas, teas, and chocolate as well as some medications; so always check the product label. Check in with your medical provider to find out if there are any potential interactions between any medications you are taking and caffeine.



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