The incandescent light bulb, one of the most venerable inventions of its era but deemed too inefficient for our own, will be phased off the U.S. Market beginning in 2012 under the new energy law just approved by Congress. Although this will reduce electricity costs and minimize new bulb purchases in every household in America, you may be feeling in the dark about the loss of your old, relatively reliable source of light. Here's a primer on the light bulb phase-out and what it will mean to you.

**Why are they taking my light bulbs away?** Moving to more efficient lighting is one of the lowest-cost ways for the nation to reduce electricity use and greenhouse gases. In fact, it actually will save households money because of lower utility bills. Ninety percent of the energy that an incandescent light bulb burns is wasted as heat. And yet, sales of the most common high-efficiency bulb available—the compact fluorescent (CFL)—amount to only 5 percent of the light bulb market. Earlier this year, Australia became the first country to announce an outright ban by 2010 on incandescent bulbs. The changeover in the United States will be more gradual, not mandated to begin 2012 and phased out through 2014. However, don't be surprised if some manufacturers phase out earlier.

How do I save money, when a CFL costs six times as much as an old-fashioned bulb? Each cone-shaped spiral CFL costs about $3, compared with 50 cents for a standard bulb. But a CFL uses about 75 percent less energy and lasts five years instead of a few months. A household that invested $90 in changing 30 fixtures to CFLs would save $440 to $1,500 over the five-year life of the bulbs, depending on your cost of electricity. Look at your utility bill and imagine a 12 percent discount to estimate the savings.

**I've heard that CFLs don't really last as long as they say.** Turning a CFL on and off frequently shortens its life, which is why the government's Energy Star program says to leave them on for at least 15 minutes at a time.
Also, if you have dimmable light fixtures, make sure to buy CFLs labeled “dimmable.” All CFLs that carry the government's Energy Star label are required to carry a two-year limited warranty, so contact the manufacturer if your bulb burns out prematurely. The Energy Star website has a good FAQ on CFLs.

I don't think that I like the color of the light from CFLs. When they first hit the market, CFLs had a limited range of tones. Now, manufacturers offer a wider variety, but there is not an agreed-upon labeling standard. The Energy Star program is working to change that. But for now, look for lower “Kelvin temperatures” like 2,700 to 3,000 for “redder” light, closer to old-fashioned incandescent bulbs, while bulbs with Kelvin temperatures of 5,000 and 6,500 provide more “blue” and intense light.

I've heard the CFLs have mercury in them--isn't that bad? Consumers are rightly concerned about the toxic substance mercury that helps CFLs produce light. Even though the amount sealed in each bulb is small one old-fashioned thermometer had about 100 times as much mercury-contact local trash collection for disposal instructions. Environmentalists agree that more work must be done on bulb recycling programs. Right now, you can return any CFL to any Ikea store for recycling, and the Environmental Protection Agency and Earth911 have sites you can search for other recycling programs near your home.

But if you break a CFL, you'll have a toxic spill in your home. Maine's Department of Environmental Protection has developed the best advice on the procedure to follow if a CFL breaks. Don't use a vacuum. Maine officials studied the issue because of a homeowner in that state who received a $2,000 light bulb clean-up bill from an environmental hazards company – a story that has circulated around the country and increased consumer concerns about CFLs. It turns out that the company’s advice was caution. Using a drop cloth might be a good new routine to develop when screwing in a light bulb, to make the clean-up of any breaks easier.

By the way, don't think that incandescent bulbs are mercury free. In the United States, the chances are at least 50 percent that their light is generated by a coal-powered plant featuring mercury as well as other types of pollution. Popular Mechanics recently crunched the numbers to find that even if the mercury in a CFL was directly released into the atmosphere, an incandescent would still contribute almost double that amount of mercury into the environment over its lifetime.

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A Real Eye Opener

There's a very good reason millions of mugs and Styrofoam cups go bottoms up at workplaces across America daily - even when the pot looks scorched and the liquid within pours like oil.

An estimated 80 to 90 percent of the population imbibes hot and cold drinks, with caffeine for kick, of course. Not just at dawn on Monday mornings, but typically every day, sometimes all day.

After all, caffeine reliably produces the alertness droopy-eyed workers want. From long-haul truck drivers to computer programmers to stockbrokers and secretaries, the bitter-tasting alkaloid gooses the central nervous system within 15 minutes of ingestion. This stimulates the cardiac muscle, the respiratory system and the neural activity in many parts of the brain to produce that reliable fog-lifting sensation. Just one cup of regular coffee...
(about 100 mg of caffeine) can quicken the way the brain processes information. Furthermore, desk jockeys and laborers alike appreciate the way caffeine bolsters endurance and counters fatigue, however fleetingly. Aside from the physical perks, coffee rituals can make the paper chase a little less frantic. Yep, it's a true paradox: the drink that brings a buzz also makes a relaxing ritual. For all the tired masses yearning to wake up, caffeinated beverages are just the thing. Plus, studies show that a little caffeine to brighten your workday won't hurt most people. Two 6-ounce cups of regular coffee or 20 ounces of caffeinated soft drink pass moderation muster. However, many Americans consume more than double that amount.

Though caffeine sensitivity varies in each individual, consistent use of more than 350 mg of caffeine (three to four cups of strong regular coffee) daily can foster dependence with uncomfortable side effects beyond jittery irritability. First, caffeine acts as a mild diuretic, which hastens dehydration and loss of calcium. Symptoms also include an upset stomach, poor fine-muscle coordination, increased blood pressure and disturbances in heart rhythm. In women, too much caffeine may also cause premenstrual-like symptoms including fatigue, anxiety and tender, painful breasts. However, a fatal dosage would require consuming about 10 grams of caffeine, or chain-drinking 80 cups of coffee.

But perhaps the most disturbing long-term problem associated with caffeine may also be the most subtle. It involves deep sleep. Because the half-life of caffeine in your body is about six hours, downing a cup of coffee with 100 mg of caffeine at 4 p.m. leaves 50 mg of it in your system as late as 10 p.m. You may drift off (though not as easily as your caffeine-free coworkers), but the caffeine left in your body may prevent you from cycling into deep sleep where the best rejuvenation benefits lie.

Cheat ed out of a good night's rest, you may rise more sluggish than before and crave caffeine more than ever both to wake up and to fend off withdrawal symptoms. Thus, another cycle of caffeine consumption begins that can, over time, affect productivity.

All this makes a great case for cutting or at least curbing consumption. Yet, by going cold turkey, most caffeine fiends will face wicked withdrawal symptoms like that sledgehammer headache that develops as blood pressure drops and the blood vessels in the brain dilate. Other withdrawal symptoms include mild nausea, irritability and fatigue.

"But if you hang in there, that symptom will disappear". All withdrawal symptoms typically vanish within five days. However, to avoid withering during those early days of withdrawal, try "caffeine fading." In terms of coffee-related caffeine, this means:

*Mixing decaffeinated coffee with regular coffee.

*Swapping brewed coffee for instant coffee, which contains less caffeine.

*Substituting decaffeinated versions of your favorite soft drinks.

In the short term, caffeine makes a great eye opener and performance enhancer. But when it comes to top-notch long-term productivity, nothing beats getting the shuteye that comes from a totally caffeine-free system at bedtime.
**Exercise and Mood**

Ever wonder how much exercise is enough to keep you happy and alert? A new study in Health Psychology, a journal of the American Psychological Association found that a little every day is enough to keep your blues away.

In general, the results suggest that exercising as little as 10 minutes a day at an aerobic level of 60 percent will give you a measurable boost in mood and energy. Increasing the time to 20 minutes a day will significantly increase your concentration as well.

Remember, though, you have to have your heart rate up to 60 percent for 10 to 20 full minutes in order to gain the benefits. In other words, these time frames do not include warm-up or cool-down. To reap physical as well as psychological benefits, you need 30 minutes or more of moderate activity per day.

**Are you exercising hard enough?**

Exercise physiologists say that to reap the benefits of aerobic exercise, you should work out at about 60 to 85 percent of your maximum heart rate. To calculate that target, subtract your age from 220, then multiply by the percentage of maximum you’re aiming for: .60 for 60 percent, .85 for 85 percent. The higher the percentage, the more intense your exercise. The answer is found in heartbeats per minute.

\[(220 - \text{age}) \times \% \text{ max} = \text{target heart rate (in beats per minute)}\]

**For example:** If you’re 45 years old and want to exercise at a target heart rate of 75 percent of your maximum, your formula will look like this: 
\[(220 - 45) \times .75 = 131.25, \text{ or about 131 beats per minute}\]

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**Give Your Sweetheart a Better Relationship for Valentine's Day**

According to relationship expert Doug Weiss, Ph.D., executive director of the Heart to Heart Counseling Center and author of The 7 Love Agreements, "The love agreements you make or don't make in your life can be the difference between having a great, loving marriage or a distant, cold marriage." And the good news is, Weiss believes you can change the dynamics of your relationship for the better by following these steps alone -- making it a great Valentine's Day gift for an unsuspecting partner. Here are the seven "agreements," as he calls them:

1. **Faithfulness.** And Weiss is not just talking about sexual faithfulness here, but also mental, emotional, and financial faithfulness. "If you make an agreement -- whether it is to be somewhere at a certain time or to stay within a budget -- keep your word," says Weiss. Being faithful in all areas of your relationship builds trust.

2. **Patience.** We all have faults. "If your spouse is always 10 minutes late, agree today to not say another word about it. Hold yourself accountable to a friend if you need to," says Weiss. The same goes for other bad habits that try your patience. You know what's going to happen if you speak up: another argument about the same old thing. So save your breath this time. "I don't know any relationship that wouldn't benefit from a few more ounces of patience," he says.

3. **Forgiveness.** In any relationship of substance, mistakes are guaranteed. "When your partner slips up, you can place yourself in the position of
judge and jury, or you can make forgiveness a habit," says Weiss. He encourages couples to let the forgiving attitude they have with their children spill over into their marriage. "Children make lots of mistakes. They draw on walls, throw tantrums. But if you focus on what they do wrong, you miss out on the joy of parenting." The same can be said of relationships between adults.

4. **Service.** Weiss says that some people enter relationships ready to serve -- others, to be served. Unfortunately, wanting to be served usually involves a tally card -- and several ensuing arguments about who's done more lately. "When you get married, you are signing up to serve this person for the next 60 years, whether they deserve it or not," he says. So next time, try delivering it with a smile.

5. **Respect.** "Your spouse has the same worth as you do," says Weiss. So don't interrupt. Listen to her. Try to understand what he's saying. When you do these things, you're demonstrating that you value your partner's opinions and feelings as much as your own, which Weiss says goes a long way toward preventing and resolving conflicts.

6. **Kindness.** "Buy her a gift, send him an e-mail that has nothing to do with bills, kids, or other responsibilities," suggests Weiss. These little gestures of affection and appreciation help prevent relationships from becoming stale.

7. **Celebration.** She likes Monet; he likes fly fishing. It's a common scenario. Instead of retreating to your own corners of the world, agree to share your spouse's passions. "Break the old agreement of tolerance, and make a new one of celebration," says Weiss. "Be your partner's biggest cheerleader." *(Source: National Health and Wellness Club)*
Valentine's Day Stain of the Season: **Chocolate**

It’s hard to ignore the fact that Valentine’s Day is right around the corner. The grocery store displays many flowers, heart-shaped candies and other festive decor for loved ones. It seems appropriate to address one of the toughest stains of this season: chocolate.

Chocolate is one of my favorites and I sample it often. Besides, it tastes great anytime—not just for Valentine’s Day. This means sometimes you are probably going to get it on your shirt or table linens. With so many different chocolate versions, it’s difficult to decide how to proceed. Regular chocolate is usually a mixture of emulsifiers and the cocoa powder particles. Add milk chocolate and now we have milk proteins to worry about. This means, they’re both complex stains, but should be treated differently. For the regular chocolate, you want to attack the greasy portion first, but with the milk chocolate, the protein portion should be attacked first. After these have been attacked, we hit it with the bleach to help get the color out. While a difficult stain to remove—the task is not impossible.

**Regular Chocolate:**
First, pretreat with a good liquid detergent to help dissolve those emulsifiers. Rub into the stain and wait 10-15 minutes. The launder using these steps: *For white items: rub it gently a commercial stain remover immediately before laundering. Then wash immediately in hot water with detergent and 3/4 cup bleach. * For colored items: rub it gently with a color safe stain remover immediately before laundering. Then wash immediately in warm water with detergent and 3/4 cup color safe bleach.

**Milk Chocolate:**
Here you want to presoak the fabric in cold water and liquid detergent for about 30 minutes to help loosen the protein part of the stain. Then launder following the steps listed above. Don’t forget, like any other stain, be sure to inspect the item before you put it in the dryer. If the chocolate stain remains after your initial washing, repeat the steps above prior to drying item. Here’s hoping yours is a happy and stain free Valentine’s Day!

Valentine's Pet Hazards and Alternatives

Pet precautions should be taken during the spring celebrations. Each spring animal clinics and hospitals see an increase in visits during the springtime holidays. Valentine's Day and Easter pose the greatest hazards to critters living with chocolate lovers. A bit of caution can save the life of your critter.

Pets, like kids, love to get into forbidden goodies. Unfortunately, pets raiding the chocolate supply can face needless suffering—or death. Chocolate is toxic to animals and if enough is ingested it can create complications or kill an animal. Symptoms from chocolate ingestion include hyperactivity, tremors, racing heartbeat, and seizures. Damage to the liver can also occur and is not so obvious. It is risky to leave boxes of candy out anywhere in the house. As little as four ounces is enough to kill a ten pound dog or cat.

Many flowers and plants can be toxic so pet owners should check with their veterinarians for a complete list of seasonal items to keep out of the reach of dogs, cats, or birds. Animals love to explore with their mouths and make playthings out of everything so expect the worst and keep...
those lovely gifts and treats out of reach.

Animal behaviorists also caution pet owners about alcoholic beverages, cellophane, ribbons, balloons, and other festive wrappings or decorations can be ingested and cause complications or death.

Behaviorists also caution that while candlelight dinners are romantic-- make sure that pets are not left unsupervised around flames.

Here is a list of helpful hints for sharing St. Valentine's Day with your pets:
• **Provide pet appropriate treats to occupy your critters pets during your celebrations.** Heart shaped treats or a special pet food item can be appropriate.
• **Give those pampered pets a new toy or pet specialty item.** Heart shaped pet toys are an appropriate and useful gift!
• **Spend quality time with your pets. Schedule a "pet spa day" and indulge your critter.** Better yet, go out for a long hike or cuddle up.

Don't have a pet? Not a problem. Be a sweetie and take donations to your favorite pet charity.

Robin Taylor  
Extension Agent  
Family & Consumer Science

Peggie L. Garner  
Onslow County Extension Director

**February Spotlight:**

**NCOWCICB: What is it?**

During the summer of 2006, the NC legislature passed a law requiring that anyone who installed, repaired, or inspected a septic system be state certified. The law went into effect on January 1, 2008. NCOWCICB stands for “North Carolina Onsite Wastewater Contractor & Inspector Certification Board”. The Board consists of nine appointed members who represent different aspects of the industry: installers, Environmental Health, realtors, home builders, NC Cooperative Extension, etc. Three of the Board members live in eastern North Carolina: Mr. Al Gerard (certified water treatment facility operator), Mr. Russ Davis (NC Home Builders Association), and Dr. Diana Rashash (NC Cooperative Extension Service). Information about the statute, about the Board and its members, and other information is located at: [www.ncowcicb.info](http://www.ncowcicb.info)

If you are having any work done on your septic system, make sure the person doing the work has the proper certification. This legislation was passed to help increase consumer confidence in septic systems, ensure that high-quality septic system installations and repairs are available, and
to hold septic system professionals responsible for their work. This legislation will not, however, remove or reduce the importance of an informed homeowner. Septic systems do require maintenance. One of the simplest practices is to not add anything to the system that may harm it. This includes harsh chemicals, large amounts of disinfectants, grease, and solids (bones, eggshells, cigarette filters, etc.). It is also recommended to have the septic tank pumped every 3-5 years, depending upon homeowner practices. The use of "additives" is NOT an alternative to having the tank pumped.

For more information contact our office.