

The Communicator

January 2013

Director

- 1 Greetings
- 1 A Comparison Between 2009 and 2012: UI Students' Financial Attitudes and Behaviors

Food Safety

- 3 Everything You Want to Know About Using Chlorine Bleach as a Household Sanitizer

Family Development

- 5 Four Family Cultures in America

Nutrition Education

- 7 Eat Healthy for Your Heart
- 7 Are Energy Drinks Dangerous?
- 8 Vegetables Enhance a Meal

Greetings

The week between Christmas and New Year's Eve has always been a time of reflection for me. This year will be no different but will include all I have come to appreciate about being part of the Margaret Ritchie School of Family and Consumer Sciences. It has been a fast paced but very rewarding past four months. As a school we had many successes for our students and faculty. Two weeks ago I attended my first UI graduation ceremony. I love the tradition surrounding a university graduation ceremony. Graduation at the University of Idaho tops all others I experienced in the past. And, I understand the spring ceremony is even better.

It has been a very interesting few weeks here in the College of Agricultural and Life Sciences. Not only did we have the usual end of the semester activities there a couple of other major events for us as well. The morning of December 17th the FCS faculty met for a retreat. The goals of our retreat were to draft a new mission statement that would more concisely tell our story, and to refine our strategic plan. This work will help guide and direct us as we continue to grow and serve our students and stakeholders in the state, region and nation. We made excellent progress and I am looking forward to us finalizing our plans. These planning sessions will also help us prepare for our external review this next year.

Our work that morning was interrupted by an announcement that took us all by surprise. As I am sure many of you have heard by now, John Hammel is stepping down as dean of the College of Agricultural and Life Sciences effective at the end of 2012. John has been a great friend and solid supporter of the Margaret Ritchie School of Family and Consumer Sciences. He played a major role in moving the Niccolls renovation project forward as well as advocating for additional faculty lines for us. He will be missed as our dean but we look forward to working with him as a teaching/research colleague as he steps back into that role. The search for an interim dean started immediately and we are waiting to hear the results of the search.

As you reflect on your past year I hope you identify as many wonderful events in your life as I have this past year and I look forward to 2013 with hope and

Director

Sonya Meyer
Family and Consumer Sciences
University of Idaho
875 Perimeter Dr MS 3183
Moscow, ID 83844-3183
sonyam@uidaho.edu



excitement for what the future holds. In keeping with my goal to have our faculty share some of their successful activities I have asked Dr. Nancy Deringer to share some of the results of her study on the financial education, attitudes and behaviors of young adults.



Nancy Deringer

A Comparison Between 2009 and 2012: UI Students' Financial Attitudes and Behaviors

The media is rich with headlines such as "A College Education, At What Expense?," "Student Loan Debt Now Surpasses Credit Card Debt," "Is a College Education Worth It?," "You Can Now Take Twenty-five Years to Pay Off Your Student Loan Debt," and the list continues. Higher education costs have in-

creased exponentially over the past two decades. Research has shown that one earns substantially more money over one's lifetime if they have a four-year college degree, depending upon the profession. However, for some individuals, the costs of funding higher education are beginning to outweigh the benefits; and, oftentimes, it may be overwhelming.

Two researchers, a FCS master's student and Nancy Deringer, assistant professor in FCS, collected data using an online survey from 2,000 randomly selected UI students in November 2009 (n=778), and in March 2012 (n=539). The survey consisted of questions related to the student's habits and/or behaviors. Questions examined credit card debt, student loan debt, saving, budgeting, needs vs. wants, sources used to attend higher education, and financial issues and financial topics in which they would like more information.

Analysis indicated that in both survey administrations, students who discussed finances with their parents showed significant differences and had less credit card debt and less student loan debt than those who did not.

U.S. Average Student Loan Debt of Graduating Seniors

2008	2009	2010	2011
\$23,186	\$24,000	\$25,250	\$26,600

How would you describe your current financial situation?

	2009	2012
Secure	10%	12%
Comfortable	44%	58%
Shaky	40%	27%
Disastrous	7%	3%

Do you budget for monthly expenses?

	2009	2012
Yes	61%	68%
No	39%	32%

Have you discussed needs vs. wants with your parents or spouse (if married)?

	2009	2012
Yes	71%	75%
No	29%	25%

Qualitative analysis indicated that the majority of the workshop requests related to: budgeting and money management (22%), costs associated with increasing tuition/books/fees (21%), scholarships/grants (16%), savings (13%), and student loans (11%). Other recommendations dealt with credit cards, debt management, how to find employment after graduation, what to do if parents do not help financially, and how to spend less for healthy food.

Positive highlights over the three year span include:

- students are feeling more financially secure or comfortable
- more students are budgeting for monthly expenses
- discussion of needs vs. wants with parents is occurring more

However, student loan debt continues to increase and more students have higher levels of debt especially over the \$20,000+ level.

Perhaps open discussions about finances and financial behaviors with children (at home and in school) will help lay a foundation of understanding the importance of earning, saving, and being frugal. This foundation may help students realize they need to work hard and save in high school as well as in college.

Source: Nancy Deringer, assistant professor, University of Idaho Family and Consumer Sciences.

Keywords: debt, loan, finances.



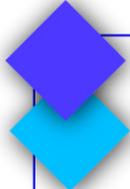
Everything You Want to Know About Using Chlorine Bleach as a Household Sanitizer

Chlorine, as a sanitizer in the form of household bleach, is the most available and effective sanitizer for household use. Foodservice establishments and the food processing industry have a number of other chemical sanitizers in addition to bleach, but these are generally not available to consumers.

Chlorine bleach has a distinctive and unpleasant odor. It is a powerful chemical and needs to be handled carefully, particularly at the strength at which it is purchased as a laundry aid.

The germ-killing effect in a solution of chlorine bleach and water is due to available chlorine, present in two forms, as hypochlorite (OCl^-) and as hypochlorous acid (HOCl), the active sanitizing agent.

Effect of pH. The relative concentration of these two forms of chlorine is determined in large part by pH of the solution, as seen in the figure below. Between approximately pH 1.5 and 7.5, 50 percent or more of the chlorine is in the form of the pathogen-killing hypochlorous acid. As the pH drops, the chlorine molecules form chlorine gas (Cl_2), a highly toxic compound. The formation of chlorine gas is the reason for never mixing bleach with acid solutions. Although consumers generally have no way to measure pH, it is useful to know that the recommended pH range for an effective and safe sanitizing solution is 6.5 to 7.5. Solutions with pH values lower than 6.0 begin to be corrosive to metals. Solutions with pH values lower than 5.0 begin to generate potentially harmful levels of chlorine gas. Solutions with pH values greater than 8.0 quickly lose their effectiveness as sanitizers.

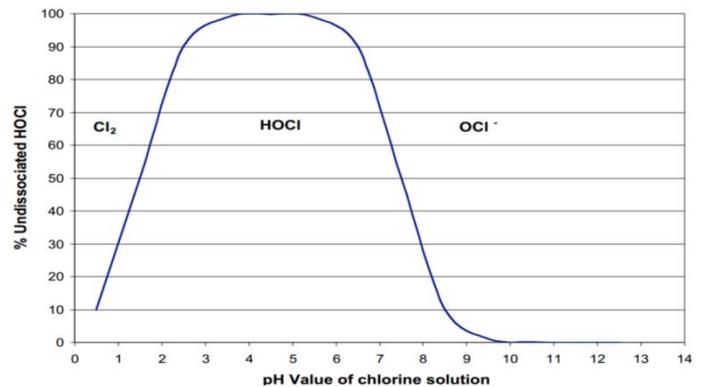


Food Safety

Sandra M. McCurdy
Food Safety Specialist
Family and Consumer Sciences
University of Idaho
875 Perimeter Dr MS 3183
Moscow, ID 83844-3183
smccurdy@uidaho.edu



Figure 1 -- Effect of pH on hypochlorous acid content.



Effect of organic material. Chlorine loses its effectiveness quickly in the presence of oil, dirt and organic material, such as food residues. Sanitizing solutions should be changed when they become dirty.

Temperature. The disinfecting power of chlorine solutions is increased at higher temperatures. The *Idaho Food Code* sets minimum temperature requirements for chlorine solutions of different strengths for use in foodservice establishments (for example, a 25 ppm chlorine solution must be used at a temperature of at least 120°F, while a 50 ppm chlorine solution must be used at a temperature of at least 75° to 100°F, depending on pH, and 100 ppm chlorine solution has a minimum temperature of 55°F). However, higher temperatures also increase the volatility of the chlorine compounds.

In the recommendations for sanitizing solutions for consumer use, the solution temperature should be in the room temperature range.

Volatility. Chlorine is volatile and chlorine solutions lose chlorine to the atmosphere over time. The rate of loss is dependent on a number of factors, primarily storage temperature, the presence of other chemicals, solution concentration, type of storage container, and whether the container is open or capped. For this reason, it is often advised that chlorine solutions be changed daily, unless required more frequently when they become dirty. The Clorox® company suggests that containers of their regular bleach “should be replaced every year and stored as directed for optimum performance.”

Contact Times. To kill pathogens, chlorine solutions must be in contact with the surface for sanitizing for a sufficient time. The time is dependent on the strength and temperature of the chlorine solution as well as the type of pathogen. Consumer instructions for sanitizing particular surfaces will include information about solution strength and contact time.

Chlorine Concentrations Consumers Encounter. Laundry bleach contains 5.25 or 6 percent sodium hypochlorite (NaOCl). The “available chlorine” is slightly less than that, for example, 6 percent “ultra” bleach has 5.7 percent available chlorine, while 5.25 percent bleach has 5 percent available chlorine. Available chlorine of 5 percent is equivalent to 50,000 ppm chlorine (which can also be thought of as 50,000 parts Cl/1,000,000 parts bleach solution = 1/20 = 5%).

Typical municipal water systems produce potable water with a residual available chlorine level of 0.25 to 2 ppm.

Making Sanitizing Solutions. The strength of a sanitizing solution needs to be matched to its use. Factors to consider include whether or not the surface is a food contact surface, whether it is porous, and the type and concentration of pathogen present. Recommendations that apply to consumers are shown in the table below. These recommendations have been adapted from food service and food industry requirements and Clorox company service bulletins. It should be noted that concentra-

tions of chlorine in excess of 200 ppm need to be rinsed from food contact surfaces with potable water (or with 200 ppm or lower chlorine concentrations solutions) after the contact time has been observed.

Surface for Sanitizing	Dilution: Bleach* to water ratio (parts per million chlorine)	Instructions
Clean Dishes and Plastic Cutting Boards	1 tablespoon per gallon** (200 ppm Cl)	Soak 2 minutes, drain and air dry.
Washed Wooden Cutting Boards	3 tablespoons per gallon (600 ppm) for soak, followed by 1 Tbsp per gallon (200 ppm) for rinse	Soak 2 minutes, rinse with 100 ppm solution, drain and air dry.
Prewashed, non-porous countertops	¾-cup per gallon (2,400 ppm)	Wipe surfaces and let stand 5 minutes, rinse with water and air dry.
Clean-up of surfaces exposed to diarrhea or vomit of a norovirus-infected person	5 tablespoons to 1.5 cups per gallon (1,000 to 5,000 ppm) http://www.cdc.gov/norovirus/preventing-infection.html	None provided.
<p>*Assumes 5.25% chlorine bleach; 6% chlorine bleach can be used as well. **To make a smaller quantity, 1 tablespoon per gallon is often rounded to 1 teaspoon per quart; this will give a chlorine concentration of roughly 267 ppm.</p>		

Source: McGlynn, W. “Guidelines for the Use of Chlorine Bleach as a Sanitizer in Food Processing Operations,” Food Technology Fact Sheet FAPC-165, Oklahoma Cooperative Extension Service, <http://pods.dasnr.okstate.edu/docushare/dsweb/Get/Document-963/FAPC-116web.pdf>; <http://www.clorox.com/products/clorox-regular-bleach/faq>.

Keywords: clean and sanitize, food safety.

Four Family Cultures in America

A study of the “Culture of American Families” by the University of Virginia’s Institute for Advanced Studies in Culture identifies four types of family cultures—the Faithful, the Engaged Progressives, the Detached and the American Dreamers—that are molding the next generation of Americans. Each type represents a complex configuration of moral beliefs, values and dispositions—often implicit and rarely articulated in daily life—largely independent of basic demographic factors, such as race, ethnicity and social class. These family cultures define the worlds that children are raised in, and may well be more consequential than parenting styles.

Much of research on parenting is based on social science models and research strategies. However the present analysis takes a broader cultural framework, identifying clusters of beliefs that guide families’ lives. First, a nationally representative sample of 3,000 parents of school-aged children completed an online one-hour survey. Then follow-up, in-person interviews were conducted with 101 of the survey respondents. The many factors that make up family cultures were distilled using cluster analysis to reveal four types:

The Faithful

The Faithful (20% of American parents) adhere to a divine and timeless morality, handed down through Christianity, Judaism or Islam, giving them a strong sense of right and wrong. Seeing human nature as “basically sinful” and moral decline in the larger society, the Faithful seek to defend and multiply the traditional social and moral order by creating it within their homes and instilling it in their children, with support from their church community. Raising “children whose lives reflect God’s purpose” is a more important parenting goal than their children’s eventual happiness or career success.

To that end, they talk to their children daily about matters of faith, routinely conduct family devotions, attend church weekly and pause to say a prayer before family meals. They have a strong sense of parental efficacy, believing that parents are more influential in their children’s lives than peer influences. Their family sizes are larger than average.



Family Development



Harriet Shaklee
Family Development Specialist
University of Idaho, Boise
322 E Front St., Suite 180
Boise, ID 83702-7364
hshaklee@uidaho.edu

A number of the Faithful’s attitudes line up with stereotypes of conservative Christians. For example, they use spanking, strongly disapprove of gay marriage or sex outside marriage, and the Faithful women embrace the role of homemaker. But several attitudes depart from stereotypes. The Faithful want their families to be warm and emotionally supportive and think men should put their family before their career just as women should.

Engaged Progressives

For Engaged Progressives (21% of parents), morality centers around personal freedom and responsibility. Engaged Progressives see few moral absolutes beyond the Golden Rule. They value honesty, are skeptical about religion and are often guided morally by their own personal experience or what “feels right” to them. In turn, they feel obliged to extend moral latitude to others.

They reject the Christian tenet that “human nature is basically sinful” and are optimistic about today’s culture and their children’s prospects. Training their children to be “responsible choosers,” Engaged Progressives allow their children more freedom at younger ages than other parents. By age 14, their children have complete information about birth control, by 15 they are surfing the Web without supervision, and by age 16 they watch R-rated movies.

Engaged Progressives are the least religious of all family types. A majority never attends church or prays before meals. Politically liberal, they support

gay marriage, value tolerance and believe the playing field of life should be relatively fair and even. Half of them live in the Northeast or on the West Coast, and few live in the South.

Engaged Progressives are particularly opposed to harsh forms of punishment, but still consider themselves to be at least moderately strict. They invest much energy in shaping their children's "moral character" and are concerned with maintaining "very close" relationships with their children.

The Detached

The parenting strategy of the Detached (19% of parents) is summarized: Let kids be kids and let the cards fall where they may. They are skeptical about the old certainties of the Faithful, but also about the self-assurance of Engaged Progressives.

The Detached are primarily white parents with blue-collar jobs, no college degree and lower incomes. They report lower levels of marital happiness, and do not feel close to their children. They feel they are in a "losing battle with all the other influences out there." They spend less than two hours a day interacting with their children, and when they have dinner together as a family it is often in front of the TV. Most of the Detached parents do not routinely monitor their children's homework and they report lower grades for their children than other parents.

In general, they are pessimistic about the future of the economy and their children's opportunities, and seem resigned to the situation. They don't express strong opinions about morality. They believe in God, but don't attend church regularly and say that religion is not important to their children's lives.

American Dreamers

American Dreamers (27% of parents) are defined by their optimism about their children's abilities and opportunities. These parents, with relatively low household income and education, pour themselves into raising their children and providing them every possible advantage. They invest much effort protecting them from negative social influences and shaping their children's moral character. This is the most common family culture among blacks and Hispanics, with each group making up about a quarter of American Dreamers.

American Dreamers believe in God and say that religion is important in their lives, but they embrace a live-and-let-live morality when it comes to other people. They believe in speaking their mind, saying that the "greatest moral virtue" is being honest.

While two-thirds of American Dreamers are married, this group features more single parents and more reliance on the support of extended family.

American Dreamers describe their relationships with their children as "very close" and want to be "best friends" with their children once they are grown. Compared to other parents, they are just as likely to offer praise and encouragement, but they are more willing to discipline kids by scolding, giving time-outs, threatening spanking and spanking.

The four family culture types reveal significant differences among the moral frameworks that guide family values, but virtually all parents share some common aspirations and attitudes. American parents of all stripes want their kids to become loving, honest, responsible, and of high moral character.

Despite a widespread perception among parents that American family life has declined since they were growing up, parents report that their own families and children are doing very well. Today's parents believe their children largely share their values. Most family arguments center around mundane, day-to-day issues like doing chores.

By and large, whether by choice or by constraint, most parents have a very thin support network. They find support from their spouse or partner, and among single parents, from their extended family. They do not turn to their neighbors for parenting support, and only small numbers, relatively speaking, turn to local institutions such as faith communities and after-school programs. Nevertheless, most say they have the support they need. For those who do find support in their church or after-school programs, it is extremely important to them.

Source: Institute for Advanced Studies in Culture, University of Virginia, www.iasc-culture.org.

Keyword: family, parenting.



Eat Healthy for Your Heart

Was one of your New Year's resolutions to eat healthy? Many individuals are aware that following a healthy diet plays a role in preventing development of cardiovascular disease. New research published in the December 3, 2012 issue of *Circulation* indicates a healthy diet may also play a role in preventing a repeat heart attack, stroke, and congestive heart failure.

In this five-year study, researchers monitored dietary intake of 31,546 individuals in 40 countries. They were 55 years or older and exhibited risk factors for heart disease, including a prior history of heart disease, stroke, or type 2 diabetes.

They found that individuals who consumed more fruits, vegetables, whole grains, nuts and more fish than meat were:

- 35% less likely to die from a repeat heart attack
- 28% less likely to develop congestive heart failure
- 14% less likely to have an additional heart attack
- 19% less likely to have a stroke

Lead researcher Dr. Mahshid Dehghan, at McMaster University in Hamilton, Ontario stated, "At times, patients don't think they need to follow a healthy diet, since their medications have already lowered their blood pressure and cholesterol—that is wrong. The more healthy you eat, the healthier you are."



Nutrition Education

Martha Raidl
Nutrition Education Specialist
University of Idaho, Boise
322 E Front St., Suite 180
Boise, ID 83702-7364
mraidl@uidaho.edu



The researchers had the following dietary recommendations:

- 4 or more cups of fruits and vegetables/day
- 3 servings of whole grains/day
- 2 servings of fish/week
- 4 servings of nuts or seeds/week
- Limit processed meat to no more than 2 servings/week
- Limit intake of sodium and sugar-sweetened beverages

Source: <http://circ.ahajournals.org/content/126/23/2705>.

Keywords: heart disease, healthy diet.

Are Energy Drinks Dangerous?

Energy drinks are defined as beverages that contain caffeine and other ingredients (such as taurine and ginseng) intended to increase the drinker's energy. They are marketed mainly to children and adolescents. The Food and Drug Administration (FDA) is currently investigating reports that energy drinks may be linked to 13 deaths. FDA spokesman Shelly Burgess stated, "So far there's been no causal link. There could have been other products involved. We don't know that yet and that's why we're taking this seriously and looking into it."

Beverage Digest, a trade publication, reported record sales of energy drinks in the U.S. last year, at \$8.9 billion. Unfortunately, as consumption of energy drinks increased, the number of Emergency Room (ER) visits involving energy drinks also increased. In 2005 there were 1,128 ER visits due to energy drinks and in 2009 (the most recent data) it increased to 13,144. Some of the symptoms patients exhibited were abdominal pain, vomiting, tremors, and abnormal heart rate. Many of these patients were adolescents, children, or young adults.

In 2011, the American Academy of Pediatrics recommended that children should not consume energy drinks and that in some high risk groups (those who don't know they have unhealthy hearts), it can be dangerous.

The amount of caffeine recommended for adults is 300-400 mg/day, the amount found in approximately three to four 8-ounce cups of coffee. There are no recommended levels of caffeine for children or adolescents.

Under current FDA rules, companies are not required to list the caffeine content of their beverages and many do not. In the December 2012 issue of *Consumer Reports*, caffeine content was analyzed on 27 of the most popular energy drink products. They found that caffeine levels ranged from 6 milligrams per serving (in 1.9 ml of 5 hour-energy decaf) to 242 milligrams per serving (in 1.9 ml of 5-hour extra strength). Due to differences in packaging, serving sizes of the energy drinks varied from 1.9 ml to 8-10 ounces. Many of the energy drink containers held more than one serving.

Consuming more than one gram (or 1,000 mg) of caffeine can result in caffeine intoxication. Symptoms include irritability, abnormal heart beat and cardiac arrest. To avoid excess caffeine intake, drink water.

Source: <http://www.merriam-webster.com/dictionary/energy%20drink>; <http://www.forbes.com/sites/alicegwaltton/2012/10/23/over-caffeinated-will-the-monster-energy-drink-debacle-prompt-change>; <http://www.beverage-digest.com/editorial/archive12.php>; <http://pediatrics.aappublications.org/content/early/2011/05/25/peds.2011-0965.full.pdf+html>; <http://www.consumerreports.org/>

cro/magazine/2012/12/the-buzz-on-energy-drink-caffeine/index.htm.

Keywords: energy drinks, caffeine.



Vegetables Enhance a Meal

Most Americans do not consume the recommended 2-3 cups of vegetables per day. When vegetables are eaten, it occurs at the dinner meal, but unfortunately only 23 percent of dinner meals include vegetables. Promoting the health benefits of eating vegetables isn't getting Americans to eat them at their meals. Are there other reasons why vegetables should be included at meal time?

Dr. Brian Wansink and colleagues, at Cornell University, studied the impact including a vegetable at mealtime had on how subjects rated the meal and the meal preparer. In his study, there were 500 subjects who rated: (1) five meals that did or did not include a vegetable and (2) the personality of a meal preparer who either did or did not include vegetables in a meal.

He found positive results occurred when vegetables were added to a meal. Using a 10 point rating scale (with 10 being the highest score), meals that contained vegetables received a higher rating. For example a meal that contained steak and baked potato received a rating of 7.52 and when broccoli was added, the meal was rated as an 8.08. In addition, the meal was rated as tasting better and the person who prepared the meal was rated higher if a vegetable was included. They were rated as being more thoughtful, caring, and a better cook.

Source: Wansink et al, Public Health Nutrition, 2012 Nov 15:1-7.

Keywords: vegetables, meal time.