Issue 180

Contents
Tomatoes
Coffee
Chocolate
Broccoli
Over-Indulgence
Soybeans
Asparagus
Beet Juice
Vitamin D
Milk with Fish Oil
Genetics
Allergies
Sleep
Brain
Positive Verbs
Media
Color
Obesity/Weight
Breast Cancer
Behavior
Fear
Brittle Bones
Emotions
Senses
Synchronization
Eve’s Intelligence
Motivation and Math
Daylight Savings
Blinking
Kindness
Bullying
Teen Pregnancy
Aftermath of Sexual Revolution

Recipes
Penne with Mushroom Ragout and Spinach
Old Fashioned Chocolate Pudding Pie
Tomatoes
Eating a tomato just two days a week could cut the risk of depression by half, according to a new study. Japanese researchers analyzed the mental health records and diet habits of 986 people who were 70 or over and found that participants who regularly ate the fruit were significantly less likely to suffer from depression. http://www.medicaldaily.com/articles/13418/20121206/tomato-day-keeps-shrink-away-eating-tomatoes.htm

Coffee
According to research highlighted in a session report published by the Institute for Scientific Information on Coffee (ISIC), drinking three to four cups of coffee per day may help to prevent type-2 diabetes. http://www.sciencedaily.com/releases/2012/12/121204112454.htm

That cup of coffee you have each morning could be doing more than giving you a wake-up jolt; it may actually improve your ability to process information. A study found that caffeine seems to make people perform better in a proofreading test compared to those going without the java. http://medicalxpress.com/news/2012-12-caffeine-boost-information-processing-skills.html

According to new research, caffeine might help you reduce weight, but coffee won't. Researchers found that rats kept on a high calorie diet lost weight after being administered caffeine, but not coffee extract. Researchers say that other compounds in coffee, some of which haven't been studied yet, might block the weight-reducing properties of caffeine. http://www.medicaldaily.com/articles/13666/20121227/caffeine-coffee-aids-weight-loss.htm

Chocolate
Chocolate may offer relief to people suffering from a persistent cough, according to scientists who found that a compound in cocoa was effective in reducing symptoms of both acute and chronic coughs. Previous research at the National Heart and Lung Institute in the UK showed that the cocoa ingredient called theobromine was even more effective than the widely used drug codeine in blocking the action of the sensory nerves that triggers the cough reflex. http://www.medicaldaily.com/articles/13462/20121210/chocolate-more-effective-codeine-treating-persistant-coughs.htm
Broccoli
Researchers have discovered that the compound sulforaphane, found in broccoli and broccoli sprouts, can kill breast cancer stem cells where chemotherapy fails. University of Michigan researchers tested the broccoli compound in mice and in live cell cultures, discovering that sulforaphane killed breast cancer stem cells that fuel tumors and prevented new ones from growing.

Over-Indulgence
It may be the season to eat, drink and be merry, but each day of over-indulging can take several hours off your life, according to a Christmas article published on the British Medical Journal website. Activities like smoking, having a couple of drinks, eating red meat and watching television anytime of year can each knock at least 30 minutes off your life expectancy for every day you indulge. In contrast, each day of sticking to just one alcoholic drink, eating plenty of fruit and vegetables, and exercising can be expected to add up to two hours to your life.
http://www.sciencedaily.com/releases/2012/12/121217190639.htm

Soybeans
The humble soybean could become an inexpensive new source of a widely used chemical for plastics, textiles, drugs, solvents and as a food additive. Succinic acid, traditionally drawn from petroleum, is one focus of research by Rice chemists. In 2004, the Department of Energy named succinic acid one of 12 "platform" chemicals that could be produced from sugars by biological means and turned into high-value materials.
http://www.sciencedaily.com/releases/2012/12/121219142303.htm

Asparagus
Drinking to ring in the New Year may leave many suffering with the dreaded hangover. According to a 2009 study in the Journal of Food Science, published by the Institute of Food Technologists (IFT), the amino acids and minerals found in asparagus extract might alleviate alcohol hangover and protect liver cells against toxins.
http://www.sciencedaily.com/releases/2012/12/121226101227.htm

Beet Juice
High blood pressure is a significant health problem, and if you're reading this article, you may be among the 68 million people in the United States or an estimated 1 billion around the world affected by this often
serious condition. One way to help lower your blood pressure may come in the form of beet juice. 

http://www.webmd.com/hypertension-high-blood-pressure/news/20121212/beetroot-juice-blood-pressure

**Vitamin D**

A new study suggests that there is a significant correlation between excessive daytime sleepiness and vitamin D. Surprisingly race is an important factor. Results show that in patients with normal vitamin D levels, progressively higher levels of daytime sleepiness were correlated inversely with progressively lower levels of vitamin D. Among patients with vitamin D deficiency, sleepiness and vitamin D levels were associated only among black patients. Surprisingly, this correlation was observed in a direct relationship, with higher vitamin D levels associated with a higher level of sleepiness among black patients. 

http://www.sciencedaily.com/releases/2012/12/121214190947.htm

Higher vitamin D dietary intake is associated with a lower risk of developing Alzheimer's disease, according to research in the *Journals of Gerontology Series A: Biological Sciences and Medical Sciences*. Very low levels of vitamin D (less than 10 nanograms per milliliter of blood serum) among older women were associated with higher odds of global cognitive impairment at baseline; low vitamin D levels (less than 20 nanograms per milliliter) among cognitively-impaired women were associated with a higher risk of incident global cognitive decline, as measured by performance on the Mini-Mental State Examination.

http://www.sciencedaily.com/releases/2012/11/121130222245.htm

**Milk with Fish Oil**

Watch out! Organic Valley uses wild ocean-caught fish oil in its Omega-3 enhanced pasture-raised organic milk. 

http://www.organicvalley.coop/?id=2795

Food science researchers at Virginia Tech mix milk with the fish oil, showing it is possible to incorporate fish oil into milk and dairy-based beverages, without destroying the product's taste or limiting its lifespan. The study was featured in the November issue of the *Journal of Dairy Science*

http://www.sciencedaily.com/releases/2012/11/121129173850.htm

Omega-3 fatty acids are heart and brain healthy and there are several vegetable sources such as flax, urad, walnuts, spinach, Indian spinach, verdalago (purslane) etc.
Genetics
An international team of genetics researchers has discovered four new gene regions that contribute to low birth weight. Three of those regions influence adult metabolism, and appear to affect longer-term outcomes such as adult height, risk of type-2 diabetes and adult blood pressure.
http://www.sciencedaily.com/releases/2012/12/121202164031.htm

In the largest genetic study of Coronary Artery Disease (CAD) to date, researchers report the identification of 15 genetic regions newly associated with the disease, bringing the number of regions associated with CAD risk to 46. The team identified a further 104 independent genetic variants that are very likely to be associated with the disease, enhancing our knowledge of the genetic component that causes CAD. They used their discoveries to identify biological pathways that underlie the disease and showed that lipid metabolism and inflammation play a significant role in CAD.
http://www.eurekalert.org/pub_releases/2012-12/wtsi-iit112912.php

Allergies
Food allergies are on the rise, affecting 15 million Americans. And according to a new study published in the December issue of Annals of Allergy, Asthma and Immunology, the scientific journal of the American College of Allergy, Asthma and Immunology (ACAAI), pesticides and tap water could be partially to blame. The study reported that high levels of dichlorophenol, a chemical used in pesticides and to chlorinate water, are associated with food allergies when found in the human body.
http://www.sciencecodex.com/food_allergies_pesticides_in_tap_water_might_be_to_blame-103077

Sleep
A new study suggests that extending nightly sleep in mildly sleepy, healthy adults increases daytime alertness and reduces pain sensitivity. The results suggest the importance of adequate sleep in various chronic pain conditions or in preparation for elective surgical procedures.
http://www.sciencedaily.com/releases/2012/12/121201085915.htm

Research indicates that high blood pressure may also be warded off by sleep, in addition to diet and exercise. One recent study published in the Journal of Sleep Research has found that getting just one
more hour of sleep a night may help people lower their blood pressure.  
http://www.medicaldaily.com/articles/13379/20121204/one-hour-more-sleep-lower-blood-pressure.htm

According to research, children with sleep-related breathing problems (such as snoring or apnea) frequently have concurrent behavioral sleep problems (such as waking repeatedly) and vice versa. However, children with one type of sleep problem are not routinely evaluated and treated for the other. The findings suggest that pediatricians, respiratory specialists and sleep medicine specialists should work together whenever a sleep problem is suspected. The study was published December 4 in the online edition of *Behavioral Sleep Medicine*,  
http://www.biospace.com/News/kids-sleep-related-breathing-problems-and/281597

Getting more sleep may help reduce overeating, a new study suggests. The researchers also found that the hormonal process through which sleep affects eating is different for men and women. The study included 27 normal-weight men and women, aged 30 to 45, who were studied under two sleep conditions: short sleep (four hours) and normal sleep (nine hours). Short sleep led to increased levels of the hunger-stimulating hormone ghrelin in men but not in women. But short sleep reduced levels of the satiety (feeling of fullness) hormone GLP-1 in women but not in men.  

**Brain**

Training human volunteers to control their own brain activity in precise areas of the brain can enhance fundamental aspects of their visual sensitivity, according to a new study. This non-invasive 'neurofeedback' approach could one day be used to improve brain function in patients with abnormal patterns of activity, for example stroke patients.  

**Positive Verbs**

Hearing a verb related to physical action automatically increases the force with which people grip objects, but has no effect on their physical reaction if the word is presented in the negative form, according to research published December 5 in the open access journal *PLOS ONE*.  
http://www.sciencedaily.com/releases/2012/12/121205200055.htm
Media and Social Networking
Using multiple forms of media at the same time -- such as playing a computer game while watching TV -- is linked to symptoms of anxiety and depression, scientists have found for the first time. What's not yet clear is the cause. http://www.sciencedaily.com/releases/2012/12/121204145557.htm

Using social networking sites like Facebook can make you eat too much. If that’s not bad enough, it can also make you spend too much, says a new study in the Journal of Consumer Research. The research reveals that catching up with friends and socializing online can have a positive effect on self-esteem and well-being. This might sound like a good thing, but the study concludes that feeling good about yourself can actually have a detrimental impact on behavior by momentarily lowering one’s ability to say no. This naturally leads to over-indulgence whether it manifests itself in splurging on clothes you don’t need, or snacking on too many holiday cookies. http://www.forbes.com/sites/nadiaarumugam/2012/12/12/eating-too-much-blame-it-on-facebook-not-holiday-treats/

Color
We all see red every now and again, but imagine seeing red beyond red. Researchers have altered the structure of a protein normally found in the human eye so that it can absorb a type of red light that we cannot normally see. The new protein could, in theory, give us the ability to see reds that are currently beyond our visible spectrum. Color vision in nearly all animals depends on specialized chemicals called chromophores, which sit inside proteins and absorb different wavelengths of light. Specific protein structures are thought to determine the absorption spectrum of the chromophores within. http://www.newscientist.com/article/dn22597-human-eye-proteins-detect-red-beyond-red.html

Obesity/Weight
Media articles and nutritionists alike have perpetuated the myth that for health, individuals should consume small meals multiple times a day. However, new research suggests all-day snacking might not be as beneficial as previously thought. Data suggests that, for obese women, eating fewer, bigger meals may be more advantageous metabolically compared to eating smaller, more frequent meals throughout the day,” said the study’s lead author. “Eating larger meals less often lowered blood-fat levels. Over time,
consistently eating fewer, larger meals each day could lower the women’s blood-fat levels and thereby lower their risk of developing heart disease.” [Link]

Women who go into pregnancy slightly overweight may risk giving birth to children with lower IQs, according to a new study. The study, published Dec. 10 in the journal *Pediatrics*, found that children of overweight mothers scored slightly lower on certain tests of verbal and number skills. [Link]

Breast Cancer

While pink is usually the color most associated with breast cancer advocacy, women may want to think red and orange if they’re looking to lower their own breast cancer risk. Tomatoes, carrots, and butternut squash are chock full of plant chemicals called carotenoids, and Harvard School of Public Health researchers found that eating plentiful amounts was associated with a 20 percent lower risk of breast cancer, according to a study published in the *Journal of the National Cancer Institute*. [Link]

Researchers at the University of California, Berkeley, and the Lawrence Berkeley National Laboratory have put the squeeze -- literally -- on malignant mammary cells to guide them back into a normal growth pattern. The findings, presented Monday, Dec. 17 at the annual meeting of the American Society for Cell Biology in San Francisco, show for the first time that mechanical forces alone can revert and stop the out-of-control growth of cancer cells. This change happens even though the genetic mutations responsible for malignancy remain, setting up a nature-versus-nurture battle in determining a cell's fate. [Link]

Behavior

Both nature and nurture appear to be significant factors in early antisocial behaviors of adopted children, a Wayne State University researcher believes. Researchers recently examined data from 361 linked triads (birth mother, adoptive parents, adopted child) in order to assess externalizing behavioral problems such as aggression and defiance when children were 18, 27 and 54 months of age. [Link]
Fear
When we are faced with things that seem threatening, our goal is usually to get as far away as we can from the threat. Now, new research suggests that our visual perception may actually be biased in ways that help motivate us to get out of harm's way. Our bodies help us respond to threats by engaging our fight-or-flight response and enabling us to act quickly: Our heart rate and blood pressure ramp up, and we produce more of the stress hormone cortisol. But research suggests that the body may also demonstrate its preparedness through certain perceptual biases.
http://www.sciencedaily.com/releases/2012/12/121211154433.htm

Brittle Bones
A new study from engineering researchers at Rensselaer Polytechnic Institute shows, for the first time, how the little-understood protein osteocalcin plays a significant role in the strength of our bones. The findings could lead to new strategies and therapeutics for fighting osteoporosis and lowering the risk of bone fracture. http://www.sciencedaily.com/releases/2012/12/121211130210.htm

Emotions
Does the emotion in our voice have a lasting effect? According to researchers, emotion helps us recognize words quicker and more accurately straight away. In the longer term however, we do not remember emotionally intoned speech as accurately as neutral speech. When we do remember the words, they have acquired an emotional value; for example words spoken in a sad voice are remembered as more negative than words spoken in a neutral voice. http://www.sciencedaily.com/releases/2012/12/121211112742.htm

Senses
Researchers examined where British men and women looked while viewing still images from films and pieces of art. They found that while women made fewer eye movements than men, those they did make were longer and to more varied locations. These differences were largest when viewing images of people. With photos of couples, both men and women preferred looking at the female figure rather than the male one. However, this preference was even stronger for women. While men were only interested in the faces...
of the two figures, women's eyes were also drawn to the rest of the bodies, in particular that of the female figure. While men made direct eye contact with faces in the pictures; especially when primed to look for threat, women averted their gaze downward slightly towards the nose and mouth of these faces. The researchers claim that this may be due to women being more sensitive to the negative consequences of making direct eye contact and will, therefore, shift their gaze downward, towards the center of the face. http://www.sciencedaily.com/releases/2012/11/121130222243.htm

In a new study published in the Journal of Neuroscience, researchers found that the timing and frequency of vibrations produced in the skin when you run your hands along a surface, like searching a wall for a light switch, play an important role in how we use our sense of touch to gather information about the objects and surfaces around us. http://www.sciencedaily.com/releases/2012/12/121211154437.htm

Synchronization
Scientists have measured “brain-brain synchrony,” but its neurological mechanism and its role in social interactions remain obscure. Researchers found that body-movement synchronization between two participants increases following a short session of cooperative training, suggesting that our ability to synchronize body movements is a measurable indicator of social interaction. http://www.futurity.org/top-stories/bonding-can-make-us-move-in-unison/

Eve’s Intelligence
The researchers suggest that a simple invertebrate animal living in the sea 500 million years ago experienced a 'genetic accident', which resulted in extra copies of these genes being made. This animal's descendants benefited from these extra genes, leading to behaviorally sophisticated vertebrates – including humans, and the price of higher intelligence and more complex behaviors is mental illness. http://medicalxpress.com/news/2012-12-intelligence-mental-illness-linked-ancient.html#jCp

Motivation and Math
It is not how smart students are but how motivated they are and how they study that determines their growth in math achievement is the main finding of a new study that appears in the Journal of Child
Daylight Savings
Setting the clock ahead for daylight savings time may set the scene for a small increase in heart attacks the next day, according to a new study that suggests sleep-deprivation might be to blame. Researchers at two Michigan hospitals reviewed six years of records and found that they treated an average of 23 heart attacks on the Sunday Americans switched to daylight savings time. That compared to 13 on a typical Sunday.  
http://www.reuters.com/article/2012/12/14/us-daylight-heart-attacks-idUSBRE8BD1AT20121214

Blinking
Why do we spend roughly 10 percent of our waking hours with our eyes closed - blinking far more often than is actually necessary to keep our eyeballs lubricated? Scientists have pried open the answer to this mystery, finding that the human brain uses that tiny moment of shut-eye to power down.  

Kindness
Children who make an effort to perform acts of kindness are happier and experience greater acceptance from their peers, suggests new research from the University of British Columbia and the University of California, Riverside. Researchers say that increasing peer acceptance is key to preventing bullying.  
http://www.sciencedaily.com/releases/2012/12/121226223051.htm

Bullying
Kids who have food allergies or are overweight may be especially likely to get bullied by their peers, two new studies suggest. Not surprisingly, researchers also found targets of bullying were more distressed and anxious and had a worse quality of life, in general, than those who weren't picked on. Bullying has become a concern among parents, doctors and school administrators since research and news stories emerged linking bullying - including online "cyberbullying" - with depression and even suicide.  
http://www.chicagotribune.com/health/sns-r3-us-allergies-bullyingbre8bn0fa-20121224,0,4824460.story

Teen Pregnancy
Seventh grade American girls who have trouble reading are more likely to get pregnant in high school than average or above-average readers, according to a new study from Philadelphia. Researchers found that pattern stuck even after they took into account the girls' race and poverty in their neighborhoods - both of which are tied to teen pregnancy rates. http://www.chicagotribune.com/health/sns-rt-us-reading-skills-pregnancybre8bq0br-20121227,0,7709093.story

Aftermath of Sexual Revolution
Signs of the cancer-causing human papilloma virus in women near or at menopause may be a reawakened dormant infection, suggesting a risk for women who came of age in the “sexual revolution” in the 1960s and 70s. About 77 percent of the infections were detected in promiscuous women who reported five or more sexual partners in their lifetime, according to a study in the Journal of Infectious Diseases. The findings released suggest that reactivation of the sexually transmitted virus may increase around age 50 and be responsible for more later-life infections than new ones, researchers said. http://www.nj.com/news/index.ssf/2012/12/hpv_infections_return_at_menop.html

Recipes
Penne with Mushroom Ragout and Spinach
**Ingredients:** 1/2 ounce (about 1/2 cup) dried porcini mushrooms; 2 tablespoons extra virgin olive oil 1/2 medium onion or 2 shallots, chopped; 2 garlic cloves, minced; 1 pound mixed regular and wild mushrooms or 1 pound regular white or cremini mushrooms, trimmed and cut in thick slices (or torn into smaller pieces, depending on the type of mushroom); Salt and freshly ground pepper; 1/4 cup fruity red wine, such as a Côtes du Rhone or Côtes du Luberon; 2 teaspoons chopped fresh thyme or a combination of thyme and rosemary; 6 ounces baby spinach or 12 ounces bunch spinach (1 bunch), stemmed and thoroughly cleaned; 3/4 pound penne; Freshly grated Parmesan to taste

**Preparation:** Place the dried mushrooms in a Pyrex measuring cup and pour on 2 cups boiling water. Let soak 30 minutes, while you prepare the other ingredients. Place a strainer over a bowl, line it with cheesecloth or paper towels, and drain the mushrooms. Squeeze the mushrooms over the strainer to extract all the flavorful juices. Then rinse the mushrooms, away from the bowl with the soaking liquid, until they are free of sand. Squeeze dry and set aside. If very large, chop coarsely. Measure out 1 cup of the soaking liquid and set aside.
Heat the olive oil in a large, heavy, nonstick skillet over medium heat and add the onion or shallots. Cook, stirring often, until tender, about 5 minutes. Turn up the heat to medium-high and add the fresh mushrooms. Cook, stirring often, until they begin to soften and sweat, about 5 minutes. Add the garlic and salt to taste, stir together for about 30 seconds, then add the reconstituted dried mushrooms and the wine and turn the heat to high. Cook, stirring, until the liquid boils down and glazes the mushrooms. Add the herbs and the mushroom soaking liquid. Bring to a simmer, add salt to taste, and cook over medium-high heat, stirring often, until the mushrooms are thoroughly tender and fragrant. Turn off the heat, stir in some freshly ground pepper, taste and adjust salt.

Bring a large pot of water to a boil and salt generously. Fill a bowl with ice water. Add the spinach to the boiling water and blanch for 20 seconds only. Remove with a skimmer and transfer to the ice water, then drain and squeeze out water. Chop coarsely and add to the mushrooms. Reheat gently over low heat.

Bring the water back to a boil and cook the pasta al dente following the timing suggestions on the package. If there is not much broth in the pan with the mushrooms and spinach, add a ladleful of pasta water. Drain the pasta, toss with the mushrooms and spinach, add Parmesan to taste, and serve at once.


Old Fashioned Chocolate Pudding Pie
Ingredients:
Graham Cracker Crust: 1 3/4 cups finely ground graham crackers (made from 10 ounces of whole graham crackers); 3 tablespoons sugar; 4 tablespoons melted non-hydrogenated margarine, melted coconut oil or canola oil; 1 tablespoon plain soy milk or almond milk

Filling: 3 cups almond milk; 1/4 cup cornstarch; 1/3 cup sugar; 3 tablespoons unsweetened cocoa powder; Big pinch of salt; /4 cup semisweet chocolate chips; 1 teaspoon pure vanilla extract

Preparation: For the crust: Preheat oven to 350 degrees and lightly spray a 9-inch pie plate with nonstick cooking spray. In a mixing bowl, combine the graham crumbs and sugar. Drizzle in the oil or melted
margarine. Use a spoon to blend the mixture thoroughly to moisten the crumbs, then drizzle in the soy milk and stir again to form crumbly dough. Pour the crumbs into the pie plate. Press crumbs into the sides of the plate first, then work your way down to the bottom. Bake for 8 to 10 minutes until firm. Let the crust cool before filling.

For the pie: Preheat oven to 350 degrees. Bake the crust for 10 minutes, remove it from the oven and let cool. In a small (2-quart) saucepan off the heat, combine 1 cup of the almond milk and the cornstarch. Use a fork to whisk until the cornstarch is good and dissolved. Whisk in the remaining almond milk, the sugar, cocoa powder and salt. It’s O.K. if the cocoa is a bit clumpy at first; it will dissolve eventually. Bring the mixture to a boil, whisking occasionally. Keep a close eye because once boiling, you want to lower the heat and bring it to a slow rolling boil. Whisk consistently until the mixture is thickened, which should be about 7 minutes. Add the chocolate chips and mix to melt. Stir in the vanilla extract. Pour the pudding into the prepared pie shell and let cool for about 15 minutes on the counter, just until it stops steaming like mad. To keep a skin from forming, place a circle of parchment paper over the filling. Refrigerate and let set for at least 3 hours.

Om! Asatoma Sadgamaya, Tamasoma Jyotirgamaya, Mrityorma Amritamgamaya, Om Shantih, Shantih, Shantih!
(Aum! Lead the world from wrong path to the right path, from ignorance to knowledge, from mortality to immortality, and peace!)