



శ్రీ వేపచేదు విద్యా పీఠము

VEPACHEDU EDUCATIONAL FOUNDATION

The Telangana Science Journal

Health and Nutrition

TIACS-subscribe@yahoogroups.com (The Indian American Chemical Society)

Chief Editor: Dr. Sreenivasarao Vepachedu

Editor: Miss Krishna Claudia Vepachedu

### Issue 209: Contents

Walking an Extra Two Minutes

Artificial Light

Cheese

Coffee

Born in America

#### RECIPES

Banana-Kiwi Salad

Creamy Fruit Salad

Fruit Dip

Couscous & Fruit Salad

### **Walking an Extra Two Minutes<sup>1</sup>**

Numerous studies have shown that sedentary life leads to increased risk for early death due to heart disease, diabetes and other health conditions. Most Americans fall short of the recommended amount of exercise, 2.5 hours of moderate activity each week. It is unrealistic to expect couch potatoes to replace sitting with exercise. Adding two minutes of walking each hour to sedentary routine may reduce health hazards of sitting for long periods of time, according to a report published in the Clinical Journal of the American Society of Nephrology (CJASN).

A mechanism in the human brain that pairs related, abstract concepts, scientists have found a “congruency effect” in studying how we think<sup>2</sup>. Similar to the infamous Tetris effect, in which extended gameplay can make other parts of your life seem to be nothing but L-shaped blocks and elusive straight pieces, the research shows the brain has a preference for addition and subtraction based on walking left or right. moving in accordance with the math problem can help us sort out the problem better than sitting still. And it doesn't seem to be just walking that gets the job done. Other research has shown the experience of passive movement helps all the same, which means if you need to calculate your expenses for the month, consider driving around the neighborhood and only making right turns.

Issue 209

5117 Kali Era, MANMADHA Year, VAISAKHA Month  
2073 Vikramarka Era, MANMADHA Year, VAISAKHA Month  
1937 Salivahana Era, MANMADHA Year, VAISAKHA Month  
2015 AD, MAY  
(Published online JUNE 1, 2015)



శ్రీ వేపచేదు విద్యా పీఠము

VEPACHEDU EDUCATIONAL FOUNDATION

The Telangana Science Journal

Health and Nutrition

[TIACS-subscribe@yahoogroups.com](mailto:TIACS-subscribe@yahoogroups.com) (The Indian American Chemical Society)

### Artificial Light<sup>3</sup>

Increased light exposure has been associated with obesity in both humans and mice. Prolonging daily light exposure increases adiposity by decreasing energy expenditure rather than increasing food intake or locomotor activity. This was caused by a light-exposure period-dependent attenuation of the noradrenergic activation of brown adipose tissue that has recently been shown to contribute substantially to energy expenditure by converting fatty acids and glucose into heat.

### Cheese<sup>4</sup>

Scientists found that eating cheese results in a higher level of short-chain fatty acids in the intestine, perhaps as a result of stimulation of beneficial gut bacteria, and also increased secretion of fats with the positive effects this has on the metabolism of cholesterol. In addition, there was a lower production of TMAO, a substance that in other studies has been associated with cardiovascular disease.

### Coffee<sup>5</sup>

The roasting of coffee beans generates stable radicals within melanoidins produced by non-enzymatic browning. Roasting coffee beans has further been suggested to increase the antioxidant (AO) capacity of coffee brews. Herein, we have characterized the radical content and AO capacity of brews prepared from *Coffea arabica* beans sourced directly from an industrial roasting plant. In-tact beans exhibited electron paramagnetic resonance signals arising from Fe<sup>3+</sup>, Mn<sup>2+</sup> and at least three distinct stable radicals as a function of roasting time, whose intensity changed upon grinding and ageing. In coffee brews, the roasting-induced radicals were harboured within the high molecular weight (> 3 kD) melanoidin-containing fraction at a concentration of 15 nM and was associated with aromatic groups within the melanoidins. The low molecular weight (< 3 kD) fraction exhibited the highest AO capacity using DPPH as an oxidant. The AO activity was not mediated by the stable radicals or by metal complexes within the brew. While other non-AO functions of the roasting-induced radical and metal complexes may be possible in vivo, we confirm that the in vitro antiradical activity of brewed coffee is dominated by low molecular weight phenolic compounds.

Men who drink the equivalent caffeine level of two to three cups of coffee a day are less likely to have erectile dysfunction (ED), according to a study published in PLOS ONE<sup>6</sup>. Men who consumed between 85 and 170 milligrams of caffeine a day were 42 percent less likely to report ED, while those who drank between 171 and 303 milligrams of caffeine a day were 39 percent less likely to report ED compared to those who drank zero to seven milligrams a day. This trend was also true among overweight, obese and hypertensive men.

### Born in America<sup>7</sup>

Obesity is one of the most serious health problems in the world today. Over the past 20 years, obesity among adults has increased significantly in the United States (US).

Issue 209

5117 Kali Era, MANMADHA Year, VAISAKHA Month  
2073 Vikramarka Era, MANMADHA Year, VAISAKHA Month  
1937 Saliyahana Era, MANMADHA Year, VAISAKHA Month  
2015 AD, MAY  
(Published online JUNE 1, 2015)

Copyright ©1998-2015  
Vepachedu Educational Foundation, Inc



శ్రీ వేపచేదు విద్యా పీఠము

VEPACHEDU EDUCATIONAL FOUNDATION

The Telangana Science Journal

Health and Nutrition

TIACS-subscribe@yahooogroups.com (The Indian American Chemical Society)

New research published by the Centers for Disease Control and Prevention shows that Hispanics born in the United States have poorer health by several measures than Hispanics born abroad who immigrate to the U.S. They are likelier to be obese and smoke cigarettes and to suffer from high blood pressure, heart disease, and cancer. The 57 million Hispanics in the U.S. make up 18 percent of the population, the largest minority group in the country.

Asian Americans are usually less overweight and obese than African Americans and Hispanic Americans, but the rate of obesity in Asian Americans is still increasing, especially in younger generations. Asian Americans are associated with a lower waist circumference (WC) and BMI, while Hawaiian/Pacific Islanders are associated with a higher WC and BMI. Typically, Asian Americans who were born in the United States (US) tend to be overweight and more obese than those born in foreign countries<sup>8</sup>.

American Indians of all ages and both sexes have a high prevalence of obesity. The high prevalence of diabetes mellitus in American Indians shows the adverse effects that obesity has in these communities. Obesity has become a major health problem in American Indians only in the past 1–2 generations and is believed to be associated with the relative abundance of high-fat foods and the rapid change from active to sedentary lifestyles<sup>9</sup>.

The Asian Indian American community is a highly educated population that has doubled in number in the last decade. With over 80 percent of Asian Indians identified as foreign-born, the population grew from just over 16,000 in 2000 to approximately 33,000 in 2010<sup>10</sup>. For the same body mass index (BMI), percentage body fat is 4% to 5% lower for blacks and Pacific Islanders but 7-8% higher for Asian Indians compared to Europids. The prevalence of obesity among Asian Indians depends on the criteria used. A BMI >25 is classified as obese for Asian Indians and all Asians by the Asia Pacific and/or Indian criteria whereas, a BMI > 30 is classified as obese for all Europids regardless of nationality. A similar underestimation of abdominal obesity occurs when the standard (Europid) waist circumference criteria is used (>102 cm for men and >88cm for women) instead of Asia pacific and/or Indian criteria (>90 cm for men and >80cm for women).<sup>11</sup>.

### Sexual Reproduction<sup>12</sup>

Almost all multicellular species on earth reproduce using sex, but its existence isn't easy to explain because sex carries big burdens. Competition among males for reproduction provides a really important benefit, because it improves the genetic health of populations. Sexual selection achieves this by acting as a filter to remove harmful genetic mutations, helping populations to flourish and avoid extinction in the long-term. In the absence of sex, populations accumulate deleterious mutations through a ratcheting effect where each new mutation takes a population closer to extinction. Sexual selection helps to remove those mutations, enabling populations to persist against the threat of extinction.

Issue 209

5117 Kali Era, MANMADHA Year, VAISAKHA Month  
2073 Vikramarka Era, MANMADHA Year, VAISAKHA Month  
1937 Salivahana Era, MANMADHA Year, VAISAKHA Month  
2015 AD, MAY  
(Published online JUNE 1, 2015)



శ్రీ వేపచేదు విద్యా పీఠము

VEPACHEDU EDUCATIONAL FOUNDATION

The Telangana Science Journal

Health and Nutrition

[TIACS-subscribe@yahoogroups.com](mailto:TIACS-subscribe@yahoogroups.com) (The Indian American Chemical Society)

## RECIPES

### Banana-Kiwi Salad<sup>13</sup>

Ingredients: 2 tablespoons lime juice; 1 tablespoon canola oil; 1 tablespoon minced shallot; 2 teaspoons rice vinegar; 1 teaspoon honey; 1/4 teaspoon salt; Pinch of, cayenne pepper; 4 kiwis; 2 firm ripe bananas; 1/2 cup diced red bell pepper; 2 tablespoons thinly sliced fresh mint; 2 tablespoons chopped cashews  
Instructions: Whisk lime juice, oil, shallot, vinegar, honey, salt and cayenne in a medium bowl. Add kiwis, bananas, bell pepper and mint; toss to coat. Serve sprinkled with cashews. To toast nuts & seeds on the stovetop: Toast in a small dry skillet over medium-low heat, stirring constantly, until fragrant and lightly browned, 3 to 5 minutes.

### Creamy Fruit Salad<sup>14</sup>

Ingredients: 1 cup sliced strawberries; 1 cup diced cantaloupe or mango; 1/2 cup or a 6-ounce container lemon or vanilla low-fat yogurt; 1 dash ground cinnamon; 2 tablespoons roasted almonds, or reduced-fat granola, chopped or sliced, optional  
Instructions: Toss yogurt with fruit in medium-sized bowl. Top with cinnamon. Sprinkle with chopped or sliced almonds or reduced-fat granola, if desired.

### Fruit Dip<sup>15</sup>

Ingredients: 1 package (1.4 ounces) sugar-free and fat-free instant vanilla pudding mix; 1 1/2 cups low-fat milk; 5 tablespoons frozen orange juice concentrate, thawed; 1/2 cup fat-free sour cream; 2 cups melon cubes or balls (honeydew, cantaloupe, watermelon, etc.); 2 sliced bananas; 2 apples, cored and sliced; 2 oranges, peeled and broken into segments; 2 peaches, nectarines or pears, cored and sliced  
Instructions: Put pudding mix, milk, and orange juice concentrate in mixing bowl and beat on medium speed for 2 minutes. Beat in or mix in sour cream. Serve the orange dip with prepared fruit. Or make a dressed fruit salad by adding all the fruits to a large serving bowl. Pour orange dressing over the top and toss gently to blend. Step 3 Serve immediately, or cover and keep in refrigerator until ready to serve.

### Couscous & Fruit Salad<sup>16</sup>

Ingredients: 2 tablespoons extra-virgin olive oil; 2 tablespoons orange juice; 1 tablespoon cider vinegar; 2 teaspoons finely chopped shallots; 1/4 teaspoon salt; 1/4 teaspoon freshly ground pepper; 2 cups cooked whole-wheat couscous; 1 cup chopped nectarine; 1 cup mixed fresh berries, such as blueberries and raspberries; 2 tablespoons toasted sliced almonds  
Instructions: Whisk oil, orange juice, vinegar, shallots, salt and pepper in a large bowl. Add cooked couscous, nectarines, berries and almonds; gently toss to combine. To toast sliced almonds, heat a small



శ్రీ వేపచేదు విద్యా పీఠము

VEPACHEDU EDUCATIONAL FOUNDATION

The Telangana Science Journal

Health and Nutrition

TIACS-subscribe@yahooogroups.com (The Indian American Chemical Society)

dry skillet over medium-low heat. Add nuts and cook, stirring, until lightly browned and fragrant, 2 to 3 minutes

Source: The primary sources cited above, New York Times (NYT), Washington Post (WP), Mercury News, Bayarea.com, Chicago Tribune, USA Today, Intellihealthnews, Deccan Chronicle (DC), the Hindu, Hindustan Times, Times of India, AP, Reuters, AFP, womenfitness.net, about.com etc.

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!)

<sup>1</sup> <http://www.sciencedaily.com/releases/2015/04/150430170715.htm>

<sup>2</sup> <http://www.medicaldaily.com/take-walk-be-better-math-embodied-cognition-gets-brain-thinking-sync-334994>

<sup>3</sup> Kooijman et al., Prolonged daily light exposure increases body fat mass through attenuation of brown adipose tissue activity, PNAS, vol. 112 no. 21, 6748–6753 (2015)

<sup>4</sup> <http://www.telegraph.co.uk/foodanddrink/foodanddrinknews/11567702/The-secret-to-a-longer-life-and-faster-metabolism-Eating-cheese.html>

<sup>5</sup> <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0122834>

<sup>6</sup> Caffeine Intake Associated With Reduced Levels Of Erectile Dysfunction; <http://www.biospace.com/News/drinking-coffee-may-lower-erectile-dysfunction/377896>

<sup>7</sup> <http://www.biospace.com/News/could-being-born-in-america-be-bad-for-your-health/375592>

<sup>8</sup> Nam, Obesity and Asian Americans in the United States: Systematic Literature Review, Osong Public Health Res Perspect, (4): 187–193 (2013)

<sup>9</sup> Story et al., The epidemic of obesity in American Indian communities and the need for childhood obesity-prevention programs, Am J Clin Nutr, vol. 69 no. 4 747S–754S (April 1999)

<sup>10</sup> Obesity and high blood pressure soar among Asian Indian Minnesotans; <http://aapress.com/health/obesity-and-high-blood-pressure-soar-among-asian-indian-minnesotans/>

<sup>11</sup> Obesity and Abdominal Obesity among Indian Americans, <http://www.cadiresearch.org/topic/asian-indian-heart-disease/cadi-us/obesity-indians-in-us>

<sup>12</sup> Sexual selection protects against extinction, Nature, May 18; <http://www.biospace.com/News/science-finally-explains-why-men-really-exist/377674>

<sup>13</sup> [http://www.eatingwell.com/recipes/banana\\_kiwi\\_salad.html](http://www.eatingwell.com/recipes/banana_kiwi_salad.html)

<sup>14</sup> <http://tastesbetterfromscratch.com/2014/10/creamy-fruit-salad.html>

<sup>15</sup> <http://allrecipes.com/recipes/appetizers-and-snacks/dips-and-spreads/fruit-dip/>

<sup>16</sup> [http://www.eatingwell.com/recipes/couscous\\_fruit\\_salad.html](http://www.eatingwell.com/recipes/couscous_fruit_salad.html)

Issue 209

5117 Kali Era, MANMADHA Year, VAISAKHA Month  
2073 Vikramarka Era, MANMADHA Year, VAISAKHA Month  
1937 Salivahana Era, MANMADHA Year, VAISAKHA Month

2015 AD, MAY

(Published online JUNE 1, 2015)