

# PULSES

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## PRESIDENT'S CORNER

*Chris Gray*

It has been too long since Bay Area Digital has released a newsletter, and now we're going to change that. We're going to make every attempt to stay more in touch with you for the remainder of 2009 and 2010. I'll make no excuses about the past except to say that we have been so busy building the business and working on product development that the newsletter just got pushed into the background for a while. No matter though: we're back with you now, have a reception to announce, and hope to meet with many of you in the next few weeks who are in the Bay Area.

From a company standpoint, the single most significant advancement for 2009 has been the final development and release of HealthTeller. The product will be shipping by or before September 1, 2009. With HealthTeller, you can access six different health products with a single interface. Many of these products, such as the oximeter and peak flow meter, have never before been accessible to the blind and visually impaired community.

In addition to HealthTeller, Bay Area Digital has introduced into its product line a number of items from the Royal National Institute of Blind People (RNIB). Also, RNIB and several other key companies have been added to Bay Area Digital's list of core partners.

Partners include Abbott Diabetes Care and Tunstall Healthcare.

The final prototype of the Bay Area Digital blood glucose meter has been finalized, due to the excellent work of the hardware and software engineers managing this project. This represents one of the major final steps required to achieve 501K certification by the U.S. Food and Drug Administration.

Come to our reception and investigate all of these exciting new developments. We'll be happy to give you a full demonstration of everything and answer all your questions. We'll have some fun there, too.

## BAY AREA DIGITAL EMBRACES WEB 2.0

The Worldwide Web holds within it major keys to the business success of any new company of the 21st century. From blogging to Tweeting, there are a whole host of new methods for communicating with current customers and generating new customers as well.

Bay Area Digital has taken the first steps toward being a major player in the web 2.0 arena. We've coerced our president into blogging, have signed up on Twitter, and laid the groundwork in several social networking sites such as Facebook.

If you're interested in learning more about such tools, we strongly recommend that you go to the web and

visit <http://christophergray.marketingmerge.com>. Consider joining Renegade University, or better yet, join the Renegade Professional network. Renegade University is free, and Renegade Professional can pay for itself within weeks of your joining and learning from it.

Also, visit and check out Chris Gray's blog at <http://ChristopherGray.squarespace.com> or Facebook site at <http://www.facebook.com/cpgray>. HINT: He writes more often in his blog than he does for newsletters!

## NEW YORK TIMES HIGHLIGHTS METER ACCURACY

*Chris Gray*

In an article entitled "Standards Might Rise on Monitors for Diabetics" Appearing in the July 19, 2009 edition of the New York Times, the margin of error

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between glucose meters was discussed, and for some disclosed, in detail. Shocking as it may be, a 20% margin of error is allowed in the blood glucose meter readings provided by FDA-approved meters. The article goes on to say: "Besides having a wide error rate, many home monitors give the wrong result if patients are taking certain drugs like Tylenol or even vitamin C. The Accu-Chek monitors made by Roche can be confounded by drugs commonly used in dialysis. ... A study by government researchers found that when comparing tests from five different popular monitors, results varied by as much as 32 percent." Perhaps this will change in time.

The current focus on this issue makes Bay Area Digital particularly pleased to have partnered with Abbott Diabetes Care and the FreeStyle line of blood glucose meters. These meters are the most accurate and predictable meters on the U.S. market today in our opinion.

To see the entire New York Times article, visit <http://www.nytimes.com/2009/07/19/health/policy/19monitor.html>.

## **YOU ARE CORDIALLY INVITED**

*Hayley Hornus*

Our next networking reception and forum for discussion of diabetes will be held on Thursday, August 6, 2009, from 4p-7p.

All are invited to attend this event at the Flood Building, 870 Market Street, in the conference room on the eleventh floor, suite 1185.

The Flood Building is located very close to Powell Street BART and the famous cable car turnaround.

## **RESEARCH CORNER**

*Hayley Hornus*

At Bay Area Digital, we comb newspapers, magazines and journals for

articles of particular interest to diabetics, especially those with visual impairments. In PULSES, we will share with you the most innovative and/or intriguing of these articles. We cannot guarantee their accuracy, of course, and all too often such news provides more hope than reality. However, it's still great to know what the future can hold, and we provide such information with that spirit in mind.

## **Inflammatory Factors May be Key to Controlling Diabetic Macular Edema**

Research Highlighted in the January 2009 Issue of "Ophthalmology"

SAN FRANCISCO-(<http://www.businesswire.com/>)--With a new study from the Centers for Disease Control and Prevention predicting that diabetic retinopathy will triple from 5.5 million in 2005 to 16 million in 2050, improved treatments are urgently needed for this leading cause of blindness in working-age people. The CDC study is the latest indicator of a world-wide diabetes epidemic that is motivating ophthalmic research around the globe. Hideharu Funatsu, MD, and colleagues at the Tokyo Women's Medical University, Japan, focused on diabetic macular edema (DME) a serious complication of retinopathy. Their findings on inflammatory factors associated with DME are presented in this month's Ophthalmology, the journal of the American Academy of Ophthalmology.

Retinopathy typically develops gradually over many years in people who have diabetes. It impacts the retina, the area at the back of the eye that focuses images for transmission to the brain. Advanced complications include the growth of abnormal blood vessels on the retina and optic nerve, and DME, swelling of the macula at the center of the retina as fluid leaks from permeable blood vessels. Precisely how DME develops is unclear, but the condition is similar to chronic inflammation that can occur in other areas of the body. When inflammation occurs, the body's immune system releases chemical messengers

into the blood or affected tissues in an attempt to rid the body of a perceived infection, irritant, or injury. Some of the chemicals cause leakage of fluid into the tissues, resulting in swelling.

Dr. Funatsu's group measured levels of four inflammatory factors and one anti-inflammatory factor in the vitreous gel, which fills the eye between the lens and the retina, in 53 patients with DME, 15 patients with nondiabetic ocular disease, and 8 diabetic patients without retinopathy.

Vascular endothelial growth factor (VEGF), intercellular adhesion molecule (ICAM)-1, interleukin (IL)-6, monocyte chemotactic protein (MCP)-1 and the anti-inflammatory pigment epithelium-derived factor (PEDF) were selected because earlier research had linked them to the development or exacerbation of DME.

All four inflammatory factors were significantly higher and PEDF significantly lower in the vitreous of in patients with DME compared with the two other patient groups. VEGF and ICAM-1 had a stronger influence on the severity of DME than the other factors. VEGF is a strong vascular permeability factor that is overproduced in response to reduced oxygen levels in the retinas of people with retinopathy, and Dr. Funatsu's research suggests that VEGF is the key to the inflammatory response in DME. Building on earlier, similar findings, the study also indicates that PEDF may block the expression and actions of the key inflammatory factors.

Although this study suggests that intravitreal injection of steroids such as triamcinolone acetonide may be useful in treating DME, further clinical trials are required to confirm this finding.

"Triamcinolone acetonide down-regulates VEGF and ICAM-1, inhibits inflammatory cells, stabilizes cell membranes, and increases PEDF levels. It appears to control more of the cytokine messengers that contribute to abnormal blood vessel permeability," said Dr. Funatsu. He adds that further focus on

VEGF and ICAM-1 may further illuminate the mechanisms of blood vessel breakdown in DME and lead to new treatments.

Eds: Full texts of the studies are available from the Academy's media relations department.

About the American Academy of Ophthalmology

AAO is the world's largest association of eye physicians and surgeons-Eye M.D.s-with more than 27,000 members worldwide. Eye health care is provided by the three "O's" - opticians, optometrists and ophthalmologists. It is the ophthalmologist, or Eye M.D., who can treat it all: eye diseases and injuries, and perform eye surgery.

## RECIPES

### Oven-Fried Chicken

*Recipes courtesy of Walgreen's Diabetes and You*

½ cup buttermilk  
1 tbsp Dijon mustard  
2 cloves garlic, minced  
1 tsp. hot sauce (Tabasco, or the like)  
2 ½ - 3 pounds chicken legs, skin removed, trimmed and cut into thighs and drumsticks  
½ cup whole wheat flour  
2 tbsps sesame seeds  
1 ½ tsps. Paprika  
1 tsp dried thyme  
1 tsp baking powder  
1/8 tsp salt  
Pepper to taste  
Olive oil cooking spray

1. Whisk buttermilk, mustard, garlic and hot sauce in a shallow glass dish until well blended. Add chicken and turn to coat. Cover and marinate in the refrigerator for at least 30 minutes or up to 8 hours.
2. Preheat oven to 425 F. Line a baking sheet with foil. Set a wire rack on the

baking sheet and coat it with cooking spray.

3. Whisk flour, sesame seeds, paprika, thyme, baking powder, salt and pepper in a small bowl. Place the flour mixture in a paper bag or large sealable plastic bag. Shaking off excess marinade, place one or two pieces of chicken at a time in the bag and shake to coat. Shake off excess flour and place the chicken on the rack. (Discard any leftover flour mixture and marinade.) Spray the chicken pieces with cooking spray.
4. Bake the chicken until golden brown and no longer pink in the center, 40 to 50 minutes.

### Nutrition Information

Per serving: Calories 226, Fat 7 g (Saturated 2g, Monounsaturated 2g), Cholesterol 130mg, Carbohydrate 5g, Protein 34g, Fiber 1g, Sodium 353mg, Potassium 423mg

Dietary Exchanges: 5 lean meats, 1 fat

### Green Goddess Salad

Makes 4 servings

½ avocado, peeled and pitted  
¾ cup nonfat buttermilk  
2 tbsps. chopped fresh herbs, such as tarragon, sorrel and/or chives  
2 tsps. Tarragon vinegar or white-wine vinegar  
1 tsp. anchovy paste or minced anchovy fillet  
8 cups lettuce  
12 ounces peeled and deveined cooked shrimp (21-25 per pound)  
½ cucumber, sliced  
1 cup cherry or grape tomatoes  
1 cup canned chickpeas, rinsed  
1 cup rinsed and chopped canned artichoke hearts  
½ cup chopped celery

1. Puree avocado, buttermilk, herbs, vinegar and anchovy in a blender until smooth.

2. Divide lettuce among 4 plates. Top with shrimp, cucumber, tomatoes, chickpeas, artichoke hearts and celery. Drizzle dressing over salad.

### Nutrition Information

Per serving: 292 calories, 7g fat, (1g salt, 3 g mono), 134 mg cholesterol, 31 g carbohydrate, 28g protein, 9g fiber, 790mg sodium, 843 mg potassium

Dietary exchanges: 2 starches, 3 lean meats, 1 fat

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