



# Health & Fitness

VOLUME 2, ISSUE 3

Multi Company Training in Battalion 4

MARCH 2012

## Upcoming Events within the county

- Co. 33 Annual Crab Feed  
March 3rd  
Paradise Pines POA

## Carboxyhemoglobin sensors and what are they?

Recently, the Butte Unit acquired two Masimo Rad-57 SpCO<sub>2</sub> sensors with the intent of monitoring our own firefighters for carbon monoxide exposures during and after incidents.

*Carboxyhemoglobin (SpCO<sup>®</sup>) is a breakthrough measurement that allows clinicians to noninvasively and immediately detect elevated levels of carbon monoxide in the blood—facilitating earlier diagnosis and treatment for patients poisoned by carbon monoxide.*

While these sensors were specifically purchased for use on fire suppression personnel, they are also available for assessment of patients, who have vague symptoms and could possibly be suffering from CO poisoning. Currently our two units will be with myself and with T2107, but the intent is to outfit all personnel who provide safety officer coverage. If money was not a limiting factor, then my goal would be to outfit all first out engines because these sensors perform the standard pulse oximetry as well as the

By: Mike Waters, Unit Safety Officer

specialized carboxyhemoglobin measuring. ***So why do we need these sensors?***

- Exposure to carbon monoxide (CO) is the leading cause of death by poisoning in industrialized countries.
- > CO poisoning is often misdiagnosed because symptoms are similar to the flu.
- > Timely diagnosis and treatment of CO poisoning is critical.
- > SpCO has been shown to identify 60% more carbon monoxide poisonings than traditional methods.

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## IS GLUTEN MAKING US FAT?

### The truth about gluten, the food industry, and your belly

By Matthew Solan, Photographs by Charles Masters

Turkey and tomato on wheat. Whole-grain pasta. Healthy, right? Maybe. But more and more people believe these foods are parts of a potentially disastrous trap. They claim that sluggishness and weight gain can be blamed on an insidious substance hiding in wheat and many other common grains: gluten.

Avoiding gluten has become big business. Sales of gluten-free products grew about 30 percent a year from 2006 to 2010, and will hit \$3.9 billion by next year, according to the market research company Packaged Facts. Supermarket shelves are filled with gluten-free breads, soups, and cake mixes—even gluten-free ketchup and soy sauce. According to market research firm Mintel, 10 percent of new foods launched in 2010 featured a "gluten-free" claim, up from only 2 percent 5 years earlier.

NFL quarterback Drew Brees won a Super Bowl while on a gluten-free diet. Cyclist Tom Danielson, a record-breaking member of the Garmin-Transitions team, says his training and racing have improved since he and his teammates went gluten-free over a year ago.

Have most common whole grains been acting as insidious nutritional double agents all these years? Or are they essential components of a healthy diet? Let's separate the wheat from the chaff.

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# Spicy Beef with Shrimp & Bok Choy

Oyster sauce and rice wine give this speedy stir-fry a rich flavor that balances the clean, sweet crunch of bok choy. *Make It a Meal:* Rice noodles or brown basmati rice and a Tsing Tao beer will make you feel like your eating in your favorite Chinese restaurant.

## Ingredients

- 1/4 cup Shao Hsing rice wine, (see Ingredient note)
- 1 1/2 tablespoons oyster-flavored sauce
- 2 teaspoons cornstarch
- 4 teaspoons canola oil, divided
- 3/4 pound sirloin steak, trimmed of fat, cut in half lengthwise and thinly sliced
- 1/4-1/2 teaspoon crushed red pepper
- 10 raw shrimp, (21-25 per pound), peeled, deveined and chopped
- 1 pound bok choy, preferably baby bok choy, trimmed and sliced into 1-inch pieces

CO (cont. from Pg 1)

### How will these sensors be utilized?

In the near future, I will be making my rounds to all personnel and taking some baseline CO measurements. Why? You might ask. Well, simply put, there is no clear agreement between medical professionals of what a true baseline “normal” value is for CO measurements. There are some inherent differences between smokers and non smokers, people who live in cities versus more rural areas, and some other minor subtle differences based upon exposures and what our own bodies become

## Preparation

1. Whisk rice wine, oyster sauce and cornstarch in a small bowl until the cornstarch is dissolved.
2. Heat 2 teaspoons oil in a large nonstick skillet or wok over medium-high heat. Add beef and crushed red pepper to taste; cook, stirring, until the beef begins to brown, 1 to 2 minutes. Add shrimp and continue to cook, stirring, until the shrimp is opaque and pink, 1 to 2 minutes. Transfer the beef, shrimp and any juices to a plate.
3. Heat the remaining 2 teaspoons oil over medium-high heat in the same pan. Add bok choy and cook, stirring, until it begins to wilt, 2 to 4 minutes. Stir in the beef-shrimp mixture to the pan and cook, stirring, until heated through and the sauce has thickened slightly, about 1 minute.

**Ingredient Note:** Shao Hsing (or Shaoxing) is a seasoned rice wine. It is available in most Asian specialty markets and some larger supermarkets in the Asian section. If unavailable, dry sherry is an acceptable substitute.

## Per serving Nutrition:

**Per serving:** 204 calories; 8 g fat ( 2 g sat , 4 g mono ); 54 mg cholesterol; 6 g carbohydrates; 0 g added sugars; 22 g protein; 1 g fiber; 384 mg sodium; 660 mg potassium.

**Nutrition Bonus:** Vitamin A (100% daily value), Vitamin C (50% dv), Zinc (23% dv), Iron (15% dv).



Recipe courtesy of:

**EatingWell**.com

accustomed to in our environment. That being said, once we compile our baseline statistics, then we will set a baseline “normal” value and appropriate “abnormal” values. In addition to CO monitoring of fire suppression personnel at fire incidents, we will also soon be receiving Draeger 5 gas monitors that allow us to actively monitor overhaul activities for both ambient CO and HCN (Hydrogen Cyanide), both of which make up what are referred to as “The Toxic Twins”



because while a modern day fire releases an unlimited amount of toxic chemicals, all of which can harm us, the two most prominent chemicals are consistently CO and HCN, These two toxins are in higher proportion than all of the other gases and so by monitoring for them, we can safely determine whether a true IDLH atmosphere is present and take appropriate measures. Stay tuned for more information.....



## Smoke Inhalation

### Stats thru 11/1/2010

Since January 1, 2010 the Coalition has tracked smoke inhalation incidents through the newswire. As of November 1, firefighters and first responders treated 1,478 civilians for smoke inhalation; 578 civilians died from smoke inhalation, 178 of which were children, and 244 firefighters have been treated on the scene or hospitalized for smoke inhalation and more than a few were treated in the hyperbaric oxygen chamber. In 2009 the Coalition tracked a total of 243 firefighter smoke inhalation cases, telling us that the number of firefighters that have succumb to smoke inhalation will surpass stats in 2009.

To date, 38 firefighters have died from

**Smoke Inhalation Treatment Database**  
<http://www.smokeinhalationdatabase.org/>

Help the coalition gather accurate statistics

cardiac arrest. Some after smoky shifts – maybe a day or two later. Many in good physical health. According to Dr. David Penney, “A number of long-term effects of CN poisoning have been identified. These include alteration of brain metabolites, demyelinating lesions of the brain, encephalopathy such as a Parkinsonian-like syndrome, neuropsychological sequelae, *ultrastructural changes of the myocardium*, and goiter. Everytime you breathe smoke, you chip away at your heart and brain – not to mention allow your body to be invaded by thousands of other cancer producing toxicants.

affecting about one in every 133 people, according to an often-cited 2003 study from the University of Maryland center for celiac research. There is no cure for celiac disease and no drugs that can treat it; you can only manage the condition, by sticking to a gluten-free diet for the rest of your life.

Even if you don't have celiac disease, gluten may still be bad for you, says Lara Field, M.S., R.D., a dietitian at the University of Chicago's celiac disease center. A rising percentage of people in the United States consider themselves "gluten-sensitive." "These people may have a food intolerance or experience many celiac-type symptoms after consuming foods that contain gluten," says Field. Some may have a form of wheat allergy. If you think you may have symptoms of a gluten intolerance, you can ask your doctor about scheduling a blood test to find out for sure. You can also check out The Gluten Connection, which has a simple self-test that can help you identify gluten intolerance, along with a complete eating plan that'll help you go gluten-free with ease.

## SHOULD I AVOID EATING GLUTEN EVEN IF I DON'T HAVE PROBLEMS WITH IT?

Gluten is also shunned by another group: People who simply think gluten encourages weight gain and who claim to feel more energetic when they don't consume it. They say humans didn't evolve the ability to digest certain domesticated grains containing gluten, and that avoiding gluten leads to more energy, better absorption of nutrients, and loss of excess weight.

Allen Lim, Ph.D., a former exercise physiologist for Garmin-Transitions, believes that going gluten-free has helped his team perform at a higher level. So does Danielson, who, like any competitive cyclist, burns—and eats—an immense number of calories

*Continued on Page 5*

*Gluten (cont. from Pg 1)*

## What is gluten, anyway? How does it affect the body?

Gluten is a protein found in wheat, barley, and rye, as well as in many common food additives. It's what gives dough its elasticity and baked goods their satisfying chewiness. But for people with celiac disease—a type of autoimmune disorder—eating foods that contain gluten can lead to a cascade of nasty reactions, including damage to the small intestine, poor nutrient absorption, diarrhea, abdominal pain, bloating, anemia, and fatigue. Celiac disease is surprisingly common,

### IAPS Data from February 2012

Reportable Injuries:	1
Record Only Injuries:	2
Injury by Activity:	
PT	0
Incident:	1
Training:	2
Station Duties:	0
Injury by Body Part:	
Head:	1
Torso/Back:	0
Extremities:	2
Heat Illness:	0

## “SAFETY CORNER”

- TGST, 2/3, Electrical Hazards

Pretty slow month, which is a good thing, in terms of incidents and/or accidents!



**Congratulations to all our new volunteers that recently completed the 3rd full volunteer module training program. Pictures here are from the Structure Module.**



**Congratulations and Farewell to Jake Sjolund on his movement to NEU as their new Training and Safety Bureau Battalion Chief.**



**Gluten (cont. from Pg 3)**

and pays close attention to what seems to work. "After I started the diet, I had better results. I didn't feel as fatigued, and my recovery period was quicker," says Danielson, who puts in 6-plus hours during a typical training session.

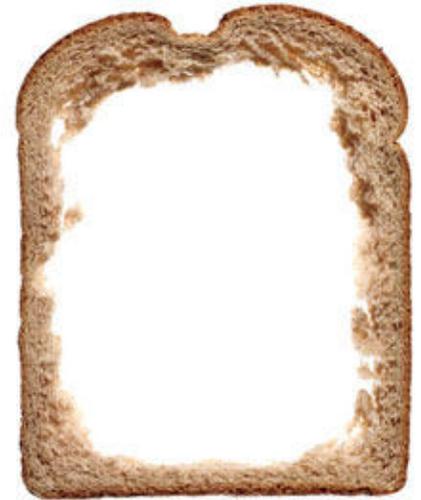
But this is anecdotal evidence; mainstream research still hasn't substantiated the claims of those who believe gluten is bad for everyone. "There is no strong scientific evidence to support the assertion that avoiding gluten leads to benefits for the general population," says Tricia Thompson, M.S., R.D., author of *The Gluten-Free Nutrition Guide* and the website [glutenfreedietitian.com](http://glutenfreedietitian.com).

Still, cutting out gluten can lead to weight loss—but not for the reason gluten-free advocates think. A strict gluten-free diet forces you to stay away from some refined carbohydrates that can lead to weight gain, Field explains. And that, she says, is where the weight-loss secret lies.

gain culprits: pizza, beer, burgers, pancakes. "Gluten itself probably isn't the reason you've packed on pounds," says Field.

"Eating too many refined carbohydrates is what expands your waistline." Commit to staying gluten-free and your food choices can become a snapshot of healthy eating—fruits, vegetables, brown rice, seeds and nuts, along with meat, fish, eggs, and milk products.

Avoiding gluten also means you're likely to avoid other whole grains and flours that lack gluten, such as buckwheat, quinoa, millet, teff, sorghum, and wild rice (which is not related to white rice). These aren't necessarily healthier options than gluten-rich wheat, barley, or rye, but consuming a wider range of grains gives you even more nutritional variety in your diet.



Gluten is found in many of the familiar weight-

**CE Answer Sheet:**

Complete this answer sheet from the previous CE article and forward it to the Training Office for grading and credit. (1 CE hour Credit for successful completion)

True       True

False       False

True

False

True       Not to take Vital

False       Not to talk about Vital Signs

True       Not to lie about Vital Signs

False

True       True

False       False

True       Yes

False       No

**Station:**

**Name:**

Be Back Next Month!

**Comments:**

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Looking through the TIC

*For Suggestions or Comments:*

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**"Let No Man's Ghost Say His Training Let Him Down!" -Unknown Author**