Health & Fitness

VOLUME 2, ISSUE 2 FEBRUARY 2012

A New Year of Healthy Possibilities!

Most of us came up with some pretty good New Year's Resolutions, such as to go to the gym more often or to eat a little healthier, but how many of you are sticking to those resolutions? Statistically, only about 10-15 percent of people are able to maintain their New Year's Resolutions a month into the New Year, and that statistic drops even more for those that are able to maintain it for the entire year. Here are some good tips from the CDC on how to be healthier, for the long term.

—The New Year has long been a time for reflection on the personal changes we want to make as we look forward to a year of healthy possibilities. Health-related goals are popular New Year's resolutions, but sometimes we may not know where to begin. Below, you'll find ways to get and keep a Healthy You, Healthy Family, Healthy Home, Healthy Community, and Healthy Workplace. Take time to make a healthy lifestyle your resolution.

Healthy You

- **Make Healthy Food Choices.** Grab a healthy snack such as fruit, nuts, or low-fat cheese.
- **Be active.** Try simple things such as taking the stairs instead of the elevator. Be active for at least 2 ½ hours a week.
- **Protect yourself** from injury or disease by wearing a helmet, sunscreen, or insect repellent when necessary.
- **Make an appointment** for a check-up, vaccination, or screening. Know where to go for care if you do not have health insurance.
- **Wash your hands** often with soap and water. If soap and water are not available, use an alcohol-based hand sanitizer.
- **Be smoke-free.** If you think you're ready to quit, call 1-800-QUIT-NOW for free counseling.
- **Get enough sleep.** Remember that sleep is a necessity, not a luxury.

Healthy Family

- Learn how to be healthy before, during, and after preg-

Continued on Page 2

The Ultimate Guide to Vital Signs: Part 3—The Respirations

The respiratory vital sign rounds out our "big three" vital signs. (Pulse and blood pressure being the other two.) It is, quite possibly, the most misunderstood and overlooked of the big three vitals.

Two big problems we encounter when factoring in the respiratory component of the vital signs are:

1) We're comfortable fibbing about the true respiratory rate. More so than pulse or blood pressure, respirations encourage us to violate the first rule of vital signs. Especially when the patient is in no apparent distress. We look at the patient, we make up their respiratory rate and, quite often, we're wrong.

2) We fail to recognize the relationship between rate and volume. In EMT school we are rarely asked about the respiratory volume. We perform our scenarios. We count a rate of respiration. We report it. The scenario moves on. In the process we forget that respiratory rate is only half of the breathing equation. Without volume, the rate means very little to us.

With those two common errors in mind, let's talk about obtaining an accurate respiratory rate and then

Continued on Page 3

The EMT Spot
Medicine Moves Fast ... Keep Up

Upcoming Events within the county

- Habitat Home Run 5k
  Feb 11th
  Bidwell Park
- Valentines Day
  Feb 14th
  Events throughout the county
- 30th Annual Almond Blossom Run
  Feb 25th
  Durham
- Co. 33 Annual Crab Feed
  March 3rd
  Paradise Pines POA

INSIDE THIS ISSUE:

Chili-Rubbed Tilapia with Asparagus & Lemon

Tilapia, a relatively plentiful fish, has the unfortunate reputation of being dull. All it needs is a spice rub, a familiar barbecuing technique that works just as well indoors. You could also use this rub on chicken breasts or toss it with lightly oiled shrimp before cooking.

Ingredients

- 2 pounds asparagus, tough ends trimmed, cut into 1-inch pieces
- 2 tablespoons chili powder
- 1/2 teaspoon garlic, powder
- 1/2 teaspoon salt, divided
- 1 pound tilapia, Pacific sole or other firm white fish fillets
- 2 tablespoons extra-virgin olive oil
- 3 tablespoons lemon juice

Preparation

1. Bring 1 inch of water to a boil in a large saucepan. Put asparagus in a steamer basket, place in the pan, cover and steam until tender-crisp, about 4 minutes. Transfer to a large plate, spreading out to cool.
2. Combine chili powder, garlic powder and 1/4 teaspoon salt on a plate. Dredge fillets in the spice mixture to coat.
3. Heat oil in a large nonstick skillet over medium-high heat. Add the fish and cook until just opaque in the center, gently turning halfway, 5 to 7 minutes total.
4. Divide among 4 plates. Immediately add lemon juice, the remaining 1/4 teaspoon salt and asparagus to the pan and cook, stirring constantly, until the asparagus is coated and heated through, about 2 minutes.

Serve the asparagus with the fish.

Per serving Nutrition:

Per serving: 211 calories; 10 g fat (2 g sat , 6 g mono); 57 mg cholesterol; 8 g carbohydrates; 0 g added sugars; 26 g protein; 4 g fiber; 419 mg sodium; 681 mg potassium. **Nutrition Bonus**: Vitamin C (37% daily value), Folate (33% dv), Iron (33% dv), Fiber (24% dv).

Recipe courtesy of: EatingWell.com

CDC (cont. from Pg 1)

nancy.

- Reduce auto-related injuries by using seat belts, child safety seats, and booster seats that are appropriate for your child's age and weight.
- Learn positive parenting tips to keep teens safe on the road.
- Develop and enforce rules about acceptable and safe behaviors for all electronic media.
- Lower the risk of foodborne illness as you prepare meals for your family.
- Serve healthy meals and snacks.
- Encourage and support physical activity.
- Gather and share family health history.
- Encourage family members to get check-ups and screenings. Make sure they know where to go for care if they do not have health insurance.
- Get pets vaccinated and keep pets healthy.

Healthy Home

- Install smoke alarms on every floor, including the basement, and particularly near rooms in which people sleep.
- Make your home safer to prevent falls among children and seniors.
- Keep cleaning products and medications out of the reach of children.
- Have an emergency plan and practice it often.
- Store meds safely, put every vitamin up and away when you use it.

Continued on Page 3

CDC (cont. from Pg 2)

Healthy Community

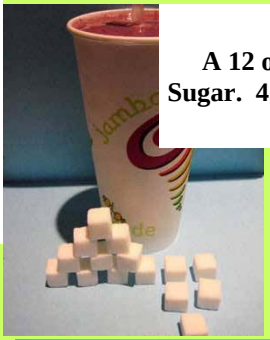
- Know the facts about childhood obesity.
- Get your immunizations.
- Choose healthier options to prepare for climate change.
- Wash your hands often with soap and water. If soap and water are not available, use an alcohol-based hand sanitizer.
- Keep water safe for drinking, recreation, and emergencies.
- Get tested and treated for sexually transmitted diseases.
- Don't drink and drive or let others drink and drive.

Healthy Workplace

- Stay at home if you're sick.
- Participate in or help develop healthy workplace programs and policies.
- Implement a smoke-free policy at your workplace.
- Take steps to prevent job stress.
- Lower work injuries and illness among youth.

Sugar Info

A 12 oz can of Coke lists 39 gm of Sugar. 4.2 gm = 1 teaspoon of sugar, or 1 cube of sugar



Respirations (cont. from Pg 1)

let's talk about truly assessing the quality of the patients respirations. Consider this your quick guide to respiration assessment mastery.

1) Assessing the True Respiratory Rate

Maybe we'd see less fibbing on the patients documented rate of respiration if we just admitted that the true respiratory rate isn't as important as you may have been lead to believe. I confess; I rarely count a respiratory rate while I'm on scene with the patient.

What's more important than finding the exact respiratory rate is your ability to recognize if the patient is breathing normally, or abnormally fast, or abnormally slow. With that in mind, try this. Look. Yes…just look. Instead of waiting until you have a moment to hold up your watch and count a respiratory rate, simple get in the habit of looking at your patient and asking yourself, "Are they breathing to fast, or to slow or just right?" Then act.

Consider the patients age, their fitness level and other factors like recent exertion, ambient temperature and emotions like anxiety and anger. The respiratory center is sensitive to all these factors.

When it's time to take a real-deal, documentable respiratory rate, find a moment when you can delegate a task to another provider, then step back and watch. I know that it's common to teach people to pretend that they're taking a pulse while they watch the respirations. This patient care head-fake always seemed a bit awkward to me. I just feel like I'm giving the appearance of taking a ridiculously long time to take a pulse. (Remember that I'm the guy that advocates for the three second pulse check.)

You might find that taking a moment to step back and just watch the scene progress while you partner and crew perform some task really improves your scene awareness. While you're taking that 30 seconds to *Continued on Page* 4

IAPS Data from January 2012

Actually from 12/30/11

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

"SAFETY CORNER"

1/3/12, Green Sheet 11-CA-AEU-028674, Load lost from utility vehicle
1/3/12, Green Sheet ref, 11-CA-RRU-115067, Burns from live fire training
1/5/12, Blue Sheet ref, 12-CA-MVU-000132, Damage to SO Helicopter
1/6/12, Blue Sheet,12-CA-SLU-000127, Inmate FF Fatality
1/7/12, TGST, Working in Cold Weather
1/9/12, Green Sheet 12-CA-SLU-000127, Inmate FF Fatality
1/10/12, Green Sheet 12-CA-MVU-000132, Damage to a SO Helicopter
1/14/12, TGST, Structure Fire PPE Awareness
1/15/12, Blue Sheet 12-CA-RRU-008333, Partial Roof Collapse
1/29/12, Green Sheet 12-CA-RRU-008333, Partial Roof Collapse

Respirations (cont. from pg. 3)

count the respirations, glance around and see what you might have missed while you were engaged in direct patient assessment.

If your patients respiratory rate is abnormally fast (tachypnea) you can get a pretty accurate idea of the true rate by counting for 15 seconds. Patients with respirations below 20 breaths per minute will fool you if you don't take a full 30 second sample.

2) Assessing the Quality of Respiration

Minute volume is the volume of air the patient inhales and exhales over a one minute time frame. Do you remember the minute volume equation you learned back in EMT class? Here, don't hurt yourself:

Respiratory Rate X Tidal Volume = Minute Volume

We didn't teach you that equation with the idea that you were going to go out and get a spirometer and start documenting minute volumes on your patient care report.

The reason we made a big deal out of minute volume was to drive home the point that respiratory rate was only half of the respiratory equation. You can't expect to count the respiratory rate and be done with your clinical decision making process. This misconception is often demonstrated by the very common EMT class question, "At what respiratory rate should I start bagging the patient?" My answer is always a resounding, "It depends!"

Imagine I asked you to tell me the value of Y in this equation:

$$5 + X = Y$$

You'd probably say, "Steve, I don't have enough information." (OK the wise-guy Algebra dude in the room might reply X+5, but nobody likes that guy.) You can't tell me the real value of Y because you only have half of the equation. In the same way, I can't tell you when to start bagging a patient based on respiratory rate alone (usually) because it's only half of the equation. I also need to know about the volume of air being moved with each breath. I need to know about the *quality* of respiration.

So how do we figure that out? I'm glad you asked.

1.) Look at the patient's posture.

I put this one first because it should be the first thing you instinctively evaluate as you're approaching a patient with respiratory difficulty. How are they sitting? (Or standing or laying.) People with advanced shortness of breath don't sit in a relaxed repose. They sit forward, often leaning on their knees. (Tripoding.) They prefer their legs down. And they don't lay flat on their back unless they are doing pretty good or they are nearing the point of intubation. It won't take you long to decide which side of the spectrum they're on.

2.) Look at their chest.

If the patient has relaxed, normal respirations, you won't see very much chest wall movement. But if they're working to breathe, you can tell if they are getting a good, equal expansion with each breath. Does the chest wall move with each breath or is much of the effort wasted?
Also not how they use their muscles. When they breathe in does the area above their clavicles retract? How about between the lower ribs out near their sides? How much effort does each breath take? How long do you estimate they can sustain that effort?

Also remember that our obstructive patients aren't fighting to breathe in as much as they are fighting to breathe out. Pay attention to the effort of exhalation. *Beware the patient who is getting tired of breathing.*

3) Listen to their lungs.

I know, I know. Some people still like to argue that lung sounds aren't an EMT skill. Forget those people. You're not going to get in trouble for using your stethoscope like a stethoscope. Listen to the anterior chest, just below the armpits and on the back, both between and under the scapula.

- Listen for sounds of obstruction like wheezes and stridor.
- Listen for sounds of fluid like rhonchi, rales and crackles.
- Listen for no sound at all. (Absent breath sounds should make you nervous.)

If you're new to the lung sound scene, listen to a lot of lung sounds. The best way to differentiate poor air movement and abnormal lung sounds is to hear lots of normal lung sounds first. Don't make the error of ignoring lung sounds on patients who are breathing normally. Learn what normal lungs sound like. Then the abnormal sounds will make more sense.

Now you've got the whole equation. The whole kit and caboodle. The whole story. Go forth and assess some respirations. Hopefully, the next time you evaluate and report the patient's respiratory status, you'll be talking about more than just a number.

Continued on Page 6

Exposing an Invisible Killer: The Dangers of Carbon Monoxide

Each year in America, more than 150 people die from accidental non-fire related CO poisoning associated with consumer products. These products include faulty, improperly-used or incorrectly-vented fuel-burning appliances such as furnaces, stoves, water heaters and fireplaces. Source: Consumer Product Safety Commission

The United States Fire Administration (USFA) and the National Association of Home Builders (NAHB) would like you to know that there are simple steps you can take to protect yourself from deadly carbon monoxide fumes.

Understanding the Risk

What is carbon monoxide?

Carbon monoxide is an odorless, colorless and toxic gas. Because it is impossible to see, taste or smell the toxic fumes, CO can kill you before you are aware it is in your home. At lower levels of exposure, CO causes mild effects that are often mistaken for the flu. These symptoms include headaches, dizziness, disorientation, nausea and fatigue. The effects of CO exposure can vary greatly from person to person depending on age, overall health and the concentration and length of exposure.

Where does carbon monoxide come from?

CO gas can come from several sources: gas-fired appliances, charcoal grills, wood-burning furnaces or fireplaces and motor vehicles.

Who is at risk?

Everyone is at risk for CO poisoning. Medical experts believe that unborn babies, infants, children, senior citizens and people with heart or lung problems are at even greater risk for CO poisoning.

What Actions Do I Take if My Carbon Monoxide Alarm Goes Off?

What you need to do if your carbon monoxide alarm goes off depends on whether anyone is feeling ill or not.

If no one is feeling ill:

1. Silence the alarm.
2. Turn off all appliances and sources of combustion (i.e. furnace and fireplace).
3. Ventilate the house with fresh air by opening doors and windows.
4. Call a qualified professional to investigate the source of the possible CO buildup.

If illness is a factor:

1. Evacuate all occupants immediately.
2. Determine how many occupants are ill and determine their symptoms.
3. Call your local emergency number and when relaying information to the dispatcher, include the number of people feeling ill.
4. Do not re-enter the home without the approval of a fire department representative.
5. Call a qualified professional to repair the source of the CO.

Courtesy of the USFA

Protect Yourself and Your Family from CO Poisoning

- Install at least one carbon monoxide alarm with an audible warning signal near the sleeping areas and outside individual bedrooms. Make sure the alarm has been evaluated by a nationally recognized laboratory, such as Underwriters Laboratories (UL). Carbon monoxide alarms measure levels of CO over time and are designed to sound an alarm before an average, healthy adult would experience symptoms. It is very possible that you may not be experiencing symptoms when you hear the alarm. This does not mean that CO is not present.
- Have a qualified professional check all fuel burning appliances, furnaces, venting and chimney systems at least once a year.
- Never use your range or oven to help heat your home and never use a charcoal grill or hibachi in your home or garage.
- Never keep a car running in a garage. Even if the garage doors are open, normal circulation will not provide enough fresh air to reliably prevent a dangerous buildup of CO.

When purchasing an existing home, have a qualified technician evaluate the integrity of the heating and cooking systems, as well as the sealed spaces between the garage and house. The presence of a carbon monoxide alarm in your home can save your life in the

Respirations (cont. from Pg 4)

Part 4: The First Rule of Vital Signs

This is probably a good time to bring up the number one rule of vital signs. Remember the movie Fight Club? Everyone knew the first rule of fight club was to never talk about fight club. Now let me give you the first rule of vital signs. Burn it into your memory.

Never lie about vital signs.
Oh, I know. You *think* you'd never lie about vital signs. You're an honest person right? Why would you lie about something as silly as vital signs? And yet, it happens…a bunch.

There you are deflating that blood pressure cuff. Everyone's looking at you, waiting for your report, and you hear . . . . (wait for it) . . . (wait for it) . . . nothing! everyone is waiting. And you did see the needle bounce right around 120 and stop bouncing right around 70. The BP must be normal right? Couldn't you just make it up and save face?

Don't do it. It's hard to admit when you just don't hear the BP or can't feel the pulse, especially when you think it's something you're doing wrong. It's easier…and very tempting, to fake it. Don't do it. You only have to make up incorrect vital signs once to completely blow your credibility.

Report a 120 over 80 blood pressure to your partner when it's really 60 over nothing just one time and your credibility as a caregiver is shot. Tell the hospital the patient has a strong pulse at 84 bpm when it's really weak and irregular at 136 bpm just one time and it will be a long time before they trust your hand-off report again. Medicine is harder when your colleagues don't trust you.

Everyone has had the experience of not being able to feel a pulse, or hear a lung sound or a blood pressure. Practice your vital signs. Take them diligently and then tell the God's honest truth about what you find.

CE Answer Sheet: Respirations

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)

1. Respirations are the fourth component of the vital signs.
   - ☐ True
   - ☐ False

2. Tachypnea = Rapid Respirations.
   - ☐ True
   - ☐ False

3. Simply determining the respiratory rate is adequate for assessing the pt's respirations.
   - ☐ True
   - ☐ False

4. Pt positioning can be good indicators of the pt's respiratory status.
   - ☐ True
   - ☐ False

5. Exhalation is as important to assess and inspiration.
   - ☐ True
   - ☐ False

6. Lung sounds aren't important to an EMT and should be left to other more trained medical providers.
   - ☐ True
   - ☐ False

7. The best way to get good at auscultating lung sounds is by listening to a lot of lung sounds.
   - ☐ True
   - ☐ False

8. What is the First Rule of Vital Signs?
   - ☐ Not to take Vital Signs
   - ☐ Not to talk about Vital Signs
   - ☐ Not to lie about Vital Signs

9. You can get accurate blood pressures by looking for the movement of the needle.
   - ☐ True
   - ☐ False

10. Has this series of articles on Vital Signs helped you to be a better care provider?
    - ☐ Yes
    - ☐ No

Name:

Station:

Comments: _____

_____

_____

_____

Inside the Burn Building

For Suggestions or Comments:

CAL FIRE / Butte County FD

176 Nelson Ave

Phone: 530-966-8682

Fax: 530-879-3433

E-mail: Mike.Waters@Fire.Ca.Gov

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