



VOLUME 1, ISSUE 8  
DECEMBER 2011

# Health & Fitness

## Upcoming Events within the county

- Paradise Christmas Tree Lighting & Truck Light Parade  
December 3 @ 5:30 pm  
Paradise Community Park
- Chico BloodSource Blood Drives  
December 5th, 12th, 19th, & 26th  
8 AM to 3 PM
- BTU HQ Christmas Party  
December 14th @ noon  
HQ Break Room
- Annual Crab Feed  
January 28, 2012  
Silver Dollar Fairgrounds  
6 pm—9 pm, Dancing—11 pm

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## How to stay motivated to exercise during the winter

Staying motivated to exercise can be difficult all year round, but staying on track with an exercise regimen when it's bitterly cold outside can be a real battle. Will winter win or will you?

As a martial arts trainer, yoga instructor, and former marathon runner, I have spent many hours contemplating what makes me and others want to go do that winter workout. The following are a few of the obstacles I've observed in myself and others that have an effect on my winter motivation to exercise.

Being cold indoors has a big effect on whether I'm willing to brave the cold outdoors. Some people have internal thermostatic controls that handle cold temperatures better than other people. For me, I can be completely unmotivated to workout if my core body temperature is even a little bit chilly while I am sitting at my desk in my office. However, if I turn on a space heater and warm my body up a few degrees, I'll suddenly feel like

hitting the snowy streets for a jog or heading out to the gym. Once my body gets moving, my core warms itself. But emotionally, I feel discouraged and tired when I'm cold. So, my first step toward motivating myself to go out into the cold for a workout is to warm my body up a few degrees.

A few years ago, I finally invested in some higher quality exercise apparel. As a female, I've found that it can be difficult to find heavy duty winter-gear in the women's department. Indeed, stay away from big box stores when shopping for winter workout gear. Head to stores that specialize in hunting, camping, or hiking gear. If you're a woman, don't waste your time looking in the women's section for warm clothes. The truly warm clothes are in the men's section. If you're planning on braving the outdoors for your workout in the winter, forget style in favor of a fit spring body. Knowing that your body will stay warm in your workout clothes can make a huge

by Jennifer Shipp

difference when you're debating with yourself about whether or not you're willing to head out for a jog when it's negative 10 degrees outside.

Spend the extra money on the higher quality clothes. Consider it an investment in your health. Paying for high quality winter gear that will get you out and exercising will pay off in fewer doctor's bills over the course of your lifetime.

Buy an indoor exercise machine. Every winter, in many parts of the country, there are days when it is not only unpalatable to go outside to exercise but also impossible. Whether you do your workout outdoors, or at a gym, there may very well be days when leaving the house is not possible. Indoor exercise machines can take up as little space as a coat in a closet and can be purchased cheaply. If you're on a super tight budget, head to a local thrift store to find a piece of exercise equipment that you'll enjoy using when going outdoors is not

Continued on Page 2

## The Ultimate EMT Guide to Vital Signs: Part 1—The Pulse

There are few things that EMT's should claim as their domain. There are certain skills that the EMT provider should simply dominate. Vital signs are one such skill. No medical provider anywhere should be able to hold a candle to the EMT when vitals signs are the name of the game.

Vital signs are, to the EMT, what sharp shooting is to the sniper; what the fast ball is to the closing pitcher; what swordsmanship is to Zorro. It's the EMT bread-and-butter skill. And yet...so many

EMTs fumble through vital signs like it's amateur hour. No more. Over the next few articles we're going to break down vital signs and make every one of our trusted and loyal readers a vital sign virtuoso.

Are you ready? Carnegie Hall awaits. Let's start with the pulse check.

Some EMT's can take 30 seconds to a minute to check a pulse. When they're done they have one single piece of clinical informa-



tion to pass on, the heart rate. Others can feel a pulse for 3 seconds and tell you much, much more about the patient's cardiovascular status. What's the difference? Practice and focus. If you'd like to be the second EMT, here's how.

**1) Know where to check for a pulse. (And why)**

Continued on Page 3

## Tips for Healthy Eating during the Holiday Season <http://www.netwellness.org>

Although holiday weight gain is a reality for many people, here are a few strategies for avoiding those extra holiday pounds without shunning the festivities. You do not have to feel deprived this season ... just make compromises and better choices.

### HEALTHY EATING HABITS

- Eat five or six small meals daily rather than the usual three meals. Frequent eating helps to control blood sugar and to curb your appetite.
- Eat a light, healthy meal a few hours before the holiday event. You are more likely to control your intake if you are not extremely hungry.
- Eat slowly and listen to your hunger cues. If you are not hungry, pass on the second helpings.

### HEALTHY FOODS

- Foods that are high in soluble fiber (such as fruits, vegetables, barley, oats, and legumes) slow the transit of food through the upper digestive

### Winter Exercise (cont. from Pg 1)

an option. Realize that if you're not one of those people who absolutely loves to exercise, that you need to have a moment of commitment built into your routine for winter or it will be too easy for you to give up before you even get started. My moment of commitment to a run starts when the door closes behind me. My moment of commitment to a martial arts workout happens when I enter my training studio. My moment of commitment to a run on the treadmill happens when both feet are on my machine and I begin calibrating the thing for the day's mileage goals. I've realized after many years

tract, making you feel fuller for a longer time. So eat a delicious apple or crisp carrots as a snack rather than grabbing a handful of chips.

- When choosing from a buffet, sample a variety of foods in small portions. Skip the usual, familiar foods and choose the special holiday items instead. Also remember to control calories by using only small amounts of sauces and gravies.
- Choose your favorite dessert and share it with someone. Just a taste of your special treat may be enough to satisfy your "sweet tooth".

### EXERCISE

- To compensate for those high-calorie foods, increase your exercise over the holidays. Exercise can burn up a few calories, reduce holiday stress, and renew your energy level.
- Pass by those close parking spaces and park farther from the mall entrance. Then take a few laps around the mall before you begin your shopping spree.
- Before the holiday event, take

that up until I cross the threshold or start hitting buttons on my treadmill, that I can easily turn back, get distracted, or just change my mind. If I can get myself onto my treadmill or into my gym, more than likely I will complete a full workout. Think and plan ahead for seasonal changes. Many runners don't train as vigorously in the winter or in the summer, for example, because the weather is not amenable to grueling trips on foot. Our bodies respond well to changes and fluctuations in a workout routine anyway. It is natural to want to take advantage of mild spring and fall weather by scheduling more challenging work-

a brisk walk around your neighborhood.

### TOMORROW'S A NEW DAY!

The holiday season is the toughest time of the year to maintain healthy eating habits. Try to enjoy yourself without overindulging. Remember that moderation is the key to calorie control. If you eat more than you had planned, get back on track the next day and set realistic diet and exercise goals for a healthier New Year!



**“Strength lies in differences, not in similarities.”**

**-Stephen Covey**

out plans. Changing up your workout from mostly outdoor walking in the spring to indoor dance videos in the winter can actually keep your body from plateauing in terms of weight loss or developing more strength or stamina.

Make weekly goals in your workout that syncs up with the weather predictions for the week. For example, in the winter months, I do all my running on the first 3 days of the week when the weather is good enough. Think about the reasons why you workout. These reasons are the thoughts that you use to motivate yourself into doing something that you have resistance toward doing. A lot of peo-

### Winter Exercise (cont. from Pg 1)

ple workout to lose weight. But people who are trying to lose weight also have emotional needs connected to weight loss. Losing weight will make them more comfortable while they're in the car, sitting at their desks, or reading the newspaper on the couch. But what about the feeling that you get after a workout? Exercise lifts the mood. Bundling up in bulky clothing in the winter to exercise doesn't really make a person feel thinner or lighter as they workout. But exercise does lift a person's mood. And I've found that during periods when weight loss was my goal, that focusing on weight loss as the only goal can actually set me back because after a workout, my body often looks bigger and flabbier than it did when I started. Weight loss doesn't happen right away following a workout. It can be really hard to psychologically pair weight loss together with exercise because after a heavy workout, the body swells and retains water. Using weight loss as the only motivating reason to head out into blizzard-like conditions when it's 20 below outside may not be enough to get yourself out the door to Workout World. It is often easier to motivate yourself to exercise in the winter if you do it to lift your mood and or to give yourself more energy during the day to do other things that you love. Exercise to connect with nature or to meet up and chat with a

### Pulse Check (cont. from Pg 1)

There are a bunch of places to obtain a pulse and good reasons to use each one. Here, our collapsed young runner shows us the seven primary pulse points that every EMT should know. Recall that the pulse is felt when we trap an artery between our finger (or fingers) and a bone lying beneath the vessel. There is some technique to this. It requires a firm, gentle, accurate touch. There's only one way to develop this skill. Take a lot of pulses. Let's look at each one of these pulse points in a little more detail. (See picture on Page 4)

We'll start at the top and work our way down.

friend at the gym can make or break a winter workout routine. Weight loss will happen, no matter what you use as motivation. Exercise, with time, should become a thing that you do as an end in itself. Exercise is actually grown-up playtime. As such, obesity or lack of physical fitness is testimony to an adult's need for play-time. Motivating oneself to do workout routines that are fun are more likely to be successful for all seasons. I like to think of winter as 12 weeks of Me vs. Nature. Every year I set out to confront the elements for those 12 weeks of bitterness knowing that if I can, a physically fit body with ever new possibilities awaits me in the spring.



Merry Christmas! (someone rescue me.....please!)

*“Running on a treadmill  
will never get you the same results  
as running from a lion!”*

*-The Most Interesting Man In The World*

### The Carotid Pulse

The carotid pulse is found by palpating the external carotid artery on the side of the neck on either side of the trachea. The carotid is a very central pulse and should be easily palpated with somewhat deep pressure. Feel for the side of the trachea and then press posterior into the neck.

This is the classic CPR pulse check site and well known to the lay public. It is often used by runners and athletes to assess their own heart rate. A palpable carotid is the current tipping

point for rapidly deciding if external chest compressions are indicated. Until a more definitive measure of cardiac output is available, in the absence of a carotid pulse, CPR is indicated. (Presuming the patient is unresponsive.) This site can also be used to assess the effectiveness of CPR. During adequate chest compressions, a carotid pulse should be palpable. If not, it might be time to switch rescuers.

### The Brachial Pulse

Felt on the inner aspect of the arm on babies and

*Continued on Page 4*

### IAPS Data from November 2011

Reportable Injuries:	3
Record Only Injuries:	0
Injury by Activity:	
PT	0
Incident:	1
Training:	1
Station Duties:	1
Injury by Body Part:	
Head:	0
Torso/Back:	0
Extremities:	3
Heat Illness:	0
Exposure:	0

### “SAFETY CORNER”

Recent topics sent out to the Unit

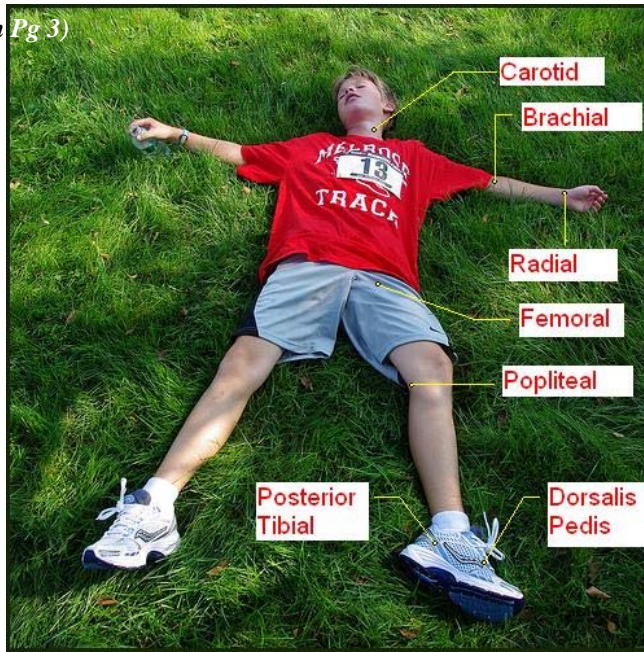
All TGST's and Blue/Green Sheets can be accessed via Outlook, under Butte: Training Bureau: Health & Safety: then either TGST or Alerts, Blue & Green Sheets, etc.

- CAL FIRE Blue Sheet, November 9th, CABDU012633- ECT MVA
- CAL FIRE Blue Sheet, November 13th, CACSR-67- Structure Collapse
- CAL FIRE Green Sheet, November 15th, CABDU012633- ECT MVA
- CAL FIRE Green Sheet, November 30th, CARRU098007-FF Injury
- TGST, November 17th, Cooking Safety
- TGST, November 23rd, Stress
- TGST, November 30th, Wind Event



## Pulse Check (cont. from Pg 3)

small children and commonly found on the medial aspect of the antecubital fossa in adults, the brachial pulse should be the starting point for each blood pressure check you perform. Find the brachial pulse and line the artery arrow on the BP cuff up with the pulse point about one inch above the elbow joint.



The brachial is the primary pulse check point for infant CPR, it's also often overlooked as an easily accessible pulse point when the radial pulse is inconvenient or painful to use. Feeling a brachial pulse requires a bit more pressure than the average radial pulse. Brachial pulses are often present even when a radial pulse is not discernible. If you are ever unable to palpate a radial pulse, the brachial should be your next stop.

### The Radial Pulse

Conveniently located and easy to palpate on the anterior / lateral portion of the wrist (thumb side), the radial pulse tends to be the classic point for checking heart rate and rhythm in the conscious patient. More convenient than a carotid, less personal than a femoral, the radial pulse is far and away the most common pulse location in use.

The absence of a radial pulse is a fairly reliable indicator that the systolic blood pressure has fallen below the 80 mmHg mark. Unequal radial pulses can signify a variety of conditions, including aortic abnormalities, vascular compromise, atherosclerosis and compartment syndrome. In the presence of shoulder or upper arm injuries, an accurate blood pressure can still be auscultated at the radial artery, providing that the cuff is properly fit to the forearm and applied correctly over the artery.

### The Femoral Pulse

After the aorta passes through the retroperitoneal cavity of the abdomen it branches into the left and right femoral arteries. These arteries can be palpated in the crease between the upper thigh and the lower pelvic area, where the lower abdominal quadrant joins the leg. Palpate deeply in the crease about midway between the iliac crest and the groin.

The femoral artery is a very central section of vasculature which makes it a popular point of access for insertion of cardiac stents and other invasive procedures that require surgeons to operate within the vasculature. It is also a great spot to check the effectiveness of CPR compressions. Due to its location, femoral pulse checks are reserved for unconscious patients. Like its centrally located brother, the carotid, femoral pulses can sometimes be felt at systolic pressures as low as 50 mmHg.

### The Popliteal Pulse

Possibly the hardest to locate of the bunch, the popliteal pulse is useful in assessing vascular compromise in the presence of a knee or femur injury. In significant leg injury it can assist in determining the location of vascular compromise and is a good secondary location for distal circulation checks when using a traction splint, which covers both of the primary pedal pulse locations.

The popliteal artery can be felt behind the knee and is easiest to reference when

the knee is slightly bent. Place both of your thumbs on the knee cap and feel in the pit behind the knee at the mid-point with the fingers of both hands.

### The Dorsalis Pedis Pulse

While its location can vary considerably, the dorsalis pedis pulse can often be felt on the dorsal (top) region of the foot just medial to the bony prominence above the instep.

The dorsalis pedis is the most commonly used pulse when assessing for distal circulation in lower limb injury. Once you find it, mark it with a pen for future reference. (Note the "X marks the spot" markings on the feet of the patient at left.)

### The Posterior Tibial Pulse

Due to the infinite variations of splinting options in lower limb injuries, it's often helpful to have an alternate spot for distal circulation checks. The posterior tibial pulse is located behind the bony promi-



nence on the distal end of the tibia. (The medial ankle bone.)

It's also a handy location to check if the sometimes elusive dorsalis pedis pulse cannot be located. Often patients with a difficult to locate dorsalis pedis pulse will have a strong posterior tibial pulse and vice-versa.

## 2) Know what you're checking

As previously stated, there's a lot more to that pulse check than heart rate. Circulation compromise, cardiovascular status as well as acute and chronic conditions can all be assessed if you're paying attention to the rate, quality, rhythm and equality of the pulses.

**Pulse Check (cont. from**

An exact heart rate is actually pretty low on my pulse check priority list. Before that, I primarily want to know if it is fast or slow, strong or weak, regular or irregular. Most of the really important stuff can be figured out in the first three seconds of your pulse check.

**3) Put the pulse in context for the patient**

This is often overlooked and one of the harder things to grasp for newer EMTs. The pulse, just like everything else you assess, needs to be placed in the context of the overall clinical picture.

An EMT student might ask, "What if I can't find a radial pulse?" Hoping for some definitive response to the "no pulse" situation. The answer is always the same. "What's the patient's mental status? What does their skin look like? Do they have a brachial pulse? Do they have a radial on the opposite side?" The answers to these questions and a bunch more will determine the proper next step.

A friend of mine recently assisted a dentist who was doing CPR on a conscious combative male who had collapsed at a local pool. The fact that he couldn't feel a carotid pulse was the only thing that mattered to him. The rest of the clinical presentation, including the victim's cries of protest, didn't matter to the dentist. He insisted bystanders help restrain the patient while he continued CPR. Sometimes, even people with advanced medical training have a hard time considering the whole clinical picture.

The presence or absence, rate and rhythm, equality or inequality, strength or weakness all need to be put into the greater context of the patient presentation. They don't stand alone.

**4) Really take a pulse**

I don't mean take a long time. I mean focus. Pay attention to that pressure wave beneath the skin we call a pulse. We check pulses so routinely, we often fall into the habit of not paying attention to other stuff while we check a pulse. Allow me to elaborate.

Have you ever checked your watch and had someone else who saw you checking ask, "Hey, what time is it?" ...and you have no idea? That's because you were performing a routine. You weren't really focusing on the time, you were just checking because that's what you do.

We do the same thing with pulses. We check it, we find it, we hold it for a few seconds and then we move on. If someone sees us check and asks, "What was the pulse like?" we might know, we might not.

Don't get stuck in that rut. Feel the wave. Visualize the heart beating within the patient, sending a wave of pressure through the vessels. Feel for its regularity, equality, strength and rate. Ask yourself what it means. Now you're on your way to becoming a virtuoso.

*Now it's your turn: What's your favorite pulse check trick?*

**CE Answer Sheet: Pulse Check**

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)

- |  |  |
|--|--|
| <p>1. Just a number for a pulse is adequate.</p> <p><input type="checkbox"/> True</p> <p><input type="checkbox"/> False</p> <p>2. Checking the radial pulse on any patient is usually adequate and thorough.</p> <p><input type="checkbox"/> True</p> <p><input type="checkbox"/> False</p> <p>3. A popliteal pulse is located near a radial pulse site.</p> <p><input type="checkbox"/> True</p> <p><input type="checkbox"/> False</p> <p>4. Femoral pulse checks are generally reserved for which type of patients?</p> <p><input type="checkbox"/> Conscious</p> <p><input type="checkbox"/> Unconscious</p> <p>5. You can evaluate the effectiveness of CPR by doing a femoral pulse check.</p> <p><input type="checkbox"/> True</p> <p><input type="checkbox"/> False</p> | <p>6. There is often an inverted correlation between the dorsalis pedis pulse and the posterior tibial pulse.</p> <p><input type="checkbox"/> True</p> <p><input type="checkbox"/> False</p> <p>7. Pulse checks can tell you not only heart rate but also things such as circulation status as cardiovascular compromise.</p> <p><input type="checkbox"/> True</p> <p><input type="checkbox"/> False</p> <p>8. CPR should always be started when you cannot detect a pulse.</p> <p><input type="checkbox"/> True</p> <p><input type="checkbox"/> False</p> <p><input type="checkbox"/> Maybe</p> <p>9. Pulse rate information is not as important as a blood pressure.</p> <p><input type="checkbox"/> True</p> <p><input type="checkbox"/> False</p> <p>10. Can you get any additional information by reassessing the pulse?</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p> |
|--|--|

Station: \_\_\_\_\_

Name: \_\_\_\_\_

Comments: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

*E45 at work*



*For Suggestions or Comments:*

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