

# EMSC Connects

Volume 5, Issue 11

November 2016

Emergency Medical Services for Children  
Utah Bureau of EMS and Preparedness

## Special points of interest:

- Cold Injury
- Hypothermia Protocol
- New Website

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## A Word From Our Program Manager

I generally try to find something to write about related to the topics of the monthly newsletter. Tia Dickson, RN, our EMSC clinical consultant, does a fantastic job in compiling and editing the monthly newsletter with educational information on pediatric emergency care. She shares the topic with me early on in the process. But this month, I'd like to focus on the healthcare providers themselves because November 2 is Stress Awareness Day.

In talking with friends, family, and colleagues, everyone seems a bit tense, apprehensive and a little stressed. In part, the apprehension may be related to an uncertain political future because we have a "huge" election looming over us and the campaigning has gotten a bit "nasty." Then, there is the stress we experience within our daily lives associated with work and family.



As I was browsing the web for info on workplace stress, I found a couple of websites that provided info graphics on stress: Successories newsletter, Huffington Post, and Office Vibe. Additional statistics were found by CDC NIOSH, the World Health Organization and the American Psychological Association. The World Health Organization stated that stress was an epidemic. The CDC NIOSH reported that the effects of stress cause cardiovascular disease, musculoskeletal and psychological disorders, workplace injury, suicide, cancer, ulcers and impaired immune systems.

Some of the statistics found included:

- 76% of workers cited that work was the leading cause of their stress
- \$300 billion/year is the annual cost to employers in stress related health care and missed work
- 54% stated that stress has caused them to fight with the people close to them
- 77% regularly experience physical symptoms caused by stress
- 73% regularly experienced psychological symptoms by stress
- 87% of workers worldwide are emotionally disconnected from their workplaces and less likely to be productive

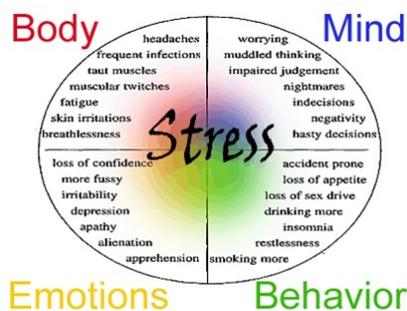
So what can we do about it? Well, you and I both know that getting enough sleep, eating right and exercise are some of the recommended activities. There are some little things we can also do for instance: complimenting someone, doing volunteer work, spending time outdoors, saying good morning, smiling, meditation, listening to music and engaging in hobbies. Organizations can recognize employees for their good work, provide career opportunities, build a culture that values the employee and match management actions with organizational values.

With the political uncertainty, workplace stress, family pressures and maybe even self-inflicted pressure of trying to meet our own expectations, healthcare providers need to be aware of stress, the consequences and take action. Taking care of yourselves will allow you to provide the best care possible to the patients.

As the holiday season approaches, I wish you a blessed Thanksgiving and would like to extend a heartfelt thank you to all Veterans for their service to our country.

Take care, be safe and thank you for your continued dedication and service to the children of Utah.

Jolene Whitney  
[Jrwhitney@utah.gov](mailto:Jrwhitney@utah.gov)



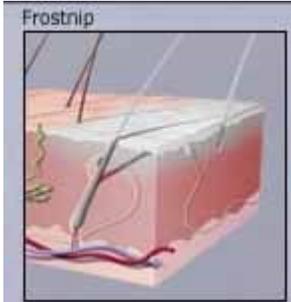
To submit or subscribe to this newsletter

Email: [Tdickson@utah.gov](mailto:Tdickson@utah.gov)

## The Doc Spot

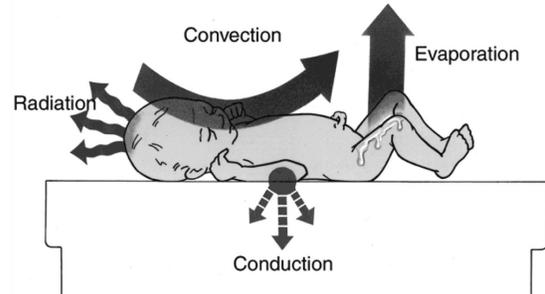
Adapted from Laura Sellis MD, Hypothermia and Cold Injury

Exposure to cold can produce different injuries. They can be divided into localized injury to a body part or parts, generalized cooling of the entire body (hypothermia), or a combination of both.



### Methods of heat loss

- Conduction
- Convection
- Radiation
- Respiration
- Evaporation



### Hypothermia

Cooling of the central part of the body to a core temperature of less than 95 degrees (35c)

#### Mild hypothermia

- **95-98degrees:** Feel cold, shivering, difficulty with hand coordination
- **90-95degrees:** Increased shivering, loss of coordination, difficulty speaking, mild confusion

#### Severe hypothermia

- **86-90degrees:** Shivering stops, incoherent, skin blue
- **80-86degrees:** Breathing and pulse slow down
- **< 80 degrees:** V-fib, death

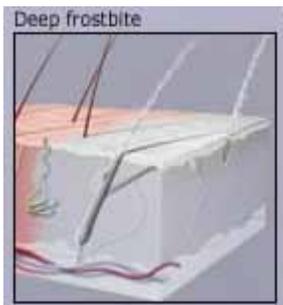
### Localized Cold Injury

Frostnip is the most common injury of this type. It is a cold-induced area of superficial blood vessel constriction. The skin remains soft and tissues do not freeze. The patient will complain of tingling, pain, and numbness. After warming, skin is pink, mildly swollen, and no blisters form.

Frostbite is freezing of body parts. Superficial frostbite involves only skin, while deep results from freezing of underlying tissue including muscle, tendon and bone. Pain may cease when the affected extremity is re-warmed. Skin is cold, pale, solid, and waxy. Blisters usually develop.

### Management of frostnip/frostbite

- Rapid re-warming is better than slow
- Use water between 102 and 108 degrees (do not touch sides of the container)
- Avoid re-freezing which leads to gangrene



*“Exposure to cold can produce different injuries”*

## Protocols in Practice

### Hypothermia

Hypothermia can be a primary complaint or a secondary issue in the injured child. Injured patients with hypothermia are more likely to die than normothermic patients with a similar injury severity score. (Sundberg J, Estrada C, Jenkins C, Ray J, Abramo T, 2010).

It is extremely important that the pre-hospital provider understands how to both prevent and treat hypothermia.

Fahrenheit-Celsius conversion table	
°F	°C
105	40.6
104	40.0
103	39.4
102	38.9
101	38.3
100	37.8
99	37.2
98	36.7
97	36.1
96	35.6

BLS	ALS
<ul style="list-style-type: none"> <li>Remove any wet clothing from patient and <i>carefully</i> move to warm environment (do not immerse patient in water)</li> <li>Refer to General Pediatric Assessment Guidelines</li> <li>Maintain airway, administer 10-15 lpm of oxygen via NRB</li> <li>Begin BVM ventilation for <b>3 minutes*</b> with 100% oxygen for:                             <ul style="list-style-type: none"> <li>Ineffective respiratory effort</li> <li>Heart rate                                     <ul style="list-style-type: none"> <li>&lt; 80 for infants</li> <li>&lt; 60 for children</li> </ul> </li> </ul> </li> <li>Cyanosis despite 100% oxygen via NRB</li> <li>Decreased level of consciousness</li> <li>Check for pulse, if no pulse begin CPR</li> <li>Begin active rewarming measures (hats, blankets), apply heat packs over chest to warm heart</li> <li>Protect injured (frostbite) areas, <i>do not rub or place on heated surface</i></li> <li>Protect patient from further heat loss</li> <li>If patient awake and alert with intact airway, offer sugar containing solution to drink</li> <li>Transport for medical evaluation</li> </ul>	<ul style="list-style-type: none"> <li>Follow BLS procedures</li> <li>Place on cardio-respiratory monitor and continuous pulse oximeter</li> <li>Assess for arrhythmias</li> <li>If unable to effectively perform BMV, consider intubation</li> <li>Initiate IV/IO                             <ul style="list-style-type: none"> <li>Warm IV NS or LR 20mL/kg</li> </ul> </li> <li>Administer medications as directed by Medical Control</li> <li>Transport for medical evaluation</li> </ul> <p>Refer to the pediatric off-line medical direction protocol guidelines; hypothermia</p>



*“Injured patients with hypothermia are more likely to die than normothermic patients with a similar injury severity score.”*

### Key Points/Considerations

- \* Do not remove clothing unless immediate active rewarming can be done.
- \* Remove wet clothing from the patient before rewarming.
- \* Be careful in the transport of unconscious patients, rough movement can precipitate arrhythmias.
- \* Keep patient lying flat to reduce cardiac work.
- \* In the rewarming phase arrhythmias can develop; recognize and treat.
- \* Notify medical control early to activate resources at receiving hospital.

**Did You Know?**

**Health Department and the Bureau of EMS and Preparedness have revamped their website**



In October the Bureau of EMS and Preparedness revamped their website and it is very user friendly. It uses the same address (<https://bemsp.utah.gov/>) as before but you might notice that some of your previously bookmarked sites are not working. You may want to establish some new links.

From the HOME page, you will find the EMSC website and resources under the Operations & Response section. Select Specialty Care, Access and Functional Needs. Or you could just link directly here: <https://health.utah.gov/ems/operations-and-response/specialty-care-vulnerable-populations/emsc/>

Check out the screen shot below to see just a few of the resources available to you online. Find archived newsletters, pediatric protocols, CHIRP program information, and portals for Emergency Responders and EMSC Coordinators. You will be surprised at the wealth of material available.

## EMSC

Utah's Emergency Medical Services for Children (EMSC) program aims to promote an integrated EMS and Trauma Response system to reduce the morbidity and mortality of the pediatric population (ages 0-14, inclusive) in Utah and the surrounding intermountain region by working in partnership with Primary Children's Hospital to:

- Promote and support injury prevention
- Deliver culturally competent training
- Conduct performance improvement activities for communities and health care providers.

EMSC Connects Newsletter



### Children's Health Information Red Pack (CHIRP)

The CHIRP program is a free service provided the Utah Emergency Medical Services for Children program within the Utah Department of Health. The goal is to ensure that up-to-date information is easily available for emergency medical services providers if you have to call 9-1-1 to assist your child with special health care needs. Please use the link below to create or retrieve a CHIRP sheet for your child.

- CHIRP Parent/Guardian Login
- CHIRP Staff Login

CHIRP Program Information and Resources



### EMSC Resources

Bicycle Skills Rodeo Trailer Loading Video

EMSC Resources for Emergency Responders



Resources for EMSC Coordinators



Contact Jolene Whitney ([jrwhitney@utah.gov](mailto:jrwhitney@utah.gov); 801-273-6665) or Tia Dickson ([tdickson@utah.gov](mailto:tdickson@utah.gov); 801-273-6674) with questions or concerns regarding the content of these pages or Utah's EMSC program.

# November 2016

Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1	2	3 PGR	4	5
6	7	8	9	10 PGR	11 DATC DXATC →	12
13	14	15 UVU PEPP →	16	17 PLS PGR	18 Juab Co PEPP →	19
20	21	22 Davis Co PEPP	23	24 	25	26
27	28	29	30			

## Pediatric Education Around the State

**Pediatric Grand Rounds (PGR)** are educational/CME offerings webcast weekly (Sept-May) you can watch live or archived presentations. It is geared towards hospital personnel. But will qualify for BEMSP CME Access at <https://intermountainhealthcare.org/locations/primary-childrens-hospital/for-referring-physicians/pediatric-grand-rounds/>

Nov 3rd *Clinician Wellbeing and Resilience*, Hilary McClafferty, MD, FAAP

Nov 10th *Pediatric Sleep Disorders, Frequently Occurring Problems and Interventions*, Brian McGinley, MD and Cekestia Buckley, PsyD

Nov 17th *The Genetic Basis of Mendelian Conditions—Discoveries, Challenges and Opportunities*, Micheal Bamshed, MD, FACMG

**EMS Grand Rounds (EGR)** This offering alternates with Trauma Grand Rounds every other month, it is geared towards EMS. Live viewings qualify for CME credit.

There are 2 ways to watch

1. Live real time viewing via the internet at: [www.emsgrandrounds.com](http://www.emsgrandrounds.com) If you would like to receive CME for viewing this presentation live, email Zach Robinson ([Zachary.robinson@hsc.utah.edu](mailto:Zachary.robinson@hsc.utah.edu))
2. Delayed viewing at your personal convenience, a week after the presentation at: [www.emsgrandrounds.com](http://www.emsgrandrounds.com)

**Peds EMS Lecture Series (PLS)** Free monthly pediatric CME/

CEU presentations from Primary Children’s Emergency Department Attending Physicians to Utah’s EMS. Offered every 3rd Thursday. Contact [Lynsey.Cooper@imail.org](mailto:Lynsey.Cooper@imail.org) for info

Nov 17th

**Project ECHO Burn and Soft Tissue Injury (ECHO)** has a pediatric and adult component. CME/CEU and MD CME available <https://crisisstandardsofcare.utah.edu> click request access and follow instructions.

Next session will be **December 21st** and will discuss “*Hot Candle Injuries: Ear Candle, Take it Off Your Christmas List.*”

## Upcoming Peds Classes, 2016

For PEPP and PALS classes throughout the state contact Andy Ostler [Aostler@utah.gov](mailto:Aostler@utah.gov)

For PALS and ENPC classes in Filmore, Delta and MVH contact Kris Shields at [shields57@gmail.com](mailto:shields57@gmail.com)



## Emergency Medical Services for Children

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Follow us on the web  
<http://health.utah.gov/ems/emsc/>  
and on Twitter: EMSCUtah

The Emergency Medical Services for Children (EMSC) Program aims to ensure that emergency medical care for the ill and injured child or adolescent is well integrated into an emergency medical service system. We work to ensure that the system is backed by optimal resources and that the entire spectrum of emergency services (prevention, acute care, and rehabilitation) is provided to children and adolescents, no matter where they live, attend school or travel.

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### Happenings: Festival of Trees

This year will be held at the South Town Expo November 30 through December 3, 2016  
10:00 a.m. to 10:00 p.m. each day

