

MERIDIAN

Spring 2024



The Quarterly Publication of the Mountain Rescue Association

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NO GEAR AND NEEDING HELP: SAR TEAMS RETRIEVE UNPREPARED SUBJECTS

ICAR: Stress Resilience
Recognizing Compassion Fatigue



MOUNTAIN
RESCUE
ASSOCIATION

Spring 2024

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ON THE COVER: Members of Chaffee County Search and Rescue evacuate a hiker who was caught in a snowstorm wearing a hooded sweatshirt and no survival equipment.



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President's Message

In Italy last October, the ICAR Medical Commission drafted recommendations for operational stress injury in SAR. The work of mountain rescue is difficult with many technical skills required but the psychological wellbeing of the humans involved is what makes us effective in our teams. Rescue work is emotionally challenging, but it should not be emotionally damaging. How do you deal with stress and stay in the green? How resilient is your team? Does your team culture support conversations about mental health? Look through the ICAR recommendations and check out the resources at Responder Alliance. Use these in your SAR work if you are not already doing so. Build connections on

your team. The benefits will be both personal and professional and will be lifelong.

Alison Sheets

President, Mountain Rescue Association

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2023 Final ICAR

RECOMMENDATIONS FOR STRESS RESILIENCE IN ALPINE RESCUE

Prepared for the AOD by John Ellerton (MedCom President) and Alison Sheets (MRA) Passed by the AOD on the 21st October 2023. Review date in 3 years time

These ICAR recommendations are designed for all rescuers and mountain rescue organisations.

Mountain rescuers are exposed to significant stress in the work they perform. The injuries, illnesses and fatalities seen, and exposure to the bereaved families and friends takes a toll on the emotional wellbeing of the professionals that respond to these incidents. Over the last decade, and more recently with the additional stressors of the global pandemic, building awareness and resilience against operational stress injury has become an important focus in alpine rescue organisations and other first responder agencies.

We believe that all rescuers should have the knowledge, skills and an ability to cope with the difficult work we do. All rescuers should be supported in this by their organisations. We also believe these recommendations promote a healthier team culture and could encourage better retention of experienced members.

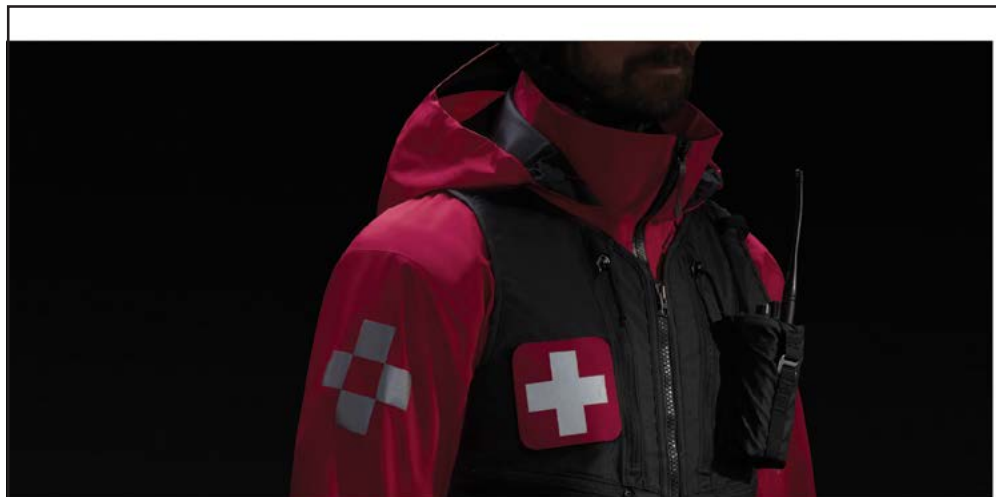
We would like to acknowledge the Responder Alliance (<https://www.responderalliance.com>) for their formative work and Marie Nordgren, Naomi Dodds, Jonathan White and others for their authorship. More detailed guidance is likely to become available in 2024. No evidence grading has been possible for this recommendation. It is based on consensus opinion. Comments are welcome; please send them to: mountain.medicine@alpine-rescue.org



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RECOMMENDATIONS:

We have divided the larger topic of operational stress injury in to three areas where education and training can be focused.

1.) POTENTIALLY TRAUMATISING EVENT

TRAUMATIC EXPOSURE PROTOCOL
POTENTIALLY TRAUMATIZING EVENT (PTE) CRITERIA

- FAMILY CONTACT
- MISSION INJURY/ HELPLESSNESS
- INCIDENTS INVOLVING CHILDREN
- PERSONAL CONNECTION OR EMPLOYEE INVOLVEMENT
- EXTREMES OF EXPOSURE
- COMPLEXITY OF INCIDENT
- DUTY TO ACT
- OVERWHELMED/DEPLETION
- FIRST TIME EXPOSURE

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2.) STRESS CONTINUUM

READY	REACTING	INJURED	CRITICAL
Sense Of Mission	Sleep Loss	Sleep Issues	Insomnia
Spiritually & Emotionally Healthy	Change In Attitude	Emotional Numbness	Hopelessness
Physically Healthy	Criticism	Burnout	Anxiety & Panic
Emotionally Available	Avoidance	Nightmares	Depression
Healthy Sleep	Loss Of Interest	Disengaged	Intrusive Thoughts
Gratitude	Distance From Others	Exhausted	Feeling Lost Or Out Of Control
Vitality	Short Fuse	Physical Symptoms	Blame
Room For Complexity	Cutting Corners	Feeling Trapped	Hiding Out
	Loss Of Creativity	Relationships Suffering	Broken Relationships
	Lack Of Motivation	Isolation	Thoughts Of Suicide
	Fatigue		

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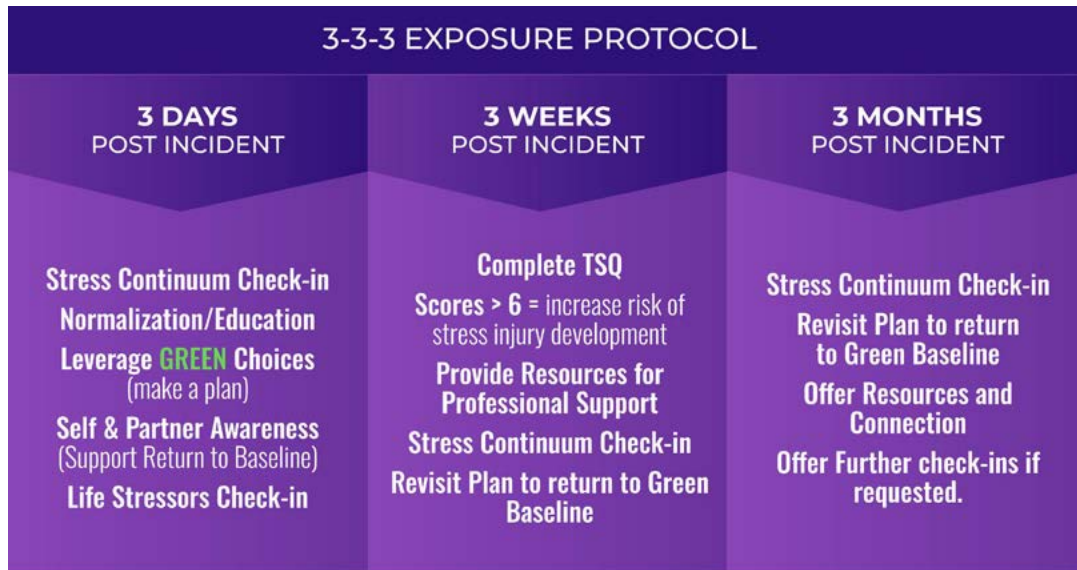
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3.) 3:3:3 PROTOCOL

Preparation and pre-planning



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4.) TRAUMATIC STRESS QUESTIONNAIRE

TRAUMATIC STRESS QUESTIONNAIRE

COMPLETE AT THE 3 WEEK CHECK-IN. ASKING THE QUESTION:
HAVE YOUR RECENTLY EXPERIENCED ANY OF THE FOLLOWING?

(AT LEAST TWICE IN THE PAST WEEK)

YES NO

1. Upsetting thoughts or memories about the event that have come into your mind against your will?		
2. Upsetting dreams about the event?		
3. Acting or feeling as though the event were happening again?		
4. Feeling upset by reminders of the event?		
5. Bodily reactions (such as fast heartbeat, stomach churning)?		
6. Difficulty falling or staying asleep?		
7. Irritability or outbursts of anger?		
8. Difficulty concentrating?		
9. Heightened awareness of potential dangers to yourself and others?		
10. Feeling jumpy or being startled by something unexpected?		

Traumatic Stress Questionnaire, C.R. Brewin et al, 2002 | used with permission

PREPARATION AND PRE-PLANNING	
1	Understanding exposure to stress, the formation of stress injury, its physical effects and risk factors should be part of all medical training.
2	Stress injury training should be recurring to normalize and destigmatize the discussion of emotional and mental health topics.
3	Organisations should develop a method to promote resilience and connection within its teams. This could be a resilience team within the team or other peer support to coordinate resilience efforts. Organisations should ensure there is continuous education about stress injury.
4	Mountain rescue organisations should develop strategies for the assessment of, the on going monitoring of, and the team response, to a potentially traumatising event - see (1) below - or other critical incident. For example, a line of duty death would meet the criteria. Other responding agencies should be included in this planning.
5	Successful organisations reduce exposure to stressors and proactively offer support. They should develop social cohesion and have zero tolerance policies on bullying, harassment, emotional and physical abuse.
DURING AN INCIDENT OR EXPOSURE	
6	Stress continuum utilisation - see (2) below - should be routine in the day-to-day activities of the team and the individual rescuer.
7	Stress First Aid* (SFA) should be practiced in order to provide practical, effective, and timely interventions. The five intervention principles (safety, calm, self-efficacy, connection, and hope) should be used when implementing SFA.
8	If feasible, rescuers should be able to “opt out” of traumatic exposures. Consider a “tactical pause” when there has been a major change to the mission goals. For example, a change from rescue to body recovery.
<i>*Stress First Aid focuses on the rescuer; Psychological First Aid embraces both rescuer and casualty/bystanders. The intervention principles are very similar.</i>	
AFTER THE INCIDENT OR EXPOSURE	
9	After action reviews or critical incident debriefs should be timely when a potentially traumatising event is identified. The focus should be on establishing the facts of the incident, what went right and areas for improvement. Acknowledgment of the incident stressors should occur but this should not retraumatise the participants.
10	Rescuers and team leaders should understand the elements of stress injury recovery and the normal timing of the stress cycle.
11	The 3:3:3 - see (3) below - model for follow up and the traumatic stress questionnaire (4) should be utilised to provide support to exposed rescuers and agencies.
12	Mental health professionals working with SAR personnel should be familiar with the rescuers’ tasks and culture of the organisation. A common language should be used consistently.

Unprepared and Freezing

Rick Lindfors - Meridian Editor in Chief

Search and rescue teams are no stranger to responding to calls for help from unprepared subjects or locating missing people who lacked the necessary clothing and equipment for their adventures. But these lapses in preparation can have life-threatening consequences as evidenced by two recent operations in Colorado and Oregon.

On November 8, 2023, Chaffee County Search and Rescue deployed to help a distressed hiker in the mountains near Cottonwood lake, Colo. The hiker had ascended a 13,000 foot peak earlier that day but battled a snowstorm

on the way down. Instead of taking the same way down, they decided to bushwhack down an avalanche chute to try and reach a road. They were able to call 911 around 7 p.m. but SAR was unable to receive GPS information from the phone call. Officials told the hiker to keep moving downhill.

More than two dozen CCSAR volunteers assembled and deployed to look for the hiker. SAR teams looked up and down several avalanche chutes, dealing with steep terrain and harsh weather. Hours later, a team found what



Search and Rescue volunteers and a USCG air crewman prepare a mushroom picker for a hoist in Benton County, Ore. (Benton County Sheriff)

looked like footprints. They followed the prints for more than an hour and a half until they reached “an unusual looking rock” in the new snow. The rock turned out to be the hiker sitting in a fetal position and covered in snow. CCSAR says they had serious hypothermia and were only wearing a cotton hoodie with no way of rewarming themselves.

CCSAR spent three hours rewarming the subject then assembled a rope system to lower them down the gully through new snow and over fallen trees. After several hours, the subject volunteered to walk out the rest of the way. They reached their base and an ambulance for evaluation at 7:00 a.m. the next morning.

In Oregon, rescuers retrieved an elderly mushroom picker who got lost over the Thanksgiving holiday with no equipment to sustain them. The Benton County Sheriff's Office says the 77-year-old man was reported missing around 9:30 p.m. November 22 near Philomath, Ore. BCSO says several agencies worked through the night into Thanksgiving day, finding him around 3:30 p.m. in a steep creek drainage a mile and a half from his vehicle. The man had left his pack, phone and other equipment and ventured out wearing Crocs sandals and socks in the

cold weather. Along with hypothermia, he was weakened by a recent back surgery and also couldn't hear SAR teams very well due to not wearing his hearing aids, an issue that SAR teams didn't know about at the start of the mission. But the man eventually saw rescuers and stood up to greet them. “He was in really good spirits because we were there [...] he was making jokes,” said Benton County Search and Rescue member Jim Blount. SAR volunteers assessed his condition, got him into dry clothing and wrapped him with a chemical heat blanket.

Incident commanders believed it was best to evacuate the man using a Coast Guard helicopter that had assisted earlier in the search. The helicopter was able to hoist the patient despite darkness settling over the search area.

Preventative search and rescue comes into focus with missions involving unprepared subjects, especially subjects who venture outdoors with little to no equipment or proper clothing. Corvallis Mountain Rescue, which assisted in the search for the mushroom picker, has offered webinars and talks on topics ranging from preparedness to avalanche safety. Social media is also a primary tool for SAR agencies. “[We do] various social posts about how you should be prepared before you go out,” said Corvallis

Mountain Rescue president Dan Sherman. In a release about their own mission, Chaffee County SAR said cell phones are not enough for backcountry communication. CCSAR says people should “verify [...] if the device you plan to use as your emergency back up is GPS capable and if this information can be provided quickly to first responders.” People also need to carry essential supplies such as extra layers, a means to signal to searchers and a way to start a fire if needed. SAR teams across the U.S. also stage teams at popular trailheads as a means to educate people on wilderness safety and also act as a quick response force should an emergency arise.

Members of Chaffee County Search and Rescue evacuate a hiker who became lost in a snowstorm near Cottonwood Lake, Colo. (CCSAR)



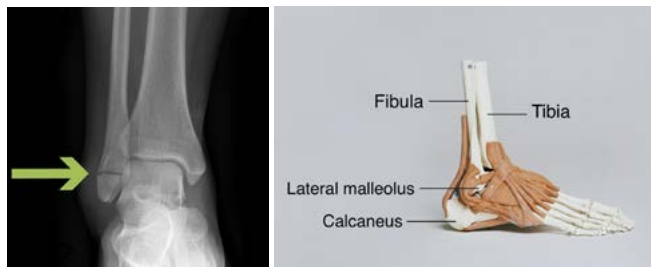
The Most Common Wilderness Injury: A Case Report

Will Petitt PA-C, MRA MedCOM

This article was originally published in the Winter 2022 edition of Meridian

The subject was a 60-year-old female hiking down from the summit of Pikes Peak (14,109 ft) on a sunny, September day. She stepped on a rock and twisted her left ankle, resulting in lateral (outside) left ankle pain only and no other injuries. El Paso SAR (Colorado Springs) and Douglas County SAR (South of Denver) responded to the subject at 13,500 ft.

The physical exam was significant for tenderness over the lateral malleolus (fibula, as pictured below) and the lateral ankle ligaments. She did not have tenderness over the medial malleolus (inside, tibia) and had no deformities. Circulatory, sensory and motor (CSM) function was intact.



FIELD MANAGEMENT

SAR applied a SAM splint by cutting the splint in half, placing one side on each side of the ankle, wrapping top with ace wrap, and taping one figure 8 around the shoe as demonstrated in the images below. This technique allows for more support and maintains shoe traction.



After splinting and re-evaluating for intact CSM, she was asked to walk five steps and she felt she could continue. SAR gave her the options of 1) waiting for a litter pack-out or 2) trying to ambulate up the 600 feet to the top of Pikes Peak. The subject started to walk with the splint in place and two hiking poles. SAR assisted her on some sections but she made it to the summit without incident.

RESCUE DECISION MAKING

SAR took into account the following several points prior to allowing her to hike out on a potential ankle fracture:


1. The subject had on low-cut trail running shoes.
 - a) It is also easier to identify a deformity with this type of footwear, but if in the field consider the subject's footwear (motorcycle, ski, snowboard or other type of large stiff boot).

- b) Her shoes allowed for a detailed exam to be performed without removal, including points of tenderness and CSM.
 - c) High-top boots don't allow for a detailed exam but do provide more stability.
 - d) Whether to remove the boot or shoe is a long topic but briefly, the boot/shoe itself provides insulation and support and once you take it off, it will be difficult to impossible to put back on.
2. SAR was less concerned about lateral ankle pain because the fibula, that is located laterally, is not a weight-bearing bone.
- a) The tibia, however, is weight bearing and located medially, so localized pain on the medial (inside) aspect of the ankle may not appropriate for hiking.
3. Evacuation was not easy but was attainable with a van waiting at the summit.
- a) The terrain was a mountainous trail but there was a vehicle at the top for transport.
 - b) If this was a longer evacuation or terrain was more challenging, then having the subject walk may not have been feasible.
4. Having the correct supplies and a subject with a good attitude makes all the difference. The subject was able to walk 5 steps with a well-placed splint, poles and motivation.
5. Weather was good.
- a) Extreme weather and unstable footing will complicate evacuation plans.
 - b) With deep snow, ice or more uneven terrain, a walk out would not be possible.




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DISCUSSION

Ankle injuries are the most common wilderness injuries that SAR encounters. While ankle injuries do not require a diagnosis in the field, simple principles can be used to make a decision about whether the subject can hike out on their own - which is safer for both the subject and the rescuer. Location of pain, degree of tenderness, an obvious deformity, subject reliability, and ability of the subject to stably bear weight and ambulate are factors when making a decision in the field. Generally a good exam and shared decision making between the subject and team with frequent re-evaluations are keys to a successful rescue.

While no specific clinical decision making tools exist to judge the risk of hiking out on an ankle injury, the Ottawa Ankle Rules (OARs) provide a 5-component evaluative tool that assesses likelihood of severity or complication of an ankle injury and can potentially be used as a guide to making this judgement call in the field. These components include bony tenderness along the posterior aspects of the malleoli, the base of the 5th metatarsal, navicular bone, and inability to bear weight both immediately after injury and for 4 steps during initial evaluation, with 2 or more positive findings correlating to increased likelihood of fracture that will be significant enough to be detectable on X-ray.

The OARs were designed to determine the need for X-ray in acute ankle injuries in order to screen out unnecessary imaging e.g. if sprained and not fractured, an X-ray will not provide useful information. They have been well validated with high degree of reliability and accuracy in detecting specific types of fractures. They do not exclude

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all ankle fractures or significant ligamentous injuries but the argument can be made that if the exam is reassuring without positive findings using the OAR components then it may be reasonable for the subject to ambulate on their injury. They do not preclude the risk of worsened injury with ambulation. Regardless, the decision should

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be made using clinical judgement and experience of the rescuers and or their medical leadership.

Will Pettit is a Physician Assistant at a level one trauma center in Denver, working in Orthopedics for the last 20 years. He is also medical chair for Douglas County Search and Rescue. He is a regular, longstanding member of the MRA MedCOM, a committee of medical professionals that writes a quarterly contribution to the Meridian. For questions about anything related to medical issues, contact medcom@mra.org. Thank you.



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Compassion Fatigue: Signs and Meaning for Search and Rescue Volunteers.

Rick Lindfors - Meridian Editor in Chief

Stress can show itself in many forms in first responders. One sign of stress or burnout is known as compassion fatigue. This can show itself as cynicism towards patients or feelings of hopelessness. Compassion fatigue can show after repeated exposure to stressful or traumatic incidents.

“Usually people who are vulnerable are the ones newer to the work,” said Tonya Wilhelm, a Minneapolis therapist and social worker, “but it can certainly happen at any point in your career.” According to the [FBI](#), communication and relationship struggles can also be an indicator of CF. Wilhelm says it is also common for first responders to have dark senses of humor, but directing anger towards subjects is a sign of feeling helpless. She adds compassion fatigue is also a sign that the person going through it does care for the people they help, but it is becoming painful to do so. An example is feeling like efforts as a first responder are not making a difference.

Compassion fatigue can be addressed at the individual level before and after incident exposure. “Mentally, I would recommend you know yourself pretty well,” says Wilhelm, “You should go into [search and rescue] knowing what fills you up and depletes you.” Individuals should have an understanding of their own signs and signals of distress and what could help address them.

For SAR teams, the issue can first be handled by first recognizing that an emotional



response is a hazard of being a first responder. Team leaders should recognize that there could be some sort of response after a mission. "I would see it as a job hazard and as something that needs to be managed," said Wilhelm. Peer support is an important tool for organizations as well as ensuring the culture of the organization supports emotional recovery. Wilhelm adds that organizations should have clear policies to help guide the support process for operators.



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Letter from the Editor

“Self-selection” is a phrase I’ve heard every now and then in my SAR career. It has always meant that an individual needs to recognize if they are able to meet the demands of a mission whether it is physical readiness or technical capacity and if necessary, opt out of a mission to ensure they are not placing themselves in a situation they cannot handle.. For example, someone could self-select if they are a novice climber being paged for a multi-pitch vertical rescue effort. This is not to say don’t respond, but rather only take on what you are capable of.

Selection is a continuous process for an individual in SAR, or at least it should be. Mountain rescue teams regularly assess physical fitness of members and maintain benchmarks to keep track of progress through the trainee, support and rescue level members. It is through training and repetition that MRA teams are able to keep their skills sharp and always at the ready for a callout.

The individual should assess themselves just as often as someone else who is grading them on their training. We always need to take a look at what we are and are not capable of, what we do and don’t know and then search for ways to improve. This applies to skills, systems and fitness. We need to live like someone else’s life depends on it. We do not get to choose when the time comes, the time chooses us and when it does we, our teammates and our patients deserve the best we can deliver.

Best,

Rick Lindfors

Meridian Editor in Chief
Northstar Search and Rescue



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