

Ogden Marathon

Medical Team Handbook



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Medical Director Welcome

It is my pleasure to welcome you to the medical team of the Ogden Marathon. For those returning, welcome back. Your experience will be critical keeping the race a safe and happy event. For those who are with us for the first time, we are glad to have you and hope this experience will lead to many more in the future. In some respects, it is like the first time for all of us as the pandemic has led to two years of no in-person racing. There is a lot of pent-up excitement for this race.

This break has led me to review our marathon handbook and bring you an updated version. Please review it in its entirety. Some of the information will not apply to you but much of it will, so please review it. Our race medical coordinator this year will be Dr Josh Hansen. He has spent a lot of time helping organize people and supplies for the race as well as meeting with Ogden City Police and Fire amongst other participating organizations. If you have questions about the race or your role, please contact him.

Please read through the race handbook in its entirety but note the following overarching points:

- Even though this is a race all athletes should be treated under patient privacy laws (HIPPA). Do not disclose any runner specific information unless asked to do so by the athlete. Discussion between medical team providers is acceptable. Direct all media inquiries to the Race Director and do not discuss patient care. If asked by bystanders how an athlete is doing, say something like, "Thanks for your concern, I cannot discuss any runners condition at this time."
- Our primary responsibility is keeping runners safe. As the race is stretched over 26.2 miles and does not pass in front of a clinic or hospital, we will all be working in a strange environment. Lean on the emergency training you have received and act only within your scope of practice.
- Our goal is to have an invisible presence on the race. Be patient when watching the runners and only intervene if medically necessary. This is a special day for our runners who have trained hard for this so try to have a minimal impact in their experience by intervening only when appropriate and as aggressively as necessary. Otherwise, be like the other volunteers and cheer them on. Please read the section on removing athletes from competition.
- While our focus is on keeping the athletes safe, we also have to take care of ourselves. The temperature will change throughout the day from cold weather in the morning to fairly warm weather by the afternoon. Rain and even snow are not uncommon during the race. Please dress in layers, come prepared for rain, and wear sunscreen. To identify yourself as a medical provider, please wear your work badge on the day of the race.

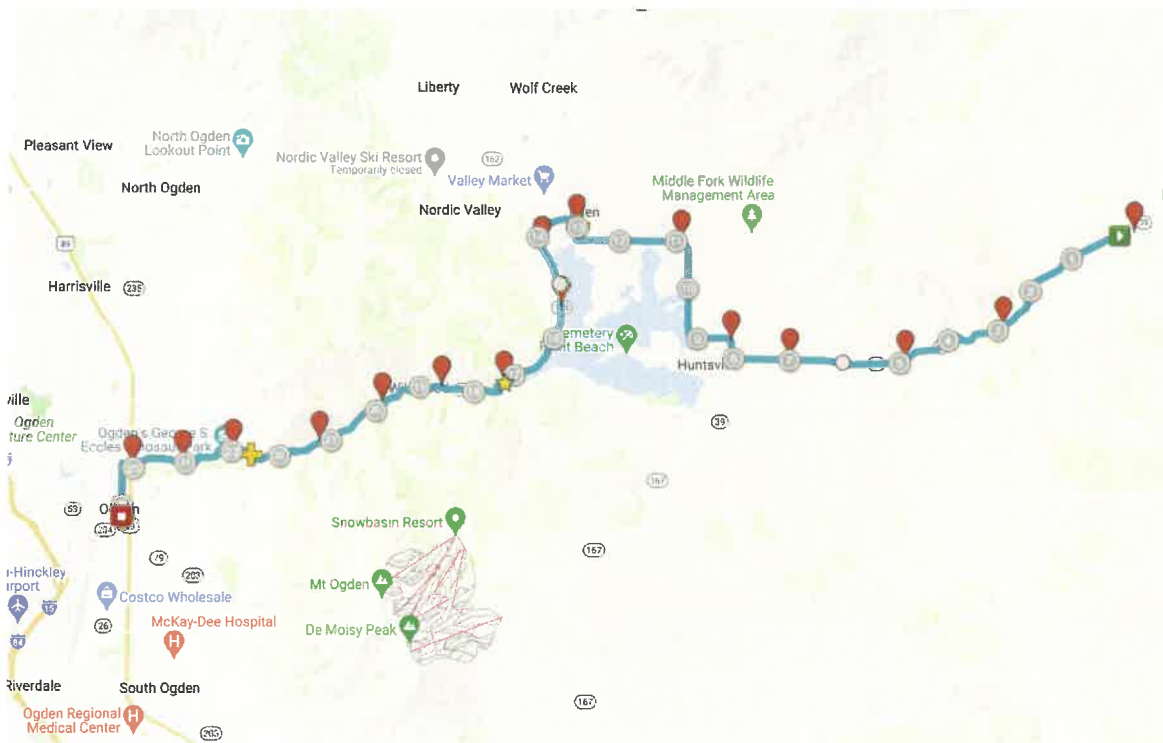
Working in medical is a lot of fun and very fulfilling. The runners are appreciative and many multi-marathon runners comment on the comforting and professional experience in our medical tents compared to other races. Let's earn that compliment. I'll see you on race day.

Sincerely,

Clark Madsen MD MS
GOAL Foundation Medical Director



Course Map



Aid Stations in red
Half Medical tent at Mile 13
Main Med tent at finish line
Small medical tent at mouth of Ogden Canyon



Contact Information

2022 Contact Information

Role	Name	Contact
Medical Lead / Finish Tent	Joshua Hansen MD	
ATC Lead/ Half Tent	Amy Jo Nelson ATC	
GOAL Medical Director	Clark Madsen MD	801-821-8319
Radio Medical Channel		XX

Race Day Instructions

Finish Line Tent

1. No parking at the medical tent, park in a nearby lot or parking structure.
2. Head to the finish line and find the medical tent.
3. The medical lead will meet you and provide details of your role.
4. Introduce yourself to your teammates. As you receive patients you will be responsible for each of them until discharge from the medical tent. Each athlete should have a completed athlete evaluation form which is saved in the designated location prior to patient discharge.
5. Athletes with minor musculoskeletal conditions will be managed by the ATC providers.
6. All other patients will be supervised by a nurse/resident team. Consultation with the attending physician is available for any patient.
7. Give a patient summary to the attending physician prior to discharge from the medical tent.
8. Missing items or other needs should be communicated to the Medical Lead in tent.
9. Communicate with the Medical Lead if you are leaving on a break or at the end of your shift. If you still have patients, please give verbal sign out to another resident or nurse.
10. If assigned to be a catcher, stand about 15m away from the finish line. Encourage runners to keep walking after the finish and only intervene if the athlete collapses or collapse is imminent. If the athlete can keep walking, assist them for 5 minutes. If able to walk on their own and can communicate their name, bib number, and hometown, they may be released, otherwise assist patient to the medical tent.
11. Always work within your scope of practice.

Half Start Tent

1. Parking is available at the site of the medical tent. (2100 N 5600 E, Eden, UT)
2. Be at the medical tent by 7:30AM
3. Always work within your scope of practice.
4. Any athlete you discuss medical care with should be logged in the athlete treatment list (appendix), any athlete you remove from the race should be relayed to the medical lead (location, bib number, reason).
5. Begin cleaning up once the last runner passes your station.



6. You are cleared to leave after all runners have passed into Ogden Canyon or been pulled from the upper course. Contact the Medical Lead to confirm closure of the Half Start Tent.

Aid Stations

Parking available near all aid stations

1. Arrive at your assigned time.
2. Set up the aid station with resources easily accessible for runners.
3. Do not interfere with athletes running the course. Read the section on removing athletes from the race.
4. In the event of a witnessed emergency, ensure that EMS is contacted immediately and apply first aid. Take care to practice within the scope of your training.
5. If EMS is not at your location, you may contact the medical lead with your location, runner bib number, situation, and time of arrival.
6. If the runner has minor injuries or wishes to leave the race, contact the medical van in your zone via radio to have the athlete picked up.
7. Any athlete you discuss medical care with should be logged in the athlete treatment list (appendix), any athlete removed from the race should be relayed to the medical lead (location, bib number, reason).
8. To the best of your abilities be a good steward of your supplies and the environment around your aid station
9. Be positive, friendly, and cheer on the runners
10. Once cleared by race director staff you may clean up and close down the aid station.

Medical Vans

1. Arrive at the finish line area by XX on the day of the race to find your assigned van and teammate. There will be one driver and provider for each van.
2. Drive your van to the assigned location.

	LOCATION	COVERAGE
VAN 1	Near Southfork Chevron (550 S 7800 E, Huntsville, UT)	Mile 1-13
VAN 2	Near Pineview Spillway	Mile 13- 21
VAN 3	Mouth of Ogden Canyon	Mile 21-finish

3. Make sure your radio is in good working order and set to the proper channel.
4. Maintain readiness to respond to calls for assistance within your zone. Respond quickly but safely. There are many runners on the course. Safety is better than speed.
5. When arriving to a distressed runner, perform a brief triage and determine disposition. Options include allowing the runner to continue the race, taking the runner to the half or finish line med tent, contacting EMS for direct transfer to a hospital. If unsure, contact the medical lead for support.
6. Any athlete found collapsed and unresponsive should be considered to have a cardiac event until proven otherwise. Apply the AED and contact EMS.



7. If EMS is not at your location, you may contact the medical lead with your location, runner number, situation, and time of arrival.
8. Any athlete with evidence of heat stroke should be taken to the finish line tent via EMS prior to going to the hospital. Rapid cooling in the medical tent with our prepared water tanks is the best treatment and must be done rapidly.
9. Some runners may have mild injuries and decline medical care and request a ride to their car. You should provide an evaluation to rule out major injury and take them to the half start or finish line medical tent, whichever is closer.
10. Any athlete you discuss medical care with should be logged in the athlete treatment list (appendix), any athlete you remove from the race should be relayed to the medical lead (location, bib number, reason).
11. After all runners have been cleared from your zone, check in with the aid stations in your zone to determine if they need assistance and then return to the finish line medical tent.



Temperature Affects Runners

In running a marathon, temperature control is key. Research has clearly shown that the number of injuries increases as the temperature rises. In addition, some of the most serious adverse events are directly related to ambient heat. When determining environmental risk, the marathon uses the wet bulb globe temperature (WBGT) which utilizes the air temperature, relative humidity, and relative radiant energy from the sun. The WBGT is monitored throughout the race to inform athlete risk.

Wet Bulb Globe Temperature Definition

Specialized thermometer with three chambers to measure temperature, humidity, and radiation.

$$WBGT = (0.7 \times \text{Wet Bulb}) + (0.1 \times \text{Dry bulb}) + (0.2 \times \text{Black bulb.})$$

Action Criteria

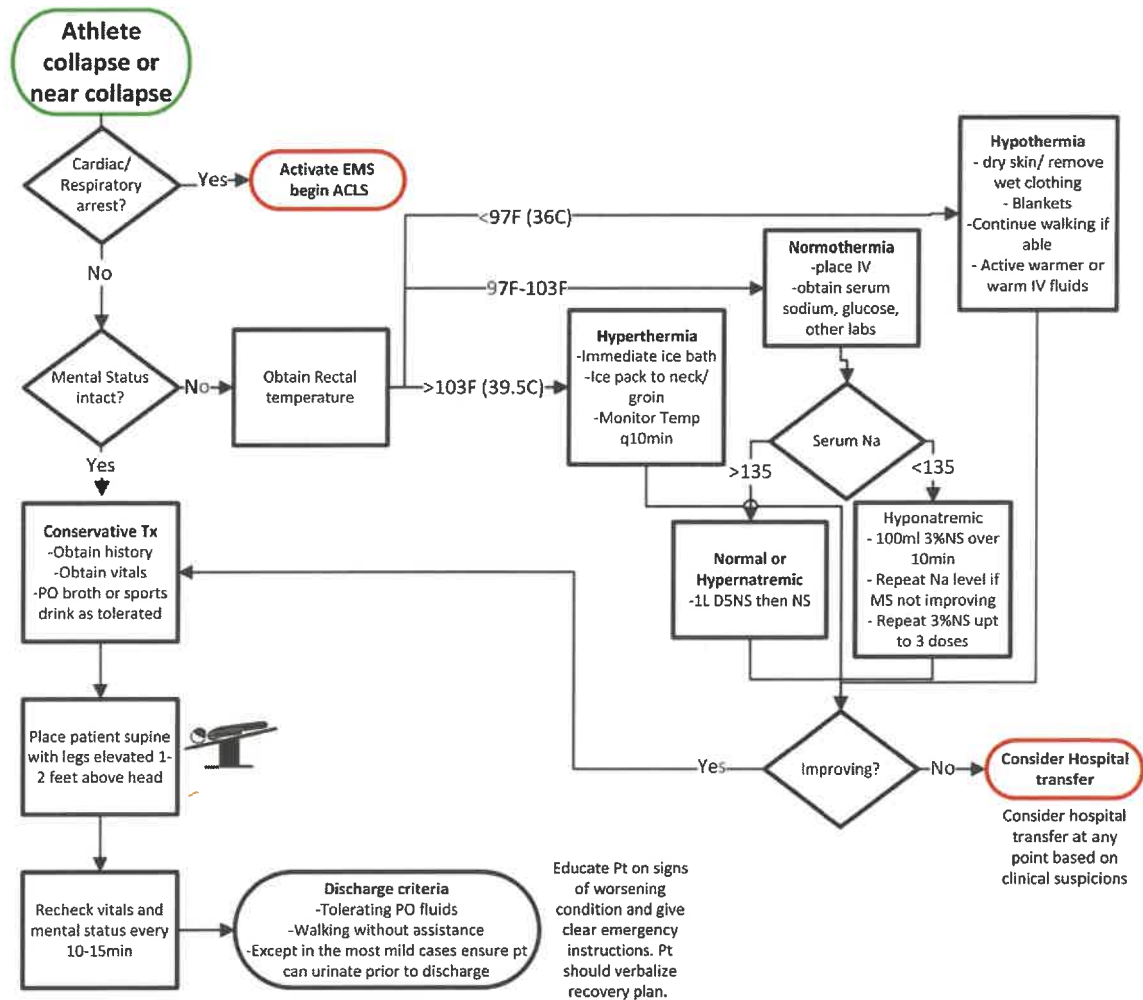
A flag system has been developed based upon wet bulb temperatures. This flag system is used to inform athlete safety and to educate runners.

	Black Flag	Red Flag	Yellow Flag	Green Flag	White Flag
WBGT	>28°C >82°F	23-28°C 73-82°F	18-23°C 65-73°F	10-18°C 50-65°F	<10°C <50°F
Risk	Extreme Risk	High Risk	Moderate Risk	Low Risk	Hypothermia Risk
Officials	Race delay or cancelation	Increase Hydration stations, inform local hospitals	Proceed with event	Proceed with event	Consider possible delay or cancelation of race
Medical Staff	Runners should be pulled from course, lookout for heat stroke and heat exhaustion	Elevated hyperthermia concern, add more ice baths	Watch for increased heat illness occurrence	Standard preparations	Watch for hypothermia injuries. Increase blankets and warm broth.
Athletes	Seek cool shelter, stop race	Increase hydration, reduce speed	Standard preparation and hydration	Standard preparation and hydration	Dress warmly with extra layers



Athlete Collapse Algorithm

Athlete collapse is the most common presentation to the finish line medical tent. Please review the algorithm below. Most cases are due to acute hypotension from abruptly stopping after ~4 hours of running. However serious causes of collapse do occur.



Symptoms of impending collapse

dizziness / lightheaded
confusion
cramps
headaches
palpitations
nausea / vomiting / diarrhea
feeling hot/cold

Signs of impending collapse

dry or cold skin
altered mental status
dysfunctional gait



Environmental Dangers

Precipitation

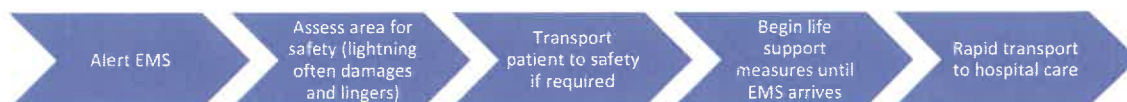
Rain and even snow are unlikely to stop or significantly alter the race. The medical tents should anticipate higher risk of hypothermia and prepare accordingly. The on-course medical providers should watch for excessive shivering or altered mental states. Slips and falls are also going to be more common. If precipitation becomes severe or temperatures drop very low (see Temperature section) the race may be postponed or even cancelled. This call will be made by race officials and passed on to medical teams. Regardless, medical providers may need to transition to providing guidance and aid to runners to help them get out of the elements and into a warm sheltered environment. Please note that this can also include hail which should prompt consideration for evacuation to shelter.

Lightning

Lightning is a rare but potentially life-threatening phenomenon that requires persistent vigilance. Prior to the marathon day race officials will monitor weather for risk of storms including lightning. Race officials will use weather tool kits to identify lightning strikes early. Race adjustment and cancellation is made by the race director, but general recommendations include lightning within:

10 miles	Begin conversation about race delays or changes, identify safe locations for evacuation if necessary
5 miles	Consider evacuating racers in affected section of course
Within course	Consider evacuation and delay of race

The medical director will advise race directors in these situations, but race changes will be made by the race director. If evacuation is warranted safe locations (fully enclosed substantial buildings and vehicles) should be identified as quickly as possible. Find large enough structures for runners, officials, volunteers, and spectators. NATA recommendations are to wait at least 30 minutes from the last strike within 5 miles of the event. The marathon is a very large event and it may be most effective to have some sections close at a time rather than stopping the whole race. If a person in your area is struck by lightning, follow the steps:



Wind

Wind levels high enough to adversely affect the race are unlikely. If wind levels reach the point that flying debris becomes a danger the course or section should be evacuated. See precipitation section above.



Earthquakes and Rockslides, Fire, and Natural Disasters

Tectonic plate movement is part of life along the Wasatch Front. Most earthquakes are mild and will not have any bearing on race function. The Race Director will make determinations regarding race changes and evacuation. Medical staff will serve to aid in evacuating participants if needed and providing medical care and triage in the event of injuries due to an earthquake or other natural disaster.

Rockslides are a possibility as the race does run through the Ogden canyon which has narrow steep walls. In the event of a rockslide onto the course, medical vans will respond to the area as permitted by law enforcement and be present to provide first aid and evacuate uninjured athletes. Athletes with significant injuries will be triaged and stabilized until EMS can arrive.

In the event of other natural disasters such as wildfires or tornados, race officials will watch conditions closely with local officials and make race day changes, postponements, cancelations as needed with the aim of protecting athlete safety above all other considerations.

Poor Air Quality

Race day air quality along the course will be monitored using data from the Utah Department of Environmental Quality. The Air Quality Index (AQI) will be used to guide judgement. A PM2.5 level greater than 30 will trigger an alert to athletes about affected areas of the course and a warning for vulnerable people. A PM2.5 greater than 50 will trigger a conversation with race leadership about potentially postponing or canceling the race.

Evacuation

If evacuation is required use your best judgement to find areas of safety for runners in your area. Safe locations will be communicated to you via race officials and public safety personnel or via the radio medical channel. Authority in emergency situations lies with public safety officers (police, fire department, EMS) and secondarily to race officials. Please assist them in their efforts to protect athletes.



Removing Athletes from the Race

Removing an athlete from the race whether that be the marathon or 5K should never be taken lightly. Athletes have trained for a long time, paid for, and sometimes even traveled a long distance to run this race. For many this is may be a highlight of their life. That said, there may be times that an athlete will need to be removed from competition, sometimes against their will. This document establishes policy regarding situations where athlete removal is warranted.

*"All runners look bad,
some look badder."*

- Pittsburgh Marathon
Medical Guidebook

Who Can Remove Runners?

Involuntary medical removal from race can only be performed by physicians and licensed athletic trainers. Preferably these should be providers with experience working with distance runners and their unique concerns. In severe cases where the athlete is unable to respond then they are considered self-retired from the race.

Removal Criteria

- Cardiac Arrest
- Altered mentation or confusion that does not resolve with simple treatment and rest
- Athletes requiring IV infusions are removed from competition
- Multiple injuries and falls
- Core temperature greater than 102°F (38.5°C) or less than 97°F (36°C)
- Any other situation where the athlete is at high risk of harm to self or others.

Return to Competition

An athlete that needs evaluation can be seen by pulling them to the side or running along next to them. Mild first aid, evaluation, rest, food or fluids, and analgesics/electrolytes can be given without jeopardizing an athlete's race. If the athlete wishes to return to running the provider should apply a sticker or pen mark to the bib of the runner. Downstream providers should be on the lookout for these "marked" runners. No intervention is necessary but watch closely and be available if assistance is needed. If a runner is evaluated 2 or more times on course then they should receive 2 or more stickers as appropriate. Number of stickers does not affect athlete placement or performance.

Decision to Remove

If a physician or ATC decides that removal is necessary, please follow the following steps:

1. Clearly state to the athlete that you are removing them from the race and your reasoning for doing so.
2. Escort the athlete to the medical tent or van.
3. Log details regarding the removal and contact the race medical director
4. Transport athlete to closest medical tent, ambulance, or location as determined by medical director.

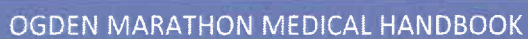


Balancing Safety and Runners Choice

Do not remove an athlete from the race lightly. In general, if an athlete is alert enough to follow commands and can verbalize the risks of continuing the race they should be allowed to do so. Runners will often look very ill to providers used to seeing hospitalized patients. However, a distance runners physiology has adapted to large amounts of physical stress and still keep running.

A reasonable alternative to removal is to “mark” the athlete with a sticker or pen and radio a high-risk runner to the medical lead who can then pass that information on to downstream providers who can look out for the athlete.

However, caution should be given in actively assisting athletes. This is critical with our elite athletes as your interference can be deemed unfair assistance and result in disqualification. Generally, contact with athletes for medical evaluation will not result in disqualification. Medical staff can run alongside the athlete if they identify themselves and do not provide forward assistance to the athlete. Contact with the patient should only be that necessary to provide medical evaluation and support. The goal of the medical team is to provide competent medical support but leave as little a footprint on the race as possible.



Athlete Treatment List

[illegible]



Athlete Evaluation Form



ATHLETE EVALUATION FORM		Bib #
Event:		
Name:	[M] [F]	DOB / /

Evaluation	When did symptoms begin? _____ mi/laps Finished event [Y] [N] Fall [Y] [N] H2O q _____ mi Electro q _____ mi Bar/gel q _____ mi CONST: [Exhaustion] [Fatigue] [Hot] [Cold] [Syncope] [Headache] Mobility [Ambulating] [Assisted] [Carried] Cognition [Alert] [Confused] [Unrespons] Orientation [person] [place] [time] [date] CV [Chest Pain] [Palpitations] [Lightheaded] PULM [SOB] [Wheeze] [Cough]	GI [Abd pain] [Nausea] [Vomiting] [Diarrhea] [Cramps] SKIN [Hot] [Cold] [Sweaty] [Dry] [Rash] <input type="checkbox"/> Lesion _____ MSK [Blister] [Cramps] [Trauma] [Pain] Head [] Hips [R] [L] Neck [] Thigh [R] [L] Shoulder [R] [L] Knee [R] [L] Arm [R] [L] Calf [R] [L] Hand [R] [L] Foot [R] [L] Back [] Toe [R] [L]
	Other	

PMH	Current Rx		
	Weeks in Training _____	Miles/Wk _____	#of previous events _____

Time	Treatment/labs	BP	Pulse	SaO2	Temp
		/			R
		/			R
		/			R
		/			R
Discharge time:		DISPO: Participation Home EMS Declined Tx		Follow up None PCP Ortho PT	

Dx	Derm [Abrasion] [Laceration] [Blister] [Insect Bite/Sting]	Tx: [Leg Elevation] [PO fluids] [IV Fluids] [Ice Pack] [Wrapping] [Stretching] [Massage] [Laceration Repair] [Rapid Cooling] [Ibuprofen] [Bendaryl]
	MSK [Strain/Sprain] [Fracture Suspected] [Muscle cramps]	
	Const [Hyponatremia] [Heat Exhaustion]	
	EAC: [Hyper] / [Hypo] / [Normothermic]	
Other Dx		Provider



Athlete Home Instructions



**Intermountain
McKay-Dee Hospital Center**
Sports Medicine and Orthopedic Services
Healing for life

Home Report

TO: _____ DATE: _____

FROM: _____ RE: _____

INJURY: _____

TREATMENT: Rest. Ice _____ minutes and repeat every _____ hours or _____ times per day for the next _____ hours or days.
Compression with _____. Elevate _____ inches above the heart.

Follow-up: _____

If you have any questions, please contact our office at 801-38-SPORT.