

MEDICAL INFORMATION



To: All Clarence Demar Marathon Runners

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Introduction

The Clarence Demar Marathon Medical Team will be fully staffed with EMT's, nurses, athletic trainers, mid-level providers and providers. Cheshire Medical Center/Dartmouth Hitchcock Keene is proud to be the primary medical volunteers at this race and we are very excited to be available to assist you on race day. Our team will provide rapid assessment and treatment of your medical needs during and post marathon. We want you to have a safe and healthy race, and are here to help however we can. To that end, we are providing the following information about our services, as well as valuable tips and recommendations to help you achieve your goals.

Medical Stations

There will be medical staff on course at various mile markers and a fully staffed medical tent will be located at the finish line. There will be roughly 5 medical stations on course and they will all be at locations where there is a water station. At the finish line, the medical staff can be identified by their volunteer medical red t-shirt and photo ID badge. Please do not hesitate to seek help or ask any questions – we are here to help you!

Weather

Keene weather this time of year can be unpredictable. Be sure to check the local forecast and plan accordingly. The average temperature in September in Keene is 61 degrees but can reach highs of mid 70's and lows in the 50's. Be careful to gauge your dress and pre-race fluid intake accordingly. Race officials will monitor the temperature, humidity and radiant heat (Wet Bulb Globe Temperature, WBGT) to determine the risk of weather related danger to participants. **Every other aid station will have a flag to represent the heat index. Please see chart below for what each flag color represents that you will see on course.**

Heat Risk Chart			
Flag Color on Course	Level of Risk	Wet bulb Globe Temp	Comments
Green Sign	Low Risk	<64°F	Risk low
Yellow Sign	Moderate Risk	65° - 73°F	Risk level increases as event progresses
Red Sign	High Risk	74° - 81°F	Everyone should be aware of injury potential
Black Sign	Extreme Risk	>82°F	Consider delaying event until safer conditions prevail

*Wet bulb Globe Temperature is a measure of the heat stress in direct sunlight, which takes into account: temperature, humidity, wind speed, sun angle and cloud cover (solar radiation). A WBGT device is a measurement tool used to measure the above affects to monitor environmental conditions during exercise.

DO NOT CONFUSE WBGT TEMPS WITH ONLY OUTDOOR TEMPATURE!

Rules about Fluids

It is well established that physiological function and performance is compromised as a result of dehydration. Therefore, it is necessary to ingest fluids during exercise to maintain physiologic functions and prevent early fatigue and heat-related illness. Sports drinks are generally the preferred beverage to maintain hydration; many of these include essential electrolytes such as sodium. The following tips will help you decide how much to drink on race day:

- Drink at least 16 ounces of fluid 1-2 hours before the race.
- Drink an additional 16 ounces of fluid in the hour before the race.
- Check your urine 1/2 hour before the race. If clear to yellow then you are well pre-hydrated. If dark and concentrated then drink more fluids!
- During the race drink no more than 1 cup (8-10 ounces) of fluid every 15-20 minutes along the way - that does not mean a cup at EVERY water station. Water/Sports Drink stations are located throughout the course.

Remember to drink enough but **DO NOT OVER DRINK!** Fluid replacement should approximate sweat and urine losses to maintain hydration at less than 2% body weight reduction. These are guidelines only – athletes must know their individual needs. Runners who sweat more than average will require more than the recommended amount of fluids. We are asking participants to weigh themselves at registration and to write this weight on the back of your bib. This will assist our team in the event that you have difficulties and seek aid.

Hyponatremia

What is hyponatremia? Hyponatremia is a disorder of fluid-electrolyte balance that results in a dangerously low sodium concentration in the blood.

What causes hyponatremia in athletes? Excessive drinking, sodium loss from sweating, and the kidney's limited capacity to excrete water will dilute sodium in the body's fluids.

Who is at risk? Athletes that drink too much before and during prolonged exercise and "salty sweaters" are at risk. Research has shown that females, runners with a slight build, runners taking over 4 hours to complete the course, and those taking nonsteroidal anti-inflammatory drugs (such as Advil, Motrin, Aleve, ibuprofen, naproxen, etc.) may be particularly susceptible to this risk.

What are the symptoms? Nausea, vomiting, throbbing headache, dizziness, severe fatigue, swollen hands and feet, wheezy breathing, confusion, disorientation, and lack of coordination may all be seen with hyponatremia. In severe cases, it may result in seizure, respiratory arrest, coma and even death. Symptoms can occur up to 24 hours after an endurance event.

How Do You Prevent Hyponatremia?

- Follow the guidelines above.
- Drink a sports drink that contains sodium. Do not rely solely on water for endurance events longer than 2 hours.
- Do not restrict salt in your diet. Examples of high sodium foods are potato chips, fritos, pretzels, tomato juice/sauce, chicken noodle soup, chicken broth, and Gatorade
- Do not take NSAIDS (Advil, Motrin, Aleve, ibuprofen), or any anti-inflammatory medications before, during or after the race. Tylenol may be taken safely.

Pain Relievers

Recent medical research has shown that non-steroidal anti-inflammatory drugs (NSAIDs) like Advil, Motrin, Aleve, ibuprofen, naproxen, etc. may be harmful to a runner's kidney function if taken within 24 hours of an event. NSAIDs are thought to increase the possibility of hyponatremia during endurance activities by causing decreased blood flow to the kidneys and interfering with a hormone that helps the body retain salt. Therefore it is recommended that on race day (after midnight on race day) you do not use any analgesic but acetaminophen (Tylenol) if needed. NSAIDs may be taken again 6 hours after you have finished the race providing you are able to drink without nausea or vomiting, have urinated once, and are feeling physically and mentally normal. NSAIDs would be beneficial at that time in preventing post-event muscle soreness.

After you Cross the Finish Line

Runners should continue to walk for at least 15-20 minutes after finishing the race. Standing still or stopping can cause you to feel nauseous, dizzy, and weak. Endurance athletes may experience syncope or fainting immediately after completing a race if they don't continue to walk. Walking will help to redirect the blood pooling in your legs back to vital organs, including your brain. Drink fluids slowly as tolerated. If you think you need help, ask one of our medical personnel at the finish.

After your initial walking period, some experts agree that slowly stretching your leg muscles will assist in the reduction of cramps and post-race soreness. Post-event massage will be available.