

Downed Runner

Condition: A downed runner or collapsed athlete is a participant who cannot stand or walk without help either during an endurance athletic event or at the completion of the event.

Background: More than 500,000 athletes participated in marathons in the United States in 2011, and exercise-associated collapse is the most common medical problem during these events. This type of exercise-associated collapse may be caused by numerous underlying conditions, including cardiovascular problems, temperature-related illness, electrolyte imbalance, asthma or allergy, muscle cramps, injury of muscle/bone, or seizures.

Risk Factors: Although cardiac fatalities are rare, the incidence increases with longer distance events. Other risk factors for collapse include illness such as heart disease, medications, inadequate training, warmer temperatures, increased humidity, concurrent illness, excessive water intake, inadequate water intake, weight gain, a race time of greater than 4 hours, and low body mass index.

History and Symptoms: The presenting symptoms of the downed runner vary depending upon the underlying cause of the collapse. In addition to collapse, the symptoms may include headache, dizziness, weakness, moist skin, rapid or slow heart rate, altered mental status, seizures, shivering, decreased or difficulty breathing, nausea, muscle cramping, lightheadedness, itching, hives, chest tightness, muscle pain, and swelling.

Physical Exam: The physician covering a running event will perform a physical exam to address life-threatening issues, such as consciousness, breathing, heartbeat, bleeding, or broken bones. Then, the underlying medical conditions can be assessed. The physician will focus on the vital signs, such as temperature, blood pressure, heart rate, and oxygen levels, as well as breathing rate and sounds, alertness, balance, speech, muscle strength, and reflexes.

Diagnostic Process: Blood or urine tests for sodium and sugar levels, hydration, or kidney function may be performed. X-rays, MRIs, or ultrasounds may be used to diagnose injuries upon transfer to the hospital. An ECG can be used in the case of abnormal heart rhythms.

Rehab Management: Management will depend on the underlying cause of collapse in the downed runner. Following stabilization, athletes will be moved to a medical tent for further treatment and then either sent home or transferred to a hospital for additional tests or treatment.

Other Resources for Patients and Families: Many long-distance races have race expos at packet pick-up, providing a good time for medical staff to inform athletes about preventive strategies to avoid serious medical problems. On-line resources are also available for training and injury/illness prevention for recreational athletes.

Frequently Asked Questions

What is PM&R?

Physical medicine and rehabilitation (PM&R), also known as physiatry, is a primary medical specialty that aims to enhance and restore functional ability and improve quality of life to those with injuries, physical impairments or disabilities affecting the brain, spinal cord, nerves, bones, joints, ligaments, muscles and tendons. PM&R physicians, known as physiatrists, evaluate and treat the whole body, maximize patients' independence in their daily life and are experts in designing comprehensive, patient-centered treatment plans to empower patients to achieve their goals. By taking the whole body into account, they can accurately pin-point problems, decrease pain, assist in recovery from devastating injuries and maximize overall outcomes and performance with non-surgical and peri-surgical options. To learn more, visit www.aapmr.org/aboutpmr.

What makes PM&R physicians unique?

PM&R physicians' training focuses not just on treating medical conditions, but on enhancing the patient's performance and quality of life in the context of those medical conditions. They focus not only on one part of the body, but instead on the development of a comprehensive program for putting the pieces of a person's life back together – medically, socially, emotionally and vocationally – after injury or disease. PM&R physicians make and manage medical diagnoses, design a treatment plan and prescribe the therapies that physical therapists or other allied therapists perform or that are carried out by the patients themselves. By providing an appropriate treatment plan, PM&R physicians help patients stay as active as possible at any age. Their broad medical expertise allows them to treat disabling conditions throughout a person's lifetime.

Why see a PM&R physician?

A PM&R physician will thoroughly assess your condition, needs, and expectations and rule out any serious medical illnesses to develop a treatment plan. By understanding your condition and goals, you and your PM&R physician can develop a treatment plan suited to your unique needs.

How do I find a PM&R physician near me?

Visit www.aapmr.org/findapmrphysician or contact your primary care physician for a referral.