



## Survival First Aid The *MARCH* Algorithm

In a true survival situation, you may not know when or if advanced medical care will be possible, and you will be limited in the level of first aid and medical care that you will be capable to deliver. The care that you will be able to provide in any situation is dependent upon your level of preparation, and your current level of training. It is recommended that you practice the skills of basic and advanced first aid, as well as Wilderness First Aid, and attend a Wilderness First Aid course that is presented by an experienced instructor and endorsed by a Nationally recognized certifying organization.

The concepts of Tactical Combat Casualty Care provide an organized framework for prioritizing injuries that are most life threatening, how to quickly address these life threatening injuries, and how to proceed in further treatment. These guidelines were developed by the Committee on Tactical Combat Casualty Care, which is the first ever collaborative effort by civilian and military medical providers aimed at best treating severe injuries and saving lives.

The Tactical Combat Casualty Care treatment guidelines are organized using the **MARCH** algorithm:

### ❑ Massive External Hemorrhage

Bleeding from a major artery or vein can cause an injured person to bleed to death in less than 5 minutes from the time of initial injury. These types of injuries involve major injuries to an extremity - not the torso - and must be addressed first before moving on to treating any other injuries. These major life-threatening injuries are treated one way: the application of an effective tourniquet device to stop the blood loss.

### ❑ Airway Patency

The major organs of the human body require oxygen in order to function, and the one way that oxygen gets into the human body is thru the mechanism of bringing air in thru the nose, mouth, and the upper airway passages. If there is an obstruction to the airway, or some reason that the body cannot bring in air thru the upper airway system, that airway must be opened and protected to allow for the intake of air.

### ❑ Respiratory System Function

The human respiratory system operates on a negative pressure system, and must be sealed from the outside environment in order to function in the exchange of carbon dioxide and oxygen. Without the ability to exchange gases, the respiratory system will not deliver the oxygen coming into the body thru the patent airway for delivery to the body organs. The respiratory system must be sealed in order to function, and prevent further life threat.



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### □ Circulatory System Function

The circulatory system is the method of delivering the needed oxygen to the organs and tissues of the human body. If the circulatory system is not working properly, the individual organs of the body cannot function, and begin to fail, which presents a very significant life threat; however this threat is dependent upon having blood in the system to deliver the oxygen that is being brought in thru the patent airway and sealed respiratory system. This also includes maintaining circulatory integrity by treating for the effects of shock after any injury.

Shock is defined as the inability of the body to deliver oxygen to the organs of the body due to the body's response to injury. This is a purely physical response that is unavoidable, but if left untreated, can become life threatening.

### □ Hypothermia and Head Injuries

As described in the Core Survival Needs, core body temperature is one of the most important factors in survival. That is even more important after any injury. A drop in core body temperature can interrupt the body's normal blood clotting mechanism; can lead to quicker organ shutdown and even failure; and can even mask the symptoms of other injuries.

Maintaining core body temperature is treated in the same way as treating for the symptoms of shock - keep the injured person warm and protected from further heat loss to the environment.

While there is very little actual treatment that can be rendered for a closed head injury (often referred to as a concussion or concussive brain injury), a person who has suffered a possible head injury must be protected from any further injury, which is as important as treating any obvious injuries.

Very often, the symptoms of hypothermia and a head injury appear similar and are difficult to distinguish; but the treatment is the same.

These guideline have been developed to help providers to address the greatest life threatening injuries in a manner that will maximize the chances of survival after an injury; but they are no substitute for training and practicing the delivery of quality first aid in any situation.