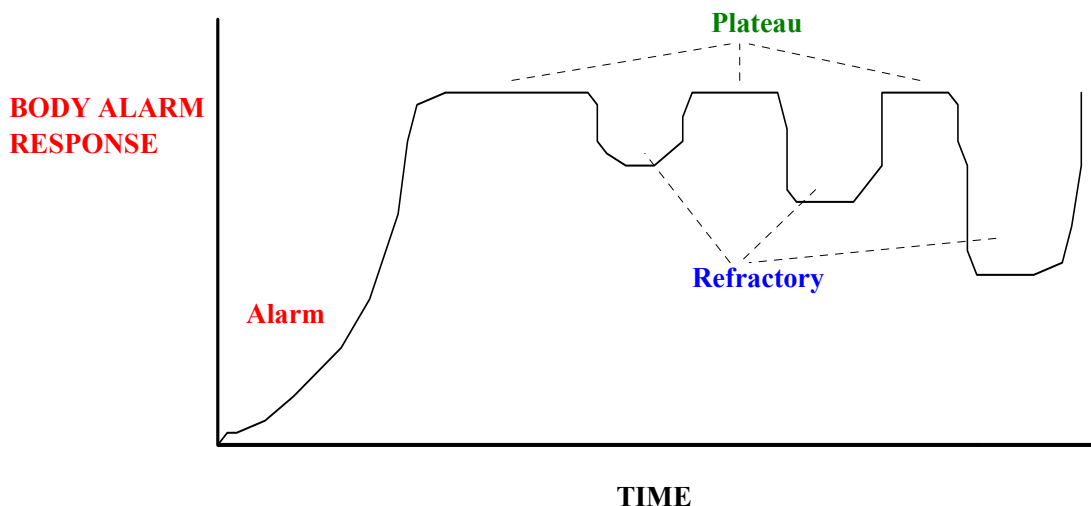


## How the C.A.R. System Aids Operators During Combat Stress and The Body Alarm Response

by Jeff Johnsgaard & Paul Castle

The Body Alarm Response (**B.A.R.**) is a description of the natural unstoppable psychological and physiological changes that take place in every Human Being when they have been startled or otherwise thrust into a situation of urgency, perceived importance and or fear. For example “ *When confronting an unexpected Lethal Force threat.* ” It starts and continues, it has a life of its own. It is *adaptive* in that it can be helpful, and *mal-adaptive* in that it can also be unhelpful.

Medical and psychological specialists state that **B.A.R.** becomes noticed when we are first introduced to an event or set of circumstances which bring us to an increased level of arousal. This set of circumstance is perceived by us to be startling or otherwise sudden and of an urgent nature. See the graph below.



How does this **B.A.R.** take place? First our body picks up information from one or more of our senses which we process and filter. If this information is perceived as being an urgent and immediate threat, our body immediately goes into psychological and physiological changes. This point of startle and rapid change is termed the **Alarm** phase. During this phase we get Sympathic Nervous System activation which does a number of things to our body in order to prepare it for a “fight for survival”.

These changes include vasoconstriction, audio exclusion, tunnel vision, fine motor control loss and others. Psychologically our body is having an “Oh Boy!” moment and because the response is so deeply ingrained into our DNA we simply cannot do anything else. Basically at the moment we are experiencing the **Alarm** phase of **B.A.R.** we experience a temporary mind freeze.

2.

The **Alarm** phase lasts only a few moments, but when it is finished our body has gone through a transformation. Dozens of chemicals and physiological changes have been introduced into our system and we are in the next phase of **B.A.R.** the **Plateau**. You will be able to perform better as you approach the phase. The **Plateau** phase is often regarded by Operators as a detriment because most experience a decreased performance level to both cognitive and psychomotor skills. The detriment has been seen by many as a decreased ability to perform tasks and has a direct relation to the level and type of training the Operator has received.

One of Sabre Tactical's maxims reflects on this point by stating that *In a Crisis We Do Not Rise to the Occasion But Merely Default to Our Level of Training*. Meaning, if we get a **B.A.R.** activation but do not recognize the stimulus or situation and have no orientating response we will undoubtedly Freeze.

If we do recognize the situation and have trained to do something which specialists term having an "*Orientating Response*" we will enact a set of practiced movements known as a *Behavioral Chain*. An example of this is an Operator suddenly identifying a deadly force threat, firing their weapon until it stops, checking and seeing the slide locked back with no ammunition in the chamber and nothing in the magazine. Then undertaking a *combat reload* based on their previous training, i.e. Behavioral Chain, also described as "*Unconscious Competence*." But if we had no training or understanding of that "*lock back*" situation we would most likely freeze and hesitate much longer before performing a reload if at all. This has been described as "*Unconscious Incompetence*" to perform a set task. Students are constantly observed in this phase on the training range.

An important and main issue an *Operator* must know about the **Plateau** is that it is the phase they need to maintain and properly function in. The **Plateau** equates to a productive response. Since there is nothing anyone can do to impede or stop the **B.A.R.** we must understand how to prolong it, and properly function during this time period. First, because of the physiological changes to the body they must understand that loss of bladder and sphincter control can be natural. It is simply the body's reaction to shutting off these unessential processes, and shunting the blood and energy to the heart and large muscles in an effort to mobilize for a *flight or flight* reaction. This is also the case for vasoconstriction where our blood vessels contract and restrict the flow of blood into our extremities. This is so we can withstand large wounds to our *arms* and *legs* with a decreased level of immediate blood loss.

Secondly, we know we may have target fixation, tunnel vision, audio exclusion, increased heart rate, fine motor control loss and dual sight picture among other responses. We can train in ways to overcome many of the effects of these natural responses. The **C.A.R.** System aids Operators in this phase by eliminating dual sight picture, and placing the front sight in our natural focal point (*accommodation or reading distance*) to decrease the time it takes to properly sight. This is a fundamental shift from traditional shooting styles, and is one of the major reasons why the **C.A.R.** system is so effective in combat.

3.

The **C.A.R.** system utilizes body and sense of direction alignment in conjunction with aimed sight in order to immediately acquire proper weapon alignment. Finally, the **C.A.R.** system will allow an Operator to fire their weapon while limiting almost 95% of the weapons recoil due to working in harmony with the center axis of the Operators body. In essence what many Instructors consider to be detrimental in a gunfight, i.e. weapon recoil, the **C.A.R.** system eliminates.

Another area the **C.A.R.** system helps to aid Operators in the **Plateau** period is in its Returning phase. Here we will enact a “Z” Scan and pivot like a tank turret while forcing a few normal breaths. We are actively scanning for additional threats, observing our last known threat and most importantly fighting off the third phase of **B.A.R.** by trying to maintain the alertness of the **Plateau** period. It is important to delay the final phase of **B.A.R.** until we are absolutely sure the situation is over and safe.

The below pictures were taken by Mr G. Robinson, and have been reproduced for educational purposes only. As can be clearly seen on Cpl. S\*\*\*\*\* face he is angry. He has been hit in the shoulder by fragments of an AK47 round. Anger is a natural emotion when we are injured. This elevated emotional state often allows us to fight through pain. It could be said that at this point this Operator is still in the **Plateau** period and aware.



The last phase of the **B.A.R.** is termed the **Refractory** period. Here is where the Operator has in effect “*Stood Down*” from the incident, most likely believing it to be over. The body then goes through a strong Parasympathetic Nervous System backlash. Napoleon Bonapart recognized that the time when troops are at their most vulnerable is the time *directly after* a battle. The pictures above shows *L/Cpl. \*\*\*\** rendering first aid to *Cpl. S\*\*\*\*\**. As can clearly be seen from his face, he is going into the **Refractory** period. His face has gone pale, he appears to be staring into space, and his shoulders are rounded. Note that his grip on his weapon is now very loose, and the weight of the grenade launcher has angled the weapon backwards.

4.

This is due to a rapid decline in **B.A.R.** and a backlash of all the systems which initially shifted during the **Alarm** phase. Here an Operator must know that if they allow themselves to relax they will fall into a physically and psychologically weaker and more vulnerable state. This is of course inevitable and necessary but only when the scene can be secured by fresh troops who did not go through the initial assault. Simply put, no other shooting technique aids the Operator throughout every element of the **Plateau** phase as much as the **C.A.R.** System.

The **C.A.R.** system renders irrelevant all of the fears **B.A.R.** normally provokes in an Operator and helps them to perform while maintaining a state of *Alertness* and *Planning*. In addition the **C.A.R.** system offers superior *Weapon Retention* techniques, so an Operator can keep their weapon if injured or suffering from the diminished physical and cognitive processes associated with the **Refractory** phase.

There is one other technique the **C.A.R.** system utilizes in its training which has a dramatic impact on exactly how detrimental the **Refractory** phase will be on an Operator. It is a breathing technique developed by Dr. Herbert Benson of Harvard University.

The *Benson Technique* \*\* is a simple breathing exercise which will enable an Operator to lessen the impact of the *Refractory Phase* by helping them to “*Stand Down*” after an incident. In turn they will be much more ready to respond to further threats should their be a need. The technique itself is extremely easy and if done correctly will lead to a massive decline in stress, tension and anxiety.

First, try to find an environment where you can sit and relax at least slightly. Now take in a deep breath in through your mouth and hold it for a moment almost as if you were yawning. Exhale through your mouth as if you were blowing on a cup of hot coffee. Continue to repeat this cycle for a few minutes. Basically you are building up the level of CO<sub>2</sub> in your body and promoting your body to yawn. If you are driving or lying down it is quite possible to fall asleep so be aware. This process could take from 1 to 5 minutes.

As the **B.A.R.** graph shows it is possible to go through the **Alarm**, **Plateau** and **Refractory** phase multiple times. Each time you get to the **Refractory** phase you are slipping deeper away from the ability to react back to the **Plateau** phase effectively. But, if you practice the *Benson Breathing Technique* your ability to respond will not diminish as far. The **C.A.R.** System renders irrelevant the problems associated with the **Plateau** phase which no other shooting style can match, and if utilized along with the *Benson Technique* will give Operators the ability to maintain their effectiveness for a greatly extended period. That may make all the difference you will need.

\*\* Herbert Benson. Published in 1968.

This section was written as a result of information supplied to the Authors by Dr. Niel Aronov Ph.D. A clinical and Forensic Psychologist in Memphis TN.