

# Adrenaline and Your Self-defense Strategy

## Does adrenaline help or hurt you in a self-defense situation?

Even for experienced martial artist, the effect that adrenaline has on your body is often overlooked when developing a self-defense strategy. The adrenaline rush can certainly be used to your advantage when defending yourself, but it is also wise to prepare for how it can negatively influence your actions and reactions. One note, since the adrenaline rush affects each individual differently, our discussion must generally be non-specific, involving "possible" reactions, not "definite" reactions.

Adrenaline is secreted directly into the bloodstream by the adrenal glands when a person is experiencing a potentially stressful or dangerous situation. When introduced into the bloodstream, adrenaline increases your heart rate and blood pressure and diverts blood to your muscles. Because of this, adrenaline can increase your speed and strength and decrease the ability to feel pain. These physical effects cause what is known as "the fight or flight" reaction, preparing you to defend yourself or run from an encounter. All this is great for a self-defense scenario, right? Well, not entirely, there are a number of bodily reactions that, unless you are prepared for them, can cause deterioration in your ability to defend yourself.

## How can adrenaline help you in a self-defense situation?

Your initial response to a surprise or a stressor (run, jump, freeze, flinch, etc.) happens prior to adrenaline being introduced into your system. This initial reaction to a stressor is usually based upon the individual's personality, temperament and, in physical confrontations, training. How you train for a confrontation is generally how you will react, and the introduction of adrenaline after a few seconds will likely reinforce this reaction. Note, studies have shown that while generally, adrenaline enters the system for most people quickly, in a percentage of women, adrenaline is introduced at a slower rate.

Assuming you are training to defend yourself and your initial reaction is not one of panic (freezing for example), the adrenaline surge is more likely to be an advantage. It can enhance your initial reaction by adding speed and strength to your defensive actions as well as limiting your reaction to pain. A key point to using the adrenaline rush to your advantage is to be aware of the negative effects and training to mitigate the possible issues.

## What are the possible negative effects of adrenaline?

While energizing you for "fight or flight", the feelings caused by an adrenaline dump can be unexpected and often surprising. Physically, adrenaline can cause a number of negative effects, including the shakes and nausea.

In addition to the physical side-effects, there are a number of possible perceptual symptoms. Some of the possible negative "perceptual" effects include:

- Tunnel vision
- Difficulty concentrating
- Feeling as if time slows
- Inability to think clearly
- A moment of freezing

While any individual may have some, all or none of these symptoms, it is good to be aware of them so you can prepare yourself in advance. Understanding what obstacles may be encountered by and adrenaline dump and training, both physically and mentally to overcome them, can give you an edge when you find yourself in a self-defense situation.

Next, let's look at methods to mitigate both the physical and perceptual drawbacks of an adrenaline rush. By addressing these drawbacks, you can enable yourself to better handle sudden self-defense situations.

### **What are the perceptual drawbacks?**

There are a number of perceptual drawbacks that can be encountered while under the influence of adrenaline. Finding it difficult to think and concentrate is one of the primary drawbacks. Mentally, you can find it difficult to sort out multiple options that that may be available to you. This tends to be a natural reaction to stress and is true whether we are discussing a self-defense situation or a critical presentation at work.

Another possible drawback is momentarily freezing during a stressful situation. With or without adrenaline, freezing, or hesitation, is a natural occurrence whenever a person encounters a new or unique situation. Add adrenaline into the mix and hesitation can become crippling if you have not prepared.

Finally, there are visual drawbacks, such as tunnel vision and an inability to focus (or focus solely) on objects. This reaction to stress is common and is often a result of your mind locking on to one aspect of an encounter. For example, you frequently hear people who describe an armed hold up by saying something like, "All I could see was the gun" or "The end of the barrel looked huge".

While these drawbacks are all certainly real, many people in stressful occupations find ways of coping. Emergency room doctors, paramedics, police officers, etc., all have to deal with these effects on a day-to-day basis and are able to perform without loss of skill or ability.

### **How do you cope with the perceptual drawbacks?**

There are a number of things you can do to minimize the perceptual drawbacks. The first is doing exactly what you are doing at this moment. You are thinking about it! Become aware of the possibilities and think about them. Sudden stressful situations and the adrenaline dump are not things we are used to or comfortable with. By thinking about our reactions, by cognitively dealing with the possibility, we take the first step in controlling the issues.

Another thing you can do to mitigate the effects is to accept the internal warning signs that sometimes come prior to an adrenaline dump. Our sub-conscious can often warn us of signs that an encounter is imminent. There are many ways that we express these warning signals. Have you ever felt the hair stand up on the back of your neck or felt that something was just “wrong”? This can be a sign that your body is instinctually preparing for a situation that you are only peripherally aware of at that moment. Gavin De Becker in his book *The Gift of Fear* explains how your instincts can help you to recognize “hidden” danger.

Finally, become more comfortable with the adrenaline surge by placing yourself in stressful situations while training. Most long-time martial artists get into a routine. Two man drills and sparring can become ho-hum. As martial arts students, we should always train with a “bit of fear”. Modify your training so that your partner surprises you and keeps you guessing. If the drill you are practicing calls for a straight punch to the head, have your partner change it to a hook every third or fourth time. Modify the timing so you have to wait for your partner to attack. Never get comfortable with the rhythm. Yes, you will look stupid when you miss a block now and then and yes, you may get hit. That possibility is what causes the adrenaline to flow. Wear protective gear to start. The more you practice this way, the more comfortable you will get. When you get comfortable at that level, find other ways to bring that fear back again. Always modify your training to continually stress your system.

### **What are the physical drawbacks?**

Generally, the physical drawbacks relate to an increase in your heart rate as a result of the adrenaline. Increased heart rate causes “shakes” and the loss of fine motor skills. The speed of your heart rate, in many ways, dictates your ability to perform defensive actions. For a person who’s resting beats per minute (BPM) is 60-70, the physical results of a higher heart rate are:

**At 120 BPM** – You begin lose fine motor skills. You are unable to dial a phone or aim a weapon. At this level, gross motor skills are generally unaffected.

**At 150 BPM** – You begin to lose your complex motor skills. Hand-eye coordination and timing deteriorate. Practiced techniques that do not require fine motor skills are still generally available. A trained martial artist can still perform at this level.

**A 180 BPM and above** – At this level you begin to lose rational thought processes. Though trained gross motor skills are not drastically affected, trained martial artists start to experience degraded performance. Martial artists can experience a “mental logjam”. This means that even with substantial training, it may become difficult to select the proper defensive movement.

### **How do you cope with the physical drawbacks?**

From a physical standpoint, the keys to coping with an increased heart rate during a self-defense situation are:

- Training with the “2 second rule” in mind
- Limiting the number of practiced techniques
- Using techniques that rely on gross motor movements

When a person is placed in a stressful situation it takes a few seconds for the effects of adrenaline to be felt. Your reactions in those first few seconds can often dictate how you will continue to perform. Immediate actions tend to break the “freeze” that can occur during an adrenaline rush. Practice self-defense techniques with the “2 second rule” in mind. React immediately with a counter attack when practicing. This will train your mind to react during the early stages of an encounter.

Repeatedly practicing a large number of defenses against one type of attack can be detrimental in an adrenaline charged situation. “Knowing” too many techniques can cause a “mental logjam” in a self-defense situation, causing the defender to freeze. While, as martial artists, we all strive to be well rounded, when it comes to defending yourself, too much information can be deadly. For each type of attack (i.e. hook punch, shoulder grab, etc.), develop and practice a limited number of responses that are right for you. Limiting the number of responses and drilling them until you react immediately can remove the possibility of the “mental logjam”.

As described above, fine motor skills are one of the first casualties of the adrenaline rush. Techniques that require a high degree of targeting (striking a nerve point for example) or that require a high level of finger dexterity may not work well in a stressful situation. Techniques that utilize gross motor skills tend to be more effective and are good choices when developing a self-defense strategy. A good rule of thumb when it comes to dexterity is to avoid techniques that cannot be performed while wearing winter gloves. While this may sound simplistic, it tends to eliminate techniques that require fine hand manipulation while leaving gross motor techniques available.

In conclusion, practicing immediate reaction with a limited number of techniques per attack type that rely on gross motor skills can be a successful self-defense strategy. Training with the adrenaline rush in mind can provide you with an edge during an encounter.

Richard Sbuscio  
5<sup>th</sup> Dan, Shihan  
Koshin-ha Chito-kai

[Pittsburgh Martial Arts Examiner](#)