The Importance of Adrenal Stress Conditioning for Self Defense

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Introduction

Most of us, martial arts practitioners, have experienced it one way or another: our palms get sweaty, our legs and arms feel heavy, the hair in the back of our neck begins to stand up, our vision tunnels in one particular object, our minds go blank, and we forget to execute all the techniques we have religiously practiced time and time again. Luckily for many of us, this only occurs during a controllable stressful situation such as a belt promotion test, a sparring session, while practicing with either an intimidating partner or in new surroundings. Others, however, may not be as lucky, for they will or have experienced a certain degree of such described mental and/or physical paralysis during a real life attack, time at which either fighting or fleeing is needed the most. Moreover, this *freezing up* could be so severe that even a highly trained fighter who gets attacked in the street, may be unable to execute previously learned self defense techniques. The end result could be a serious injury, rape or even murder.

The catalysts for such freezing up are the same processes behind the fight or flight reaction triggered by an intense life-threatening situation. The reason why some people, even trained martial artists, freeze

rather than fight back or escape however, is due to the lack of experience in dealing with the set of chemical and psychological reactions that occur within the body upon in the presence of a threatening situation. It does not matter whether the individual has many years of experience training in combative martial arts. If the body and mind have not been trained to deal with the corresponding biochemical and psychological responses, techniques learned under a heavily controlled environment will simply not work. Such has been the unfortunate case for many highly experienced female black belt martial artists, who have been attacked and raped despite their training background.

The purpose of this research paper is to define, explain and discuss the benefits and ways of adrenaline stress conditioning in self-defense training. Adrenaline stress is the major biochemical response the body executes when threatened. More precisely, it is the result of a rush of adrenaline into the bloodstream initiated by the brain. Once the body is adrenalized, the person will begin to experience physiological and psychological changes. For most individuals, these changes can and will take control of their ability to react appropriately to a particular situation, if they are not used to responding while they are being activated. The main idea behind adrenaline stress conditioning is to teach the individual how to properly deal with said set of changes in an attack situation.

Although different types of ways to achieve such goals have been proposed, one of the most complete and effective ways is by means of scenario-based training. For this reason, when describing the methods of attaining adrenal stress conditioning, this paper will

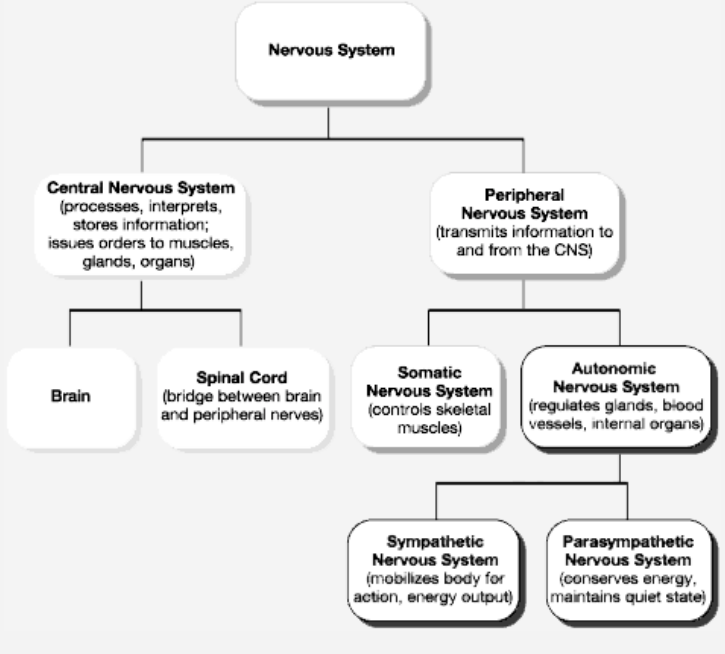
focus on such. Nevertheless, alternative methods will be mentioned. Unlike what is most likely to be observed in most training halls, scenario-based training is not characterized by instruction under a highly controlled environment. Instead, it provides the student with an environment very similar to that of a real-life attack. Through such training, students are taught to react while experiencing fear and all other negative reactions caused by the release of adrenaline also known as *adrenaline dump*. In so doing, students get to know and understand how their bodies change. In the end, they learn to remain in control of their minds and bodies under any violent situation. While a successful escape from an actual violent attack is in no way guaranteed, this type of conditioning increases the probability for such. More importantly, research shows techniques learned under adrenaline stress are not only more effective, but also stay in the person's mind longer. Hence, it is not necessary for individuals to engage in long training periods of this type. Instead, a set of short training sessions will be sufficient to provide any individual with the proper conditioning. As a matter of fact, long training periods of this type would bring about a degree of familiarity between students and teachers, thereby rendering it useless.

The rest of the paper is divided as follows. Section II discusses the physiological and psychological reactions of adrenal stress, also known as the "fight or flight" response. Section III entails the body of this project. It explains the basics behind scenario-based training, its importance, and why classic martial arts preparation is not enough self-defense training. Section IV concludes the paper with a summary and suggestions.

Adrenal Stress and Freezing Up

When faced with a life threatening situation, both the brain and body undergo several changes. More specifically upon experiencing fear, an individual is said to undergo an acute stress response. During this reaction, brain impulses activate the sympathetic nervous system (NS) to prepare it for fight or flight. The Figure below shows the components of the nervous system. The activation signal is initiated within the central nervous system. It then travels through the peripheral NS, into the autonomic NS and later towards the sympathetic NS.

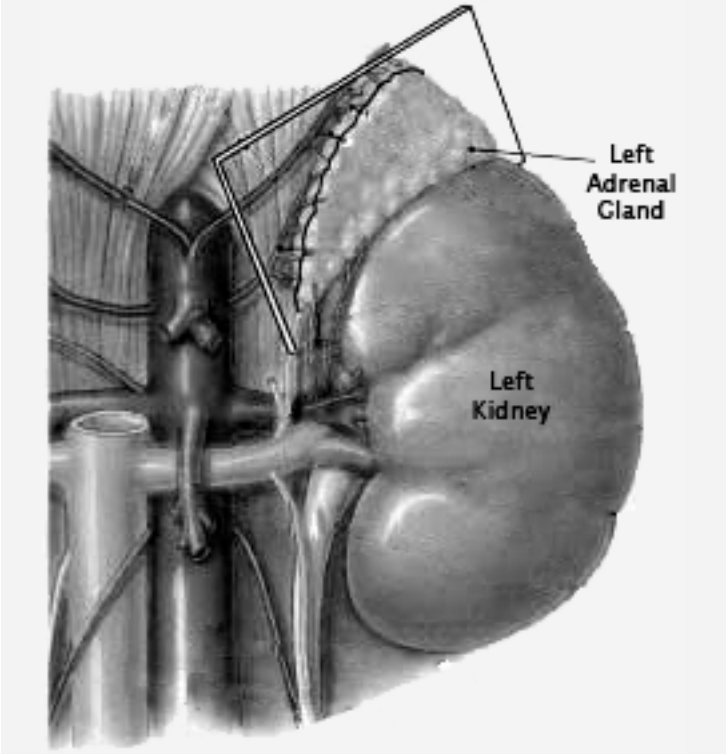
Figure 1: Chart of the Nervous System.[1]



The sympathetic nervous system then sends a message to the adrenal glands. These organs, also called the suprarenal renal glands due to their

location, are small, triangular glands found on top of both kidneys. Each one is made of an exterior *adrenal cortex* and an interior *medulla*. Upon receipt of stimulus from the nervous system, the medulla produces the hormone *adrenaline*.[2] Once produced, *cromaffin* cells located within the medulla release this chemical into the bloodstream. The Figures below illustrate the processes described. Figure 2 shows the location of the left adrenal gland, sitting atop the left kidney, while Figure 3 shows the Adrenal Gland in cross-section.

Figure 2: Location of the Adrenal Glands.[3]



The main purpose of this biochemical flow is to put the body on alert and prepare it for violent muscular action. In the process of doing so, it sets off many physical reactions. Among many, it promotes faster and stronger heart beats. It opens the bronchioles in the lungs in order to increase oxygen uptake. It causes the dilation of the pupils to allow more light to come into the eyes. It slows the digestive system, thereby allowing more blood to get into the muscles. Peripheral blood vessels constrict. Increased activity related to gastric ulcer formation occurs, and subjective responses begin, such as irritability and mood changes. This chemical discharge is also known as the *fight-or-flight* reaction originally described by the great Harvard physiologist Walter Cannon.

Figure 3: Cross-section of the Adrenal Gland.[4]

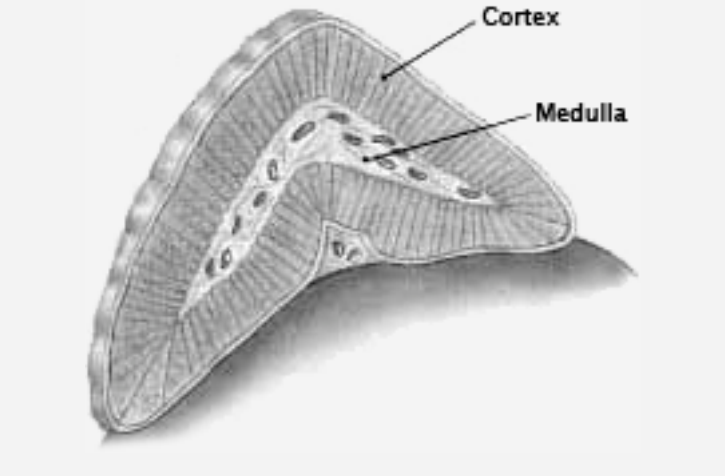
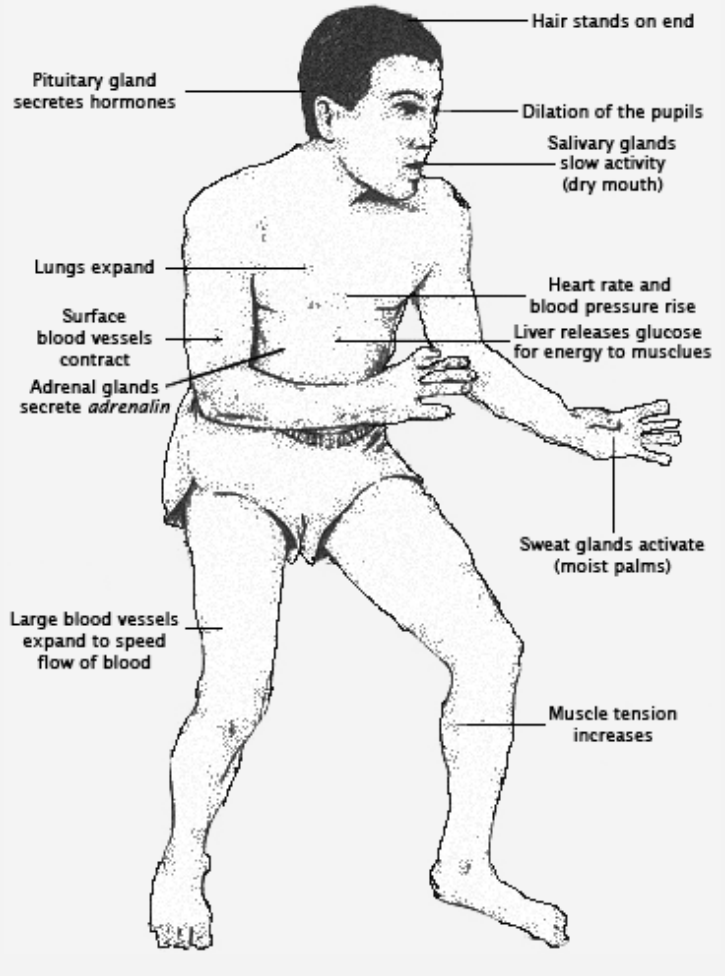


Figure 4 summarizes the primary physiological changes caused by the fight-or-flight reaction. As the name indicates, the fight-or-flight reaction is meant for the individual to either run away as fast as possible or stay and fight with maximum strength in the face of

danger. Nevertheless, individuals who have never experienced such threatening circumstances will often choke up and their bodies will freeze. The reason for this is that the biochemical reactions previously mentioned combine with a psychological effect in which the person's mind speeds up its ability to process visual signals. To the threatened individual's mind, things will appear to move in slow motion, and he or she will be overwhelmed with surprise, fear or

Figure 4: Physical Changes Caused by the Fight or Flight Reaction.[5]



both, thereby freezing up instead of reacting as dictated by the fight or flight reaction. This effect is known as *Tachi Psychi*, defined as the speeding up of both the visual processing centers and the accelerated triggering of the motor control functions.

This is not to be confused with the loss of access to the self aware mind. In combat, the adrenal mind

controls the body, not the self-aware mind. As a result, after the incident the individual feels as if things happened too quickly for him to think and react. Succinctly, when the individual is not familiar with the adrenal response in violent situations, fear and the negative effects of the adrenal release (to be discussed below) will overpower any physical or psychological ability the individual has. This will in turn hinder any opportunity the person has to avoid the attack, escape it, or confront it by using previously learned survival techniques.

More specifically, as previously described, the adrenaline release unleashes several physical enhancements in order to prepare the body for action. These enhancements however, come at the expense of other basic functions. The most relevant to the subject matter of this paper are: auditory exclusion, loss of peripheral vision and loss of fine motor coordination. When attacked the individual is unable to hear or see what she would otherwise be able to. For example, a victim will not likely hear a second assailant coming from behind, thereby easily becoming prey for the latter attack. Also, the person's peripheral vision is greatly reduced, and this reduction gets worse with the level of fear experienced. Namely, she will focus or tunnel on the actual threat such as the assailant's roaring face or a weapon. As in the case of hearing loss, the individual will most likely fail to become aware of other assailants, and also of the opportunity to escape. Finally, the victim 'freezes' or experiences a loss of limb control.

While the previous two reactions are significant, the latter mostly explains why even highly experienced combative sports practitioners can and have easily

become victims of violent attacks. The reason is that the type of motor skills lost corresponds to fine motor skills, and these are the ones demanded by many techniques commonly practiced in different fighting or combative martial arts. This includes most strikes regularly used to score points in a fight, to execute a break or taught as part of a specific martial arts form. This notion is especially relevant for martial arts which claim to teach the individual self-defense techniques, and base their foundation on strikes such as those described above. In short, no matter how much training an individual has, if such training does not teach the person how to deal with the adrenal response and understand how to counteract its effects, it might not be effective in protecting the individual.

Clearly, this will not be the case for everybody. Some individuals are naturally better at handling stressful or violent situations than others, and may not see the benefit of adrenal stress conditioning. Others however, would greatly benefit from the realistic experience, most likely to be missing in their current training method. Generally speaking, the real problem of self defense is effectively dealing with fear and the adrenal stress reaction. For this reason, effective self-defense training must provide the individual with such an opportunity by eliciting them under a controlled, yet highly realistic environment. Such is the purpose of scenario-based training, which is the topic discussed in the next section.

Conditioning

The core of scenario-based training is the adrenal stress associated with the fight scenario. The point of

every exercise is that nothing will be predictable to the student or fighter. It teaches him or her to adapt and deal with whatever happens in different scenarios. For example, during the *portal of safety scenario* a student will be told his objective is to cross from one end to the room to the next passing through a doorway. Included in these instructions is the warning that some trouble may occur. The student must properly handle whatever happens. As the fighter walks, an armored assailant, typically male, appears. The assailant's behavior will be unpredictable and unknown to the student. For example, the assailant could be friendly or he could immediately attack the student physically, verbally or both.

Figure 5 provides a pair of pictures illustrating the appearance of the attacker, otherwise known as the *bulletman*.

Figure 5: Bulletman, the Armored Assailant.[6]

It is important to understand the role of the bulletman is highly critical in scenario based training. His job is not easy. On the one hand, he must understand the ability level of the fighter or student in every scenario, and react to such ability accordingly. This means some students might get a perfect striking opportunity, while others will not see the attack

coming. In either case, the goal is to challenge and improve the student's fighting ability. On the other hand, he must know how to take a shot without getting seriously injured. The armor, strong as it is, does not fully protect the assailant. He must know how to roll with the punches thereby minimizing the impact. However, as students' skills increase it becomes harder for the bulletman to protect himself against hard hits. Hence, the main instructor assists by ending a particular scenario when he sees fit.

Despite the high probability of confrontation in each scenario, the main role of the student is to avoid physical violence as much as possible. One can do so by means of body language or simply by setting a verbal boundary with the attacker(s). In so doing, the student is letting the bulletman know he is not intimidated or frozen with fear. Nevertheless, fighters must always keep a close eye on the bulletman's hands, as he might draw a weapon at any time. This would in turn, make the confrontation more difficult. Also, as an attempt to model real life, the fighters are not allowed to attack the bulletman without justifiable and reasonable cause.

Generally, at the opening of every scenario, the bulletman approaches a student and begins to "woof".[7] The purpose of the woof is to intimidate and scare the student. This is typically how street attackers intimidate their victims thereby initiating the freezing or chocking up process. Under scenario based training, the student is taught to relax during such moment and instead use the time to analyze the attacker, assess his intentions and look for an opening to escape. The goal is to get the student to achieve a level of relaxation that in turn intimidates the attacker. The reason is that

if the person being woofed at does not show fear or intimidation, the aggressor will feel he is dealing with the unknown instead of dealing with someone who is too scared to defend herself. On this note, if a student is able to convince the bulletman during a particular training scenario she is not scared, the bulletman will not attack. Otherwise, avoidance is not possible and a fight begins.

When the bulletman attacks, the student responds immediately by fighting at a full intensity level. During the assault the student will hit the aggressor with full power to the head, neck, midsection, groin, etc. The fight might go to the ground. If so, they all continue at full speed until the instructor blows a whistle indicating the armored assailant is down. At such time, the fighter must search the attacker for any weapons or secure herself from any weapons the bulletman might have pulled out. The individual then executes a safe escape keeping an eye out for more assailants. The fight is over when the student demonstrates she has escaped successfully.

These fight scenarios engage involuntary biochemical responses in the student. In particular, they engage a part of the brain different from the conscious mind. As a result, the body doesn't know the difference between reality and fantasy, and responds biochemically as it would in a real life attack. In so doing, students are able to experience and learn to deal with the effects of adrenalization in a highly realistic, yet safe environment. More importantly, by means of experiencing their own adrenalization process, students learn to control the timing of the flow of adrenaline. While some people adrenalize at the moment of the woof, others do so after the attack.

The idea of experiencing the attack in a realistic yet safe environment is that students learn quickly when and how fast to allow the body to experience the effects of adrenaline. In so doing, the individual will know when to allow the positive effects of the release (greater speed, pain tolerance, strength, etc.), while at the same time suppressing the negative ones.

In addition to helping students deal with intimidation tactics, tunnel vision and the like, scenario based training de-conditions the denial response that exists in many people who reject thoughts about the evil intentions of their attackers. That is, the person is taught to be aware of the nature of the woof and the attacker by means of listening to their gut instincts. This notion may in fact be one of the most important lessons to be learned about self defense. De Becker (1999) defines such gut reaction as "listening to one's true fear", and claims that doing so might save your life. Although De Becker's reasoning for learning how to listen to one's fear focuses on prevention, he still suggests scenario based training is a good way of self defense training, in particular for women.

One more benefit obtained from scenario based training is that it builds muscular memory. Research done at the Center for Neurobiology of Learning at the University of California at Irvine, shows learning that occurs under adrenal stress is stored differently in the brain. In particular, it is stored in the emotional memory, which has greater survival value than the ordinary memory. As a result, it will be kept for much longer time than if stored under ordinary memory. More importantly, this type of learning occurs more efficiently. That is, defense techniques learned under

properly conducted adrenal conditioning exercises will always be part of an individual's automatic response mechanism.

Many would argue that a person trained in martial arts would not benefit from scenario based training. But, many classic methods of martial arts training do not address any of the elements included in the woofing and do not involve scenario type training. Instead, these systems focus on technique and on developing fine motor skills in their execution. As stated, the problem is that loss of fine motor skills is one of the first and most important reactions of adrenal stress. As a result, in a real life attack martial arts students may find themselves unable to use their learned techniques, regardless of how real-world-relevant they may be.

Even if martial artists often practice sparring exercises, compete in tournaments and are used to a certain degree of fighting scenarios, these are rarely like the real deal. Most tournaments have strict safety rules. Competitors wear protective gear and there are time limitations for each round. None of these things happen in real life, nor are they used in scenario based training. Indeed sparring does lead to some adrenal stress reactions. These however, are nothing like a real life attack would bring. No matter how experienced, a martial artist who hasn't practiced defense techniques in a situation in which adrenaline is being pumped into her bloodstream as it would in reality is still at danger of freezing up in a real attack.

As a matter of fact, padded assailant or scenario based training was started in the 1970's as a response to a seemingly alarming number of experienced female black belts getting attacked and raped. Quinn (1996),

one of the several martial artists behind this training, states that many martial arts people have more difficulty in their first few fight simulations than a lot of untrained people in the class. The reason is that in his experience, most martial artists will unsuccessfully try to execute the type of strikes they would normally use in a sparring situation, and these are not sufficient to take the bulletman down. Granted, the students Quinn refers to are those who are not trained in a martial art whose sole purpose is self-defense. Nevertheless, even students who practice this latter type of martial art would greatly benefit from scenario based training.

I am not new to self defense instruction as I have been practicing yongmudo; a Korean self defense martial art, for approximately four years. In my experience I have seen how training in such helps students build confidence, character and in particular awareness of own surroundings. All these elements, in addition to realistic strikes and escapes, are necessary in real life encounters. In fact, it was my training in yongmudo which prevented me from becoming a victim one early morning as I headed to my normal workout. Specifically, by using prevention rather than confrontation techniques, I avoided what could have become a serious violent attack. However, prevention will not work in every situation, and the strikes and escapes taught in regular class may come in handy. This is where adrenal stress conditioning plays a big role. Knowing these techniques and how to execute them will not necessary prove to be the best way of protecting oneself. A person must also know how their mind and body work when their bloodstream is pumped with adrenaline. Most legitimate self defense

clubs do indeed try to incorporate the element of surprise, which brings about the rush of adrenaline.

For example, in my club I have seen how the instructors use creative exercises to teach us how to deal with adrenal stress. They have developed drills such as the Four Corner Attack Exercise, 2-on-one Sparring and ATM scenarios. In each one a person is being attacked and must defend herself. While extremely beneficial especially for beginners, fighters are not able to execute strikes at full speed or power because the attackers are classmates who are not padded as an armored assailant would be, and may not know how to minimize the impact of the defender's hit. More importantly, because the attacker is typically either a novice or a friendly face, attacks are not credible enough to elicit the release of adrenaline that would result if the attacker were either a complete stranger or a person trained to be such (i.e. a bulletman). In particular, this is the main reason why the notion of adreanal stress conditioning cannot be incorporated into any club or school that holds classes on a long term basis, even if these are self defense based. The fact of the matter is that people who see each other and work with each other frequently, at one point or another establish good relations with others thereby fostering a sense of camaraderie. This in turn offsets the possibility of adrenal release during exercises such as those described. No matter how good

Figure 6: Four Corner Attack Exercise – Ready to Start.[8]

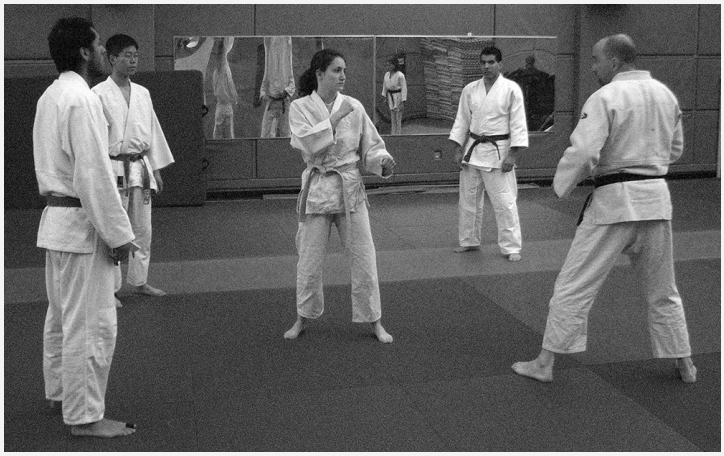
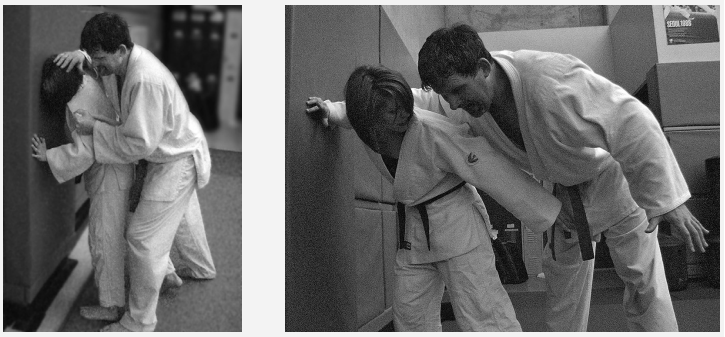


Figure 7: Four Corner Attack Exercise – Single Wrist Grab.[9]

the attacker tries to be, the fact that he is not a complete stranger will not have the same effect as the one obtained in scenario based training. Finally, because of issues such as social mores, we do not make full use of verbal intimidation or threats as is done in scenario based training. As a result, yongmudo

practitioners, like many martial artists are unable to obtain the full benefits of adrenal stress conditioning.

Figure 8: the ATM drill.[10]



I do not wish to suggest that yongmudo, or martial arts training altogether, is useless in teaching self defense. On the contrary, as explained its teachings are invaluable and can save your life. Yet for reasons explained above such training differs from that obtained in scenario based training in that the adrenal stress aspect is often missing. On this note, I have two suggestions. One suggestion is to continue the type of drills such as those described above, but increase their intensity level so as to elicit the effects of the adrenaline rush in students. One way to do this is to not only teach students how to defend themselves, but also how to think and act as an attacker. In so doing, students would not only benefit as described, but would be less naïve towards combative interactions outside of club practice. One issue not addressed by this suggestion however, is the woof component of scenario based training. Most attacks begin with intimidating words and we would all benefit from not letting them get to us. Unfortunately, for social reasons this cannot be done in many clubs. For this reason, another suggestion is to promote this type of

training among our students and initiate a weekend excursion to a school providing such training.

The next reasonable question is then; where can one formally get this type of training? There are several schools that provide scenario based learning. One of the most prominent schools is the Rocky Mountain Combat Applications Training (RMCAT) in Colorado.[11] Other institutions are listed in the table below. Of these, the most easily accessible to UC Berkeley Martial arts students is Impact Bay Area. Their courses are usually over one or two weekends and run year round.

Table 1: Resources for Adrenal Stress Training.

- Rocky Mountain Combat Applications Training
  Web Address: www.rmcat.com
  Contact: Peyton Quinn <quinnp1@aol.com>
  Address: Box 535, Lake George, CO 80827
  Fax: 719-748-8557

  Description: Full week training programs offered throughout the year (except during the winter months) at their Colorado Springs facilities. Course offerings include: Basics, Firearms, Stick & Knife, and Advanced Techniques. Participants may take one, two or the three class segments. Prices include training, meals, lodging and transportation to and from the local airport.

- Fear Adrenal Stress Training (FAST) Defense
  Web Address: www.fastdefense.com
  Contact: Bill Kipp <billkipp@aol.com>
  Address: 7016 N. 73rd St, Longmont, CO 80503
  Telephone: 720-256-3898

  Description: FAST Defense has training locations worldwide offering programs to both adults and children. Their adult programs include basics, ground fighting, weapons and multiple assailants, whereas the program for kids focuses on dealing with bullies, protecting personal space, setting boundaries against inappropriate touch and ground fighting. In addition, they offer instructor certifications for both martial school owners and instructors.

- Impact Bay Area (formerly Bay Area Model Mugger/BAMM)
  Web Address: http://www.bamm.org/
  e-mail: info@impactbayarea.org
  Address: 146 East 12th Street, Oakland, CA 94606
  Telephone: 510-208-0474

  Description: While their main focus is women's self defense, they also offer basic courses for teenagers and men. Courses offered range from basics to advanced level classes. Instructors are professionals who receive more than 200 hours of training in many self-defense techniques.

- Prepare
  Web Address: http://www.prepareinc.com/
  e-mail: prepareinc@aol.com
  Address: 147 West 25th St, New York, NY 10001-7205
  Telephone: 212-255-0505

  Description: Affiliated with IMPACT Personal Safety, courses provide basic and advanced training to women, men, teenagers, children, firms, schools and community organizations. Classes are offered throughout the year.

- Dr. Ruthless
  Web Address: http://www.dr-ruthless.com/
  e-mail: inquiries@dr-ruthless.com
  Address: Melissa Soalt or Michael Haynack
  P.O. Box 3434, Amherst, MA 01004

  Description: Dr. Ruthless offers a diverse variety of self-defense literature. Melissa and Michael also offer on-site scenario-based training, private self-defense training, lectures and seminars. Prices vary by type and length of seminar as well as travel costs.

- Kidpower
  Web Address: http://www.kidpower.org/
  e-mail: safety@kidpower.org
  Telephone: 1-800-467-6997

  Description: KIDPOWER TEENPOWER FULLPOWER International offers self defense and confidence-building workshops for children, teens, and adults worldwide. Classes are adapted to the ages and life situations of the participants. See online schedule for your nearest training location.

Conclusion

This paper addresses the importance of adrenal stress conditioning for individuals interested in learning self defense. Although this topic is relevant for everyone, the focal point of this paper pertains to students of different martial arts. The majority of students who practice martial arts view their discipline as a gateway towards executing self-protection techniques whenever necessary. Clearly, this is even more so for students of self-defense based martial arts. However, most classic martial arts do not teach individuals how to deal with the negative aspects of the release of adrenaline into the bloodstream that occurs upon feeling threatened. As a result, in actual violent attacks many such students are unable to deal with these effects, and suffer major consequences. The problem is that if a person is not trained to defend themselves while this rush of adrenaline is taking place, the body will be overwhelmed by not only biochemical, but also psychological factors. Therefore, an individual will lose control of his motor movements, experience tunnel vision, auditory exclusion and face many other limiting effects. In the end, despite the number of years training to execute different counterattacks, the victim will tend to freeze rather than stay and fight or escape. One proposed answer to this problem lies in scenario based training. The emphasis of this training method is to teach the student how to control the factors leading her to choke up or freeze during a real attack.

The primary tools towards attaining said goal are provided by the bulletman or armored assailant; the woof and realistic attack. Via a set of verbal attacks,

the aggressor initiates the adrenaline release process. The attack then teaches the individual to respond under stress and to properly deal with the fear factor. Evidently, the benefits of this training method are endless. In particular, it helps develop muscle memory; techniques learned or executed during the adrenal response stay with the individual for a very long time if not forever. In addition, it helps control and time the flow of adrenaline, teaches students to be aware of their instincts, and initiates the fight or flight response without physically and mentally freezing up.

Physical, but not mental, alternatives to scenario based training include four corner attack drills, ATM drills and two-on-one sparring scenarios. To be effective for scenario based training, attackers must pose a credible threat. They are limited however, in that extreme verbal attacks cannot be executed in most places without significant social repercussions. In addition, the familiar aspect that naturally forms in social environments such as that of a martial arts club or school make it very hard for instructors to create drills that elicit the fight or flight response. An alternate option is the use of training videos or written articles on the subject matter. While these devices won't elicit adrenal release, they will nevertheless teach the reader on the importance of training under such. The best suggestion to this end is to set up a group instruction with an organization that offers adrenal stress conditioning such as Impact Bay Area, Prepare Inc., F.E.A.R or the like.

References

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F.A.S.T. (Fear Adrenaline Stress Training) Defense; http://www.gentrymartialarts.com/students/fast_defense.html. Last updated February 11, 2006. Accessed on September 25, 2006.

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Endnotes

1 Adapted from wps.prenhall.com

2 Because Parke, Davis & Co. has trademarked the name *adrenalin* for their synthetic version of this hormone, US health professionals tend to use *epinephrine* over *adrenaline*; both terms are in common usage outside the United States.

3 Adapted from an image provided online at http://tinyurl.com/2mboev.

4 *Ibidem.* Each adrenal gland is composed of two parts: the outer region is called the adrenal cortex and the inner region is called the adrenal medulla. The release of epinephrine is handled by the medulla. The adrenal medulla, is not essential to life, but helps a person in coping with physical and emotional stress.

5 Adapted from course notes from the Introduction to Psychology class of Dr. Anthony Walsh, posted online at http://www.sruweb.com/~walsh/fightorflight.jpg. The sympathetic nervous system activation leads to changes that occur throughout the person's entire body.

Some of these include an increased heart rate and blood pressure, dilation of respiratory airways, and mobilization of fatty acids and carbohydrates previously stored as fat or glycogen.

[6] Source: http://www.rmcat.com/. The bulletman must have a sense of what ability level the student is at, and must attack in a manner that continues to challenge such ability. This implies that in some occasions the attacker will give the student the perfect opportunity to execute a strike, but in others the student might just be attacked from behind without expecting it. In addition, some scenarios include the attack of two bulletmen or the use of weapons in such. Each suit is custom fitted, costing approximately $1,200 to make. The head gear contains a professional football helmet inside and the groin protector is made partly of semirigid plastics and foam. Tough as it is, the armor does not fully protect the bulletman. He must know how to roll with the shots, thereby avoiding getting seriously injured. Moreover, as the student's skills progress, the job of the bulletman becomes more difficult.

[7] Woofing is verbally challenging, threatening or insulting the student in any way. It involves statements such as "I'm going to rape and kill you" and others that cannot be put down on paper for obvious reasons. The statements used in this process are meant to equal those a victim would hear in a street attack. The purpose is to inhibit the fighter by means of intimidation.

[8] Source: UCMAP Yongmudo Club.

[9] Source: UCMAP Yongmudo Club.

[10] Source: UCMAP Yongmudo Club.

[11] Visit http://www.realfighting.com/0102/rmcat.htm for more information about this particular school.