

## **Fear, the “Freeze, Flight, Fight, Fright” Response, and Habituation**

In 2002 I wrote an article called, “The Anatomy of Fear and How It Relates to Survival Skills Training” that can be located at:

<http://www.personalprotectionsystems.ca/index.php/the-anatomy-of-fear-and-how-it-relates-to-survival-skills-training/>

In 2004 I wrote two companion articles called, “A Follow-up to the Anatomy of Fear” and “Fear as Your Ally” that can be located at:

<http://www.personalprotectionsystems.ca/index.php/a-follow-up-to-the-anatomy-of-fear/>

<http://www.personalprotectionsystems.ca/index.php/fear-as-your-ally/>

The foundation of these three articles was that if as motor skill combative instructors we could get a functional grasp on the mechanisms behind the physical, psychological and emotional responses to how our fear circuitry works, when faced with a real world threat stimuli, then the better we could predict how we “may” react and therefore teach combatives skills that are congruent with the fear circuitry, and in the process incorporate coping mechanisms (physical, emotional, and psychological) that could help inoculate (habituate) one in a desirable manner giving us a tactical advantage. Research has shown that once our body alarm system is triggered by a threat stimulus, it can also become a threat in its own right, commandeering certain parts of the brain and body in ways that are beyond conscious control; not allowing us to sometimes transition certain motor skills learned, leading to hypervigilance (fright).

It has now been eight years since my first article on this topic, and since that time, research into the physical, psychological, and emotional responses to the fear circuitry has progressed by leaps and bounds. The biggest discovery has been in the area of the “Low Road” and “High Road” response (that I talked about in my original article on the Anatomy of Fear in 2002). It was once thought that both the low road and high road followed their own distinct neurological pathways, but current research has shown that rather than working separately, both do work congruently with one another, albeit measured in microseconds.

The “low road” which is triggered by a spontaneous unexpected threat stimulus via any of our sensory modalities (sight, sound, smell, touch, and taste), is the body’s first line of defence to an immediate threat. Here, the brain will take control of the body with an immediate “protective reflex” or “startle reflex” (downloaded directly to the brain stem where all of our reflexive responses to danger are stored). These reflexes are lightning fast, but undirected to potentially hazardous changes in the environment. Some of these reflexes include but are not limited to:

- Bringing hands up to protect your head

- Crouching
- Turning of your head
- Pulling away
- Jumping, blinking, or vocalizing
- Striking out
- Dropping or flinging something that had been held
- Being stopped in action or thought
- Releasing an action that had been held in check
- Unintended speech
- Matching behaviour to the threat
- Obedience

What science has now also learned however, is that not only may the above noted automatic patterns of behaviour take place without waiting for involvement by the conscious mind, but other learned **motor skills that are congruent with what the low road elicits physically, psychologically and emotionally, can also be trained, learned, stored, and used.** This scientific fact is important for us instructors to understand.

Now for the “high Road”; unlike the low road, the “high road” is where action can be based on conscious will and thought. This path is controlled by the frontal cortex of the brain. This pathway appears to take effect during “progressive” types of fear stimuli, but it also reviews information sent directly to the low road, analyzes it in more detail, and if it determines that no immediate threat is present, it will tell the low road to quiet down. Here a combatives student will be able to apply stimulus/response type training using the OODA model. The high road is the slowest of the two fear alarm circuits. Not until the frontal cortex processes the threat signal does it enter our consciousness, a process that can take at least a half second, a time delay which could sometimes mean the difference between life and death. The extremely important point to remember here is that the high road is slow. By the time we even become conscious of an immediate threat, the low road might have already taken action to deal with it.

Current research has now shown that when confronted with a spontaneous threat stimulus; both the low road and high road responses become co-ordinated. A vigorous low road response is crucial for survival, but it is just as dangerous to have a low road that’s too active. When the fear response amps up too high (physically, psychologically, and emotionally) performance starts to deteriorate. To maintain the balance between too little fear and too much fear, the low road and high road work together to balance each other out when needed. The low road is the unconscious excitatory component and the high road is the conscious inhibitory component when it comes to survival.

In the grip of severe violence however, the low road is often incapable of deliberation and reason. Having said this, the low road does have its own logic, a simplified set of responses to an immediate threat. In some of my past writings, I mentioned three of these responses (fight, flight, hypervigilance) what research has now uncovered is that there are in fact at least four kinds of defensive reactions that the low road will trigger; “Freeze, Flight, Fight, and Fright”

### **Freeze: (attentive immobility)**

You are walking along in snake country and you hear a “rattling” noise and look down and see what you believe to be a snake. First thing most people do hear is freeze. This is generally considered the first stage of the fear response, because it tends to occur when the threat is at a distance or not yet aware of your presence.

### **Flight:**

As you standstill because of the freeze response, you now see the snake approaching you, so the next thing you do is remove yourself from the threat. The now sudden movement of the snake towards you has broken your attentive immobility (freeze) and got you to move away.

### **Fight:**

If you have no avenue to escape, and the threat becomes omnipresent, most will now take physical countermeasures (fight) to stay alive. Sympathetic overdrive has now clicked in allowing one to be capable of totally uninhibited, blind violence.

### **Fright (hypervigilance/quiescence):**

When flight or fight is futile, one becomes caught in the downward spiral of hypervigilance/quiescence, here the sympathetic response has been knocked into warp speed, and the parasympathetic system now also swings into overdrive causing inaction. The instinct here is to become immobilized in the grip of fright.

For a more in-depth understanding of the Freeze, Flight, Fight, Fright response I would refer you to an article written by Hock Hochheim that can be located at:

<http://www.hockscqc.com/articles/fightflightfreeze/index.htm>

So how can we maximize our performance under survival stress when the fear circuits are engaged, so that we go flight, fright, and sometimes freeze rather than fright?

## **Train Habituation**

What some trainer including myself call “stress inoculation” is actually known in psychological terms as “Habituation”. In layperson terms, habituation means that you become physically, psychologically, and emotionally used to things. Research has now found that when you expose yourself to a fear response stimulus and no harm ensues, your high road modifies the low road systems response to that threat stimulus. Trainers need to understand however, that merely exposing students to fear stimuli is not sufficient for proper habituation. The most effective way is to experience the stimulus frequently and steadily. The low road system is a slow learner, so habituation to a strong fear stimulus can take a long time. The key here is repetition. Experience through realistic stimulus response based training (once a combative skill set has been overlearned) increases experience and builds confidence and reduces the “newness” of the fear stimulus to the low road.

Here are some other strategies to overcome the Fright response:

### **1. Skill Confidence:**

- This takes place through both mental and physical training

### **2. Visualization (mental imagery)**

- Commonly known as “spinal tuning” we now know that the upper part of the spinal column holds a short-term memory.
- This is one reason why I have taught our Victoria Police Department’s Emergency Response Team (ERT) to visualize both their plan “A” strategy and plan “B” strategy as they are enroute to their target.
- Remember that the mind cannot easily tell the difference between fantasy and reality. The more one uses mental imagery, the more one becomes spinal tuned to deal with the task at hand.
- As a certified hypnotherapist, I use the science and art of hypnosis and Neuro Linguistic Programming (NLP) to pre-program stimulus/response issues directly into the subconscious, specific to combat performance. Not only have I have seen a DRAMATIC increase in combative performance in those students in which I am using hypnosis and NLP, but I am also experiencing about a 50% decrease in the amount of time needed to make a student unconsciously competent in the skill set taught, when compared to

those who I have not conducted this type of training. In fact, I truly believe that hypnosis and NLP specific to combatives, will be the next nexus in training.

### **3. Breathing**

- This skill has been used in the martial arts for thousands of years
- Known as autogenic breathing
- One wants to breath in through their nose for a three count, hold for a two count, and then breath out through the mouth for a three count. Studies have found that if a person was to do this for a 3-cycle count, it decreases one's heart rate up to 30% for up to 40 seconds.
- I have also taught this skill to our department's ERT team. While they are doing their spinal tuning, they are also conducting autogenic breathing drills at the same time. Our ERT team has conducted a lot of empirical and "real world" operations where they placed heart monitors on team members that have proven this de-escalation in heart rate does take place.

### **4. Value Of Life:**

- In our society a person's life is considered to be precious. In fact, most of our morals and laws are based upon protecting oneself and others against serious injury or death.
- In a self defence situation, one may have to seriously injury or even kill another human being.
- Although a reality, many people involved in combatives training have not "really" internalized or even thought about this. Because of one's "belief system," to kill or seriously injure another person is as foreign to them as committing suicide.
- If one does not come to grips with this issue one will fail to act in such a situation

### **5. Belief In Mission / Task At hand:**

- If you do not believe in the mission or task at hand, or if the risks outweigh the ultimate benefit to you/society, you WILL hesitate in combat
- One who hesitates in combat, will usually levitate (12 feet under or be seriously injured)

### **6. Faith System:**

- You do not want to go into combat without having things resolved
- Both the ancient samurai and the kamikaze's during WWII understood this important rule

- Even in our modern times, there are certain special warfare teams around the world that are allowed to make peace with their deity prior to mission
- A strong faith system, whatever that faith system may be, MINIMIZES the fear of dying. As a graphic example of this, look at the events of September 11<sup>th</sup> and how the terrorists were not afraid to die and thus were able to carry out their mission. Also, look at what is happening in the middle east right now with suicide bombers!
- Remember, combat is not the place for you to be making major adjustments to your belief system. You need to be concentrating on the task at hand and nothing else. Not to do so places you in jeopardy.

## 7. Training:

- Training for combat “must” be gross motor based. Why? Because we know that during combat, SSR will negatively affect fine/complex motor skill performance no matter how well trained!
- For any skill taught, there must always be a plan “B” abort strategy conditioned as well. We must not be teaching multiple defences (responses) to a specific type of attack (stimulus).
- Instructors should always teach a new technique in slow motion. Why? It allows the student’s brain time to observe the technique and begin the “soft wiring process” which becomes “hard wired” through physical and mental training in conjunction with repetition, as long as it is gross motor skilled.
- These skills should be trained over and over again until they have been completely automatized, or what is called “overlearned” which produce a motor skill set that are resistant to all but the blindest panic.
- Students should be allowed to gain proficiency in the combat motor skill BEFORE stress (habituation) is added to the learning environment. Studies have found that bringing in survival stress before a motor skill has been fully automatized yields poor results, since high survival stress shuts down the high road before the skill has been transferred to the low road.
- All physical skills should be chunked or partitioned into progressive steps, rather than taught all at once. Many instructors when teaching a physical technique will have the students practice the entire technique from beginning to end when first learning the specific skill set. This is a huge mistake. Remember that the brain first learns in pictures and through modeling. By teaching a technique from A to Z all at once, the student may not fully develop the proper and full “mental picture” needed to perform the technique properly which usually leads to frustration by the student. Teachers, coaches, and instructors must insure that the student understands step A fully, then move onto step B. Once step B is understood move on to step C and so on. By doing this, frustration goes down, while confidence and skill level go up.
- Once the skill sets are learned, they must now be applied in dynamic training with imagination and emotion in order to make the stimulus/response training as real as possible. Again, the more the real the training, the better-prepared one becomes for the reality of the street (Habituation).

**8. Exercise, have a good diet, and get enough rest:**

- Studies have found that those who do well under survival stress are significantly superior in all-round psychological health, AND bodily fitness including a good diet.

**9. As much as possible, keep your day-to-day life free of stress and anxiety, and ramp up your sympathetic nervous system only during training and exercise.**

**10. Always Remember That Proper Pre Planning Prevents Poor Performance:**

- No matter how well you have trained, habituated, exercised, or slept to prepare the high road for battle, there will be times that the threat stimulus and fear circuitry will be so intense that the low road will shut down the high road. You may become what I have called “combatively stupid”, and the danger here is that if one does not get challenged, fright (hypervigilance/ quiescence) is a real possibility.
- Remember that when under high stress our working memory and cognitive focus shrinks and narrows.
- One way to overcome these memory and cognitive challenges and make effective decisions and translate them into action is through simple rules of thumb that psychologists call “heuristics”. If this happens then do this. No complicated cognition or subtle judgement is required. If our plan “A” strategy fails, then here’s the plan “B” abort follow up strategy.

So what can we as Instructors, coaches, and teacher do to incorporate the most current research in the field of Fear as it relates to Survival Skills Training?

- Absorb the above noted information and research it yourself
- Seek out instructors, coaches, trainers that are using this research in their training. You will be surprised that there are few that do.
- If you cannot attend courses from the above mentioned, look at what you are doing in the area of self protection and ask yourself, is my training “congruent” with the above noted information, if not change what you are doing
- Train on the concept of “commonality of technique.” The initial plan “A” strategy that I use in an unexpected spontaneous assault (be it armed or unarmed), is no different than in an attack that I do see coming. Why, because no matter if the brain goes “high road” or “low road”, my “congruent” gross motor skills will work in both paths. This is a definite tactical advantage.
- Understand that although the “low road” reflexive motor responses cannot be changed, they can be “moulded” to fit a combative motor skill technique that is useable during a spontaneous attack. I use the Somatic Reflex Potentiation response, which I call “penetrate and dominate,” in all my programs.

- Fortunately, there are methods of reducing fear and controlling the fear circuitry so that we can harness it in a desirable, rather than an undesirable manner, physically, psychologically, and emotionally.

As I stated in my other articles, I am not a doctor or Neuroscientist, but I have been studying combatives for the past 24 years. Since 1992, I have been using training techniques based upon the above noted information, not knowing that I was doing so. In the past, my training was based solely on my empirical research here at the school, and what was happening to officers, civilians, and students in the real world. The information in this post has once again solidified my belief that what I am doing (and have been doing for years) in the area of combatives is correct. This belief is not only based upon my empirical research over the past 24years, but as reported in this article, the scientific research as well.

The field of Neuroscience, specific to fear and motor skill performance, is constantly evolving. Any true “Street” combative system or style, should keep abreast of these new discoveries, and integrate them into training to make their survival skills more street applicable.

Knowledge and the understanding and application of that knowledge is power. Please feel free to pass this information on, but remember give credit where credit is due.

Darren Laur

Integrated Street Combatives

[www.personalprotectionsystems.ca](http://www.personalprotectionsystems.ca)

References for this Posting:

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