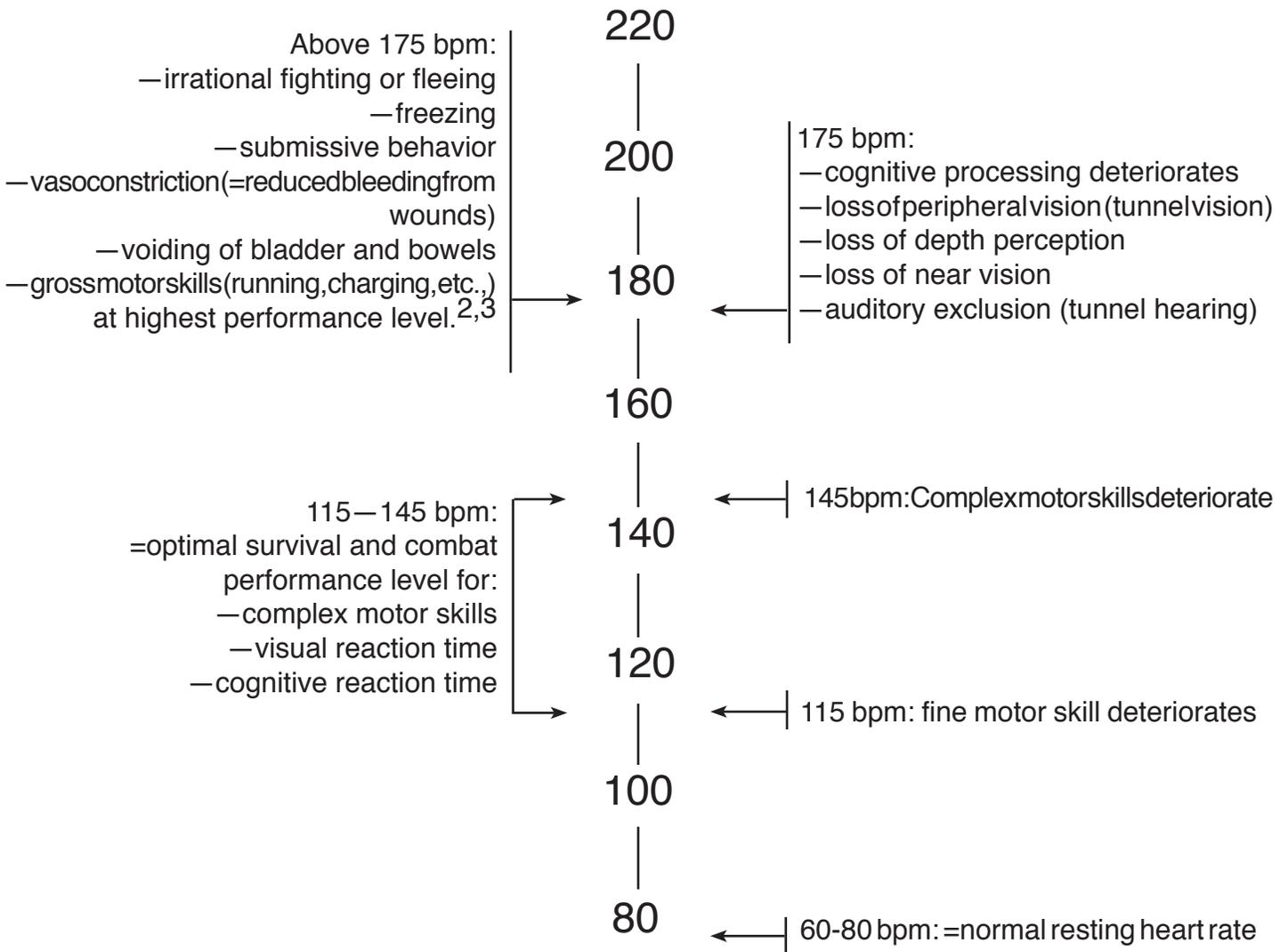


# Effects of Hormonal Induced Heart Rate Increase <sup>1</sup>

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## HeartRate

beats per minute (bpm)



**Notes**

1—This data is for hormonal induced heart rate increases resulting from sympathetic nervous system arousal. Exercise induced increases will not have the same effect.

2—Hormonal induced performance and strength increases can achieve 100% of potential max within 10 seconds, but drop to 55% after 30 seconds, 35% after 60 seconds and 31% after 90 seconds. It takes a minimum of 3 minutes rest to "recharge" the system.

3—Any extended period of relaxation after intense sympathetic nervous system arousal can result in a parasympathetic backlash, with significant drops in energy level, heart rate and blood pressure. This can manifest itself as normal shock symptoms (dizziness, nausea and/or vomiting, paleness, clammy skin) and/or profound exhaustion.

# David Grossman: On Killing —Patience Mason

The first evening of the Albuquerque retreat for combat veterans and spouses put on by the National Conference of Viet Nam Veteran Ministers, [P.O. Box 2965, Attleboro, MA, 02703-0965, 1-508-222-7313, Rev. Phillip G Salois, MS, email XUAN LOC@aol.com] we had a lecture by Lt. Col. Dave Grossman, (Ret) who has written a book called *On Killing*, (Little Brown, 1995). He is not a combat vet, but he has studied killing, interviewed hundreds of combat vets, police officers, etc..

The diagram on the preceding page was one of his slides. It had a profound impact on me, because as he showed it and pointed to the "Above 175 bpm" part, he said "Your frontal lobes [the thinking part of the brain] are just not working!" Your forebrain has been "hijacked by your midbrain, the mammalian brain" which has four functions, the 4 F's (fight, flight, feeding and mating) and can only do one at a time.

As he was saying this, I could see Bob in one of his rare but frightening rages and it really hit home to me: That is why there is no point in arguing with a trauma survivor when he or she is in a rage. Hormones are cascading through the body and brain and nobody is home! That guy I usually like is not there. Trying to argue with him at that point is about the same as handing a lit cigarette to a guy with emphysema who is on oxygen. BOOM!

Grossman said that in that state, in combat, the bad guy looks closer because of tunnel vision (so I might look more threatening). The person in that state also can't focus on things that are close (like the expression on my face, I thought) and that everything will be gated out except one sense, usually vision, so the person really doesn't hear what you are saying, anyhow.

It was a moment of enlightenment for me.

All of this, by the way, is autonomic arousal which is not under conscious control. Grossman said the bridge between autonomic arousal and conscious control is breathing. Learning autogenic or combat breathing, as military and police elites do today, can help you control automatic arousal and keep your heart rate in the 115-145 area where you function best. This involves breathing in for four counts, holding it for four counts, breathing out for four counts and holding for four counts.

Grossman went on to say that in a study called *Deadly Force Encounters*, Artwhol and Christian reported that 88% of people had auditory exclusion, 17% reported intensified sounds (which means one in ten had both!) 82% reported tunnel vision. 78% reported feeling like they were on automatic pilot, 63% had slow motion time, 11% paralysis, 63% heightened visual clarity also called flashbulb memory, 61% had memory loss for part of the event, 50% for some of their own actions, 50% felt like they were watching themselves (dissociation), 36% had intrusive distracting thoughts (usually family or God), 19% had memory distortion, 17% had fast motion time (a 30 minute shootout seemed like two seconds).

Grossman discussed the experience of killing. In the military you are taught to kill the enemy, but no one ever tells you what will happen to you when you kill a man. If you haven't been warned about what could happen, you will never talk about it. He thinks a cause of PTSD is reflected in the phrase, "You are only as sick as your secrets." Most of the things combat vets never talk about (and are ashamed of) happen to everyone. for instance, in WWII, he said 25% of combat vets admitted to losing bladder control and 25% to

losing control of bowels but only on an anonymous questionnaire.

Another midbrain response to violent death in combat or other situations is "Thank God it wasn't me." This isn't irrational because the midbrain is focused on survival and is really happy, even exhilarated, to have lived, but people usually feel terrible guilt for having this thought, especially if it is a friend who died. There is also a great feeling of power and pleasure when you kill someone else in a deadly encounter. It is that mammalian brain again, happy to have won, to be alive! Then there's a backlash of remorse and nausea, "What's wrong with me?" The 18 year old private who was never told this would happen is devastated by these feelings.

Grossman didn't say this, but I believe that if this is the only good feeling you get for long enough (like a year in the bush), you will learn to love killing and so think there is something really wrong with you. The tragedy is to be put in that situation as a young man and without help. Evolution or God gave you this capacity to kill, but it was other men who put you in the position where it was the only pleasure available.

"It is all my fault," is another common midbrain response. The midbrain accepts full responsibility for everything in a sort of "something-bad-happened-don't-let-it-happen-again" way. Lots of veterans spend the rest of their lives feeling and believing that they are responsible for things that happened, as do survivors of other kinds of interpersonal violence.

David Grossman's book, *On Killing*, is available in paperback. He is really a dynamic speaker. He is the director of the Killology Research Group, 1422 S Main, Jonesboro, AR 72401.

Reprinted from Vol. 4, No. 4 of the Post-Traumatic Gazette. © 1998, Patience H. C. Mason.

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