

Heart Rate (beats per minute)

Above 175 bpm:

- Irrational fighting or fleeing
- Freezing in core
- Submissive behavior
- Vasoconstriction (=reduced bleeding from wounds)
- Voiding of bladder and bowels
- Gross Motor skills (running, charging, etc) at highest performance level

220

200

180

160

175 bpm:

- Cognitive processing deteriorates
- Loss of peripheral vision (tunnel vision)
- Loss of depth perception
- Loss of near vision
- Auditory exclusion (tunnel hearing)

115-145 bpm:

Optimal survival and combat performance level for:

- Complex motor skills
- Visual reaction time
- Cognitive reaction time

140

120

100

80

155 bpm:

complex motor skills deteriorate

115 bpm:

fine motor skills deteriorate

60-80 bpm:

normal resting heart rate

**Effects of hormonal induced
heart rate increase**

Source: Psychological Effect of Combat
Dave Grossman and Bruce Siddle
Academic Press. 2000