

Experimental Tip # 7: Identifying and Dealing With Stress in Tournament Play

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Monday, 12 November 2007
Last Updated Monday, 12 November 2007

Stress is natural in competition. In fact, the presence of a small amount of stress is needed to ensure there is an optimal amount of arousal, not too little and not too much. With a small amount of arousal, a bowler will be more tuned-in and focused. But, the presence of too much stress can inhibit performance on the lanes, if gone unrecognized and unchecked. Too much stress causes physical, emotional, cognitive and behavioral responses that reduce performance levels. This article will articulate an understanding of your bodies' response to stress, recognizing common symptoms as well as training and practice methods to reduce stress during competition. One such method is to use a heart rate monitor as a personal biofeedback mechanism in tandem with stress reduction interventions.

My experimental tip series are presented as out-of-the-box or extras to improve performance. In this case, I believe personal biofeedback paired with a stress recognition and stress reduction intervention process can prepare you to deal with stress more effectively in tournament conditions. Your Bodies Response to Stress When we encounter stressful situations, our body goes into a fight or flight response releasing a chemical reaction in our body. The released hormones prepare us for survival. The adrenal gland is also home of the grand daddy of all stress reactions, the fight-or-flight response. Sensing impending danger the hypothalamus presses out cortisol-releasing factor, a hormone that prompts the pituitary gland to release adrenocorticotropin (ACTH). Carried in the bloodstream to the adrenal glands, ACTH triggers production of cortisol and epinephrine. The end result of this hormonal relay is a sudden surge in blood sugar, heart rate, and blood pressure—everything the body needs to flee or confront the imminent danger. After being released by the pituitary gland, the stress hormone ACTH can impede production of the body's natural pain relievers, endorphins, leading to a general feeling of discomfort and heightened pain after injury. High levels of ACTH also trigger excess serotonin, now linked to bursts of violent behavior. (Carpi, 2006) So, this explains the physical

response to stress. The heart rate and blood pressure both increase will your body is ready for battle. But, when this happens on a bowling lane, due to stress induced by a situation of needing to strike-out to win, these hormones are not friendly to good execution. How can you be relaxed and execute quality shots with this happening inside your body? In short, you can't. But, what can you do? First and foremost, a bowler must recognize that a stress response is occurring. What physical, emotional, behavioral and cognitive responses are indicators triggered by stress? Once we can identify what is happening, we can actively intervene with strategies discussed later. Identifying My Responses to Stress Without the recognition of your response to stress, you will not be able to intervene. Specifically, what is your physical, emotional, cognitive and behavioral response to stress? If you don't practice recognizing your responses to stress, you will not recognize them when stress has sunk its teeth into you. To prepare for an improved recognition, think about these four questions and likely responses:

- WHAT IS MY BODY DOING? (physical) rapid heartbeat, nausea, muscle tension, sweaty palms, headache, dizziness
- WHAT AM I FEELING? (emotional)moodiness, feeling tense, depression, getting angry (short temper), irritability, impatience

- WHAT OR HOW AM I THINKING? (cognitive)inability to make a decision, inability to concentrate or focus, difficulty with thinking clearly, anxious thoughts, fear of failure, worried, feeling overwhelmed.

- WHAT AM I DOING? (behavior) overacting to unexpected problems, isolating oneself from others, nervous habits such as nail biting, pacing, picking skin on fingers, etc.

5-Steps to Reduce Stress in the Heat of Competition After identifying that you are indeed reacting to stress, here are four methods that will help you reduce the symptoms of stress: Sit down and close your eyes. The simple act of closing the eyes reduces external visual stimulation. Your brain waves will produce more alpha waves or slower frequency waves. This will act to calm you. Deep breathing. Take a deep breath. Hold it. Exhale. See a tranquil picture in your mind. Something that is soothing or calming. This can be as simply as the clouds and sky on a sunny day. Listen to music between frames. Listen to your favorite songs. This music, in your head, can be used as part of the pre-shot routine as well. Recite your positive self-talk statements. No lane beats me! I am prepared with release knowledge for any lane condition and transition. Training Yourself to Eliminate Stress To train yourself to use the above 4-steps of stress reduction, you can engage in some basic but effective biofeedback sessions with a low-cost heart rate monitor. Your heart rate will be a sure sign of how you are handling stress. These portably and wearable ones generally run from \$30 USD to \$75 USD. First, purchase a heart-rate monitor that has the ability to regulate your heart beat continuously. In today's market, you can secure a continuous heart rate monitor that is in a watch, thumb or ring form. No longer do you need to wear a strap around your body. In addition, you could purchase a portable blood pressure monitor. Both of the examples below are worn on the wrist or hand. Specifically, this can be worn on the balance arm side. Be sure that you the device can monitor the heart rate continuously. You want to be able to see the immediate affect of the interventions on lowering the heart rate. You will use the portable device to measure a baseline, watch the heart rate response to stress and then practice interventions and decrease your heart rate. In essence, you will use the portable device in a biofeedback process. Determine your baseline heart rate before your training begins. This will help you determine if your heart rate has increased as well as when, through the methods described below, it has been reduced. In training, simulate a stressful competition moment on the lanes. Tap into your memory or create a situation you want to happen in the future. You are bowling Pete Weber in the U.S. Open final. You are leading by 20 pins with 5 frames to go. How would this make you feel? Think? Act? Behave? Make this visualization as real as possible. What are the colors that would be seen? What are the scenes around you? What are the sounds? Smells? The more successful you are at creating the situation, the more likely you will experience a stressful response. With the heart rate monitor or blood pressure monitor, check the physical response to your visualization. You

should see the heart rate increasing? Are you beginning to experience some of the other triggers to stress? Once you have begun to be affected by the stress induced visualization, do the 4-steps discussed above. Do you notice your heart rate dropping? How quickly and effectively the heart rate will drop will indicate to you how focused you are in the 4-step process. By doing this process, with the reality of controlling your heart rate, you will learn how-to more effectively control your hear rate. And, with improvement, you will believe in the effectiveness of the 4-steps when you need to utilize it to reduce stress, in an actual stressful tournament experience. Final Notes Be sure to shop around for a portable monitor that fits your budget as well as can provide a constant monitor of your heart rate or blood pressure. This and only this will allow you to use it in conjunction with the stress reduction techniques to see a steady decrease in beats per minute based on your effectiveness of implementation and focus. References

Carpi, J. (2006). Stress: It's Worse Than You Think. Psychology Today.

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