



MORE SCIENCE, LESS FICTION

In his follow-up to the Mental Battle article in the February issue of Triathlete Magazine, in this article Cadence triathlon coach and exercise physiologist, Todd Parker, covers some key components of a mental training program for the endurance athlete and coach alike. The important learning point here is to recognize the ease (of ability) to identify mental disruptions, learning simple mitigating techniques, and incorporating mental training into your repertoire of skills that lead to optimal performances.

The Mental Battle: Part II

Key Components of a Mental Training Program:

Anxiety Management. Utilize tools (questionnaires, inventories, reflection/one-on-one counseling...) to identify sources of anxiety, and develop an appropriate program using the techniques necessary to mitigate anxiety and stress. From the coach perspective of course, one-on-one sessions are critical to really getting to know your athlete better “on and off the field” so to speak. Based on research from Nideffer (2006), Taylor & Wilson (2005), Martens (2004, 1987), Dahlkoetter (2004), Rushall (2004), Andersen (2000), Orlick (2000), as well as competing professionally in triathlon and coaching endurance athletes, the following selected key components are some suggested steps to reducing and managing anxiety levels:

- [For Coaches] Establish viable two-way communications with all of your athletes. If you haven't taken the time to sit down one-on-one with each athlete, you need to make that time investment – as it will pay big dividends throughout the season. In addition, it lets each individual athlete know up front that you care about them, want them to be successful, and immediately improves athlete-coach and coach-athlete rapport, trust, and communications. For athletes who have a coach (and reside in the same area), it is important to establish these communications sharing sessions. If your coach cannot find time to accommodate you – at least initially and from time to time, then that's certainly an indicator to look for a new coach.
- Establish challenging, realistic, and quantifiable performance goals – ranging from daily short-term, intermediate weekly – monthly goals, to long-term goals that may encompass the entire season or perhaps even years down the road. By setting a goal that is unrealistic, the likely results are that the athlete won't “buy in”, anxiety will

increase, motivation will decline, performance won't be as optimal, and the athlete may even decide to quit.

- Identify what upsets you, what issues or concerns you may be dealing with, and think through to the root cause. By empowering yourself with what the root cause of the anxiety is, you can establish a strategy (i.e. techniques, personal choices, professional assistance) to alleviate it as best possible. Imagery is often very effective in mitigating root causes of anxiety. By visualizing successful handling of what were previously anxious situations, you can facilitate feeling more relaxed, and therefore perform better in the future.
- Incorporate Negative Thought Stopping, which I call turning a negative into a positive – into your repertoire. For example, instead of “man, am I nervous!” to “wow, I can feel the adrenaline, I’m ready!” Negative thoughts only perpetuate a negative downward spiral of psychological and physical performance. By staying positive, sub-par performances are treated as learning points, and can be more uplifting to the psyche with focus on future performances.
- Teach/Remind yourself that you are in control of your emotions, and not to worry or focus needlessly about aspects (e.g. weather, who shows up to race...) which are out of your control.
- Remind yourself that every day is a learning experience, and “each training day and race I learn more about myself and improve.” By learning to look at everything in this way, and making it a continual learning process, you’ll be less anxious, more excited, and feel a growing empowerment as time goes on.

Breathing (Breath Control Training). Often called relaxation response or relaxation breathing, which was developed by Dr. Herbert Benson of Harvard Medical School back in 1975, although several cultures claim to have been using breathing to relax the mind and body for numerous centuries to millennia (i.e. Chinese with Thai Chi, Indian/Pakistani (Indus Valley) with Yoga)...etc. It is important to learn how to use deep (diaphragmatic) breathing techniques, remind yourself to breathe when you observe rapid shallow breathing, and incorporate Breath Control Training into your routines. By making breathing part of a warm-up routine, it will aide in relaxing or easing the daily tension buildup that can often accompany you to training and races. After making breathing a conscious part of daily training, you’ll soon catch yourself when “stressed” and breathing in a shallow manner. Furthermore, Williams and Harris argue that *“breathing is the simplest and most effective technique for reducing over-intensity (Williams & Harris, 1998).”* Close the door, turn off or lower the lights, and go to it. Below are some commonly used breathing techniques that may be performed lying down, sitting, or standing:

- If standing, stand with your body erect, feet approximately shoulder-width apart, arms and hands relaxed down at your sides.
- Focus on lower abdomen, which should be like a small balloon.
- Take in a slow, long, deep breath in through nostrils, imagining the balloon inflating slowly. You will fill the lower lungs first, and then your shoulders will rise as you begin to fill your upper lungs.
- Hold a few seconds, then slowly exhale through the mouth (pursed lips), and imagine the balloon gently deflating.
- Repeat at least 10 or more times when performing the exercise.
- You should feel more relaxed, perhaps loose and a little lighter.

- Practice this technique throughout day, especially when you catch yourself feeling stressed or anxious.
- With practice, you'll become cognizant of your breathing when it becomes shallow – indicating anxiety or stress, and be able to perform this breath control technique to aide in relaxation, focus, and attention.
- Eventually, you'll develop the “habit” or automatic response, and subsequently be able to achieve relaxation more quickly.

Concentration. A learned skill that is very perishable if not practiced or attended to routinely. This is especially true for endurance athletes who are bombarded by irrelevant cues and stimuli throughout the course of a race. Their ability to concentrate on the task and associated technique(s) at hand is critical to optimal performance. Nideffer and Sagal state that *“Concentration is often the deciding factor in athletic competition (Nideffer & Sagal, 2001).”* Lack of concentration (e.g. thinking about what you'll eat after the race) has an accumulating affect, whereas several drifts in concentration often lead to faltering technique and intensity, resulting in slower training and racing performance.

Control. Elemental to successful performances – control is the foundation of mental training, physical training, and competing. Without control, outside influences draw upon one's focus and finite energy stores, thus, facilitating a loss of self-control on several levels. A lack of control diffuses concentration and leads to sub-par performances. The following can aide or contribute to increased athletic control:

- realistic performance oriented goals are well established and revisited
- rapport and two-way communications between coach and athlete are strong and effective
- mental training is a key component of the program
- athletes recognize signs, symptoms, or cues of stress, anxiety, and negativity, and subsequently utilize the appropriate techniques or make adjustments to mitigate unnecessary tension
- consistent control of thoughts leads to more consistent behavior (i.e. thinking and being positive)
- a learned awareness that you are in control of your thoughts and actions, whereas other aspects such as the weather and who shows up to the race are outside of our control

Cue Words (Self Talk). Cue words, sometimes referred to as key words, are simply words to refocus, regain control of proper technique, to motivate, to inspire, or to initiate action such as making an explosive move on competitors. Some common example cue words to aide in calming or “bringing it down a notch” are “breathe”, “relax”, “steady”, “calm”, “loose”; whereas, “attack”, “go for it”, “that's it”, “commit”, “strike now”..., are words used to psych up or “take it up a notch”. Cue words can be very powerful and effective tools for your athletes to incorporate into their daily mental training and learning repertoire.

Focus (Attentional Focus). Attentional Focus is an athlete's ability to “listen” or pay attention to varying internal and external cues or stimuli during exercise. Simply put, it is critical that an athlete learn to focus on important relevant cues and ignore irrelevant cues in order to optimize

performance potential. Paying excess attention to spectators is an irrelevant external cue athletes need to learn to ignore, while picking up on a tactical move from a competitor is a relevant external cue that needs attending to. Teaching points:

- Teach yourself/your athletes about internal and external stimuli and cues, which originate internally (within themselves) and externally (within their environment)
- Through observations and dialog, coaches can determine where an athlete's Attentional Focus is concentrating during various conditions or stages
- Athletes must learn that they are in control of their thoughts, and can learn to focus their attention on performance related relevant cues, while ignoring irrelevant ones. Don't just tell them to focus. Educate them on what Attentional Focus really means and how it applies to their situations
- Pay particular attention to what your athletes are saying during training and following races. By doing so, you'll be able to correct misplaced focus on irrelevant stimuli, which often leads to lost concentration, performance decline, and ultimately a more anxious athlete
- Teach them to use Cue Words such as "Focus". Once they catch themselves drifting, they can immediately tell themselves "Focus", thereby getting back on track and concentrating on what is pertinent to their technique, conditions, and overall performance

A simple acronym developed by Dr. Tami Eggleston that is geared towards Focus and Attention is depicted below:

- **F** = Fuel your desire - Know your motivation and goals - keep up the passion
- **O** = Optimal energy - Know appropriate arousal/relaxation levels for best performance
- **C** = Consistency - Know the importance of practice and routines
- **U** = Understand your natural strengths and areas of improvement
- **S** = Shift Gears - Know when you need to mentally shift gears and work on controlling your attention.

Goal-Setting. Establishing goals is more than just writing them down. Effective Goal-Setting must place commitment to the vision and lay out strategies to achieve them. Strategies are specific daily and/or short-term goals that progressively work towards achieving ultimate long-term goals and dreams.

- First, sit down one-on-one with your athlete, review training progress, previous season performance accomplishments, and develop a series of short-term goals that lead toward successfully achieving long-term season goals and aspirations. Make sure that goals are event-specific. Event-specific goals focus training on improving particular aspects, as well as overall performance in the event(s) in which they will compete.
- Ensure goals are realistic and quantifiable. Goals such as "I want to drop from 22:00 to 16:00 minutes for my 5k time", or "I want to improve this year", are not realistic or quantifiable (respectively). Based upon a previous best time, coupled with the event only being 5 kilometers, the first goal is an unrealistic season goal. The second doesn't specify how or how much the athlete wants to improve, and therefore doesn't establish a benchmark to plan and progress towards.

- Emphasize goal orientation on processes and performance more so than outcome. By only establishing outcome goals, if the athlete “loses”, then motivation and focus decline, rather than learning and improving from process and performance orientations.
- Put goals in writing so that both athlete and coach may continually review and monitor progress.
- Ensure that daily training and periodic training markers (i.e. timing specific distances e.g. 400m, 1 mile...) are structured to capture performance improvements, progress, or decline. Otherwise, you’re just “wingin’ it” and hoping you’ll improve and achieve goals.
- If goals are done right, athletes will know just as well as coaches whether they are accomplishing established short-term goals, and to the extent which they’re progressing.
- Establish an overall goal support network so that others are aware of and can support and encourage goals (i.e. performance outcomes). A typical network may include coaches, spouses, parents, and teammates (when applicable).
- Provide constant relevant feedback to your athletes on how they are progressing towards goals. This is where quantifiable performance oriented goals make it easy for coaches and athletes (even self-coached athletes) to track progress! LEFT OFF

Imagery. Mental Imagery has been around for over 130 years, with German researcher and Professor Wilhelm Wundt often being named as the originator in 1876. However, in the psychological application sense, was not fully revived in the United States until the 60’s and 70’s (Holt, Horowitz...). Sometimes called Mental Practice or Visualization, Imagery is a systematic process of using your imagination in order to guide your thinking in a positive way. Specifically, you use your mind like a video playback device to correct technique, see yourself successfully coping within a stressful environment (e.g. competition), as well as visualizing optimal performance. While visualizing the performance, you can make it seem as though you feel light and effortless, while performing a fast, strong, and confident race. Imagery is an effective method to re-visit performance goals and dreams, or re-familiarize yourself with a race course, the warm-up area or route you plan to take, your race day routine...etc. Positive thoughts through the use of imagery are an important component of training and racing efforts, and if learned well, imagery can sharpen focus to more quickly pick up on relevant cues, correct faltering technique, motivate, and adjust intensity. Research has indicated that imagery results in subliminal neuromuscular patterns being present, (and although much less prominent), are identical to those when actually performing the exercise. In effect, it’s giving the mind and body a rehearsal of proper form and desired performance without physically performing the task. The visualization aspect of imagery can be externally or internally oriented. By this I mean, external is comparable to watching yourself perform by viewing a video, while internal is a perspective view from your eyes – as if the camera was imaging what your eyes see. Below are some suggested steps to begin performing mental imagery.

- Find a quiet place where you won’t be interrupted
- Assume a comfortable position that will easily allow you to let go and relax
- To become more relaxed, first perform some relaxation breathing exercises (10 or so slow deep inhalations through the nostrils, held, and slowly exhaled through pursed lips (See Breath Control Training))

- Before getting to the sport images, first learn and practice visualizing a specific object such as a stop sign. A stop sign is a good choice and is often an image used to initiate Negative Thought Stopping. Once you can readily (from a starting point or “blank page”) visualize the stop sign, then move on to sport specific imagery.
- Visualize a scene of your running (for example). Depending on where you are (pre-season, preparation phase, competition phase...) you may choose to imagine yourself in a familiar upcoming race, a particularly challenging training route, or perhaps successfully coping with the stress and anxiety on race day. See yourself successfully performing and feel the enjoyment that it brings.
- When a negative image (i.e. falling, executing poor technique, shoelace coming untied...) enters your visualization, stop, “rewind the tape”, and go back and see yourself performing successfully.
- End each session with a few slow deep breaths and open your eyes before getting up.
- Start with 5 minute visualizations or imagery segments with small breaks in between. Review/discuss what was visualized, and provide constructive feedback to your coach/athlete.
- Once you’re rather proficient, you can quickly relax and get into a 20-30 minute imagery session. A good session of this length can allow you to recap positive successful performances, correct negative trends in technique or coping skills, prepare more thoroughly for an upcoming important race, or even maintain technical skill proficiency while injured.
- Lastly, once proficient at imagery, you can rather easily enter a visualization state and perform a short session prior to a race. For those who benefit from this type of routine, many will review the course or their successful race strategy one last time – as a final tune up. In addition, as with Goal-Setting, Mental Imagery training sessions should be oriented on process and performance rather than outcome.

Mental Preparation. Mental Preparation is an overarching theme that incorporates the various psychological aspects of preparing to compete. Areas such as Anxiety Management techniques, Breath Control Training, Attentional Focus, Goal-Setting, Imagery...etc., are all mental preparation steps taken to mitigate stress and anxiety, and to optimize performance potential. Just as one incorporates numerous physical training techniques to prepare physically, one should also devote as many mental preparation techniques necessary to achieve optimal performances.

Mistakes Management. Mistakes management is the process of identifying, recognizing, understanding, and managing mistakes through a constructive means to improved performance. Athletes are going to make mistakes – technically, tactically, and personally. The fundamental level of your future successes will largely be attributable to how you manage these mistakes. Often times, there is so much focus on the positive and successful aspects of performance that we fail to recognize mistakes made, and therefore do not incorporate changes to improve or remedy such instances. Furthermore, several mistakes gone un-remedied often facilitate declines in motivation and focus, and may even result in injury. Some keys to managing mistakes are the following:

- What are the size and scope of my mistakes, in other words, how much impact on my performance are they making?

- What is the frequency of occurrence?
- What are the root causes (e.g. lack of technical proficiency, focus, motivation..., stress overload...)?

Once you can adequately answer the three questions above, then you can figure out how you're going to manage the mistakes by initiating strategies to overcome them. As with nearly every component of the psychological side of athletics, as well as instituting a viable mental training program, effective two-way communications between coach and athlete are critical to successful mistakes management.

Negative Thought Stopping. Negative Thought Stopping is a technique initiated to stop negative thoughts and replace with positive affirmations, cue words, and positive thinking. Negative thoughts only perpetuate a negative downward spiral of psychological and physical performance. By staying positive, sub-par actions or performances are treated as learning points, and can subsequently uplift the psyche when focus is on improving future performances. Below are some tips on Negative Thought Stopping:

- Incorporate Negative Thought Stopping into your repertoire of control and focus tools
- Instruct yourself/your athletes, instead of "man, am I nervous!" to "wow, I can feel the adrenaline, I'm ready!"
- Teach yourself/your athletes simple cue words that may be useful at the onset of negative thinking, internal criticism, or self-doubt. Words or phrases commonly used are: "Stop!" (and using the image of a Stop Sign), "it's not true, you know you've prepared, and you're ready", "knock it off!", "I'm not nervous, I'm ready!" ...etc.

Progressive Relaxation. Progressive muscle relaxation is a technique of stress management developed by American physician Edmund Jacobson back in the early 1920s. Jacobson argued that since muscular tension accompanies anxiety, one could reduce anxiety by learning how to relax the muscular tension. Progressive relaxation techniques are still widely used today throughout the world in sports, clinical, and a variety of settings. The techniques are simple to learn and practice, and best suited for a quiet comfortable environment.

- To perform, you begin by tensing and releasing each part of the body. Start with either your head or your feet, and then work your way down or up the body respectively.
- To begin with your lower body, firmly tense your toes as tightly as possible and hold the tension. Then, slowly release the toes.
- Move up to your feet. Firmly tense them, hold the tension, then slowly release the feet.
- Next, move on to your calves, hamstrings, quads, abdominals..., tensing and releasing - until you reach the top of your head.
- Depending on how much time you have, you can tense and relax both sides simultaneously, one side at a time, or entire muscle groups (and limbs) simultaneously.
- For those really short on time, or a quick means of relaxing prior to an imagery session, tense and release the entire body several times to reach a more relaxed state.

- A word of caution. If you have any pulled or strained muscles, tendons, ligaments..., or any other injuries for that matter, forgo that area of the body to avoid exacerbating the injured area.

Routines. Routines are a fundamental step in reducing the uncertainty and stress that often lead to anxiety. By establishing consistent habits or steps that bring familiarity to pre-race environments, routines allow the athlete to focus on relevant stimuli and necessary actions, while not worrying about details that are now “second nature”. One of the best ways to assist in developing routines for training and competition is by developing a checklist of items and equipment that are required, as well as those that may add personal comfort. Whether coach or athlete, you should develop or refine routines in the off-season. By doing so, athletes will develop routines that facilitate time savings, efficiency, confidence, and a level of comfort not experienced by others. To summarize, routines are a very simple yet effective method of reducing some of the stress and anxiety associated with athletic competition. Lastly, build flexibility and alternatives into your routines so that you’re prepared to deal with unexpected circumstances that often arise. Below are some common areas to consider making routine, especially when it comes to final competition preparations:

- vehicle(s) fueled, packed, ready to go
- route/alternate routes to race site
- contact numbers (i.e. race directors, maintenance/towing, local contacts, personal physicians...) and communications means when the unexpected happens
- all gear and apparel laid out ready to go (have a checklist)
- “to bed” and “wake up” times
- setting two alarm clocks (at least one being battery operated)
- tested “tried and true” meals and fluids
- extra sets of things (e.g. racing shoes, shoelaces, tires, tubes...)
- fluids and bottled water for race site (don’t assume they’ll have it)

Self-talk. Self-Talk is also commonly associated with Cue Words, Negative Thought Stopping, and Positive Affirmations. Positive Affirmations are positive words used to affirm or reaffirm the truth concerning your performance readiness, and stop negative thoughts. Certainly, self-talk can be negative and quite prevalent; however, here we’re going to focus more so on the positive aspects, and how self-talk can be an effective tool in aiding performance. Self-Talk is an important part of our lives – as we do it all the time and in various situations. The important thing to remember is that self-talk can be guided, beneficial, healthy, and performance enhancing – just as much as it can be negatively debilitating. In line with Cue Words and Negative Thought Stopping, below are some suggestions for incorporating self-talk into your teaching points for your athletes:

- Teach your athletes to be more conscious of their self-talk, to use techniques to stop negative thoughts, and to regain control, motivation, and energy through positive self-talk and thinking.
- If you want your athletes to “bring it down a notch”, suggest cue words to aide calming such as “breathe”, “relax”, “steady”, “calm”, “loose”...etc.

- If you want your athletes to get psyched up or “take it up a notch”, suggest cue words that might motivate, inspire, or take action such as “you’re ready”, “attack”, “go for it”, “that’s it”, “commit”, “you’ve got ‘em!”, “strike now” ...etc.
- Utilized positively, cue words can be powerfully effective in combating negative thoughts and a drifting Attentional Focus.

Whether athlete or coach, always try to be positive, or find positive learning aspects of situations. By being positive, you/your athletes will learn to be more positive, which will carry over into their training, competing, as well as elsewhere in daily life. Ultimately, this will lead towards more stability, effectiveness, happiness, and optimal performances.

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