



*the extra gear*

Mental Toughness Training for Peak Sport Performance

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## Concentration Building

### Introduction

The ability to maintain concentration during the pressure of competition and to regain concentration after unexpected situations is key to optimum performance. Many research studies have verified that concentration skills are important to peak athletic performance. Time and again this research has indicated that the ideal mental state associated with peak performance includes the feeling of being totally absorbed and focused on the activity at hand (Jackson & Csikszentmihalyi, 1999; Krane & Williams, 2006).

### What is Concentration?

Concentration or attention (I use the words concentration and attention synonymously) can be thought of as having four different parts – selective attention, maintaining focus, situational awareness, and the capacity to shift attention will focus (Weinberg & Gould, 2007). It is also helpful to think of attention as the beam from a flashlight. The beam can be narrow or broad, it can be pointed in any direction, but it can only supply so much light at a time.

- *Selective attention* is like pointing a narrow beam from your flashlight in the right direction. It refers to paying attention to the most important things in your environment while screening out the distractions. For example, you use selective attention when you have a conversation with one person at a party. You focus on what this single person is saying while screening out all the other conversations around you. If you have problems with selective attention, you might miss an important detail in a competition because you are thinking about something irrelevant.
- *Maintaining focus* is like holding your flashlight on the right thing for an extended period of time. It refers to how well someone can concentrate on a single thought over time. Research has shown that the median length of time during which the content of one's thoughts remain on target is about five seconds (Weinberg & Gould, 2007). It's not hard to see why it would be difficult to maintain focus during an entire competition.
- *Situational awareness* is like shining a broad beam from your flashlight all around you to help you decide what direction to go. It refers to the ability to size up the situation and make appropriate decisions. For instance, in a race this could mean attending to what other competitors are doing, how they seem to be feeling, and using this information tactically in your race. For instance, you might survey the pack and decide that this is a time to attack.
- *Shifting attention* is like pointing your flashlight at a moving target. It refers to altering both the width and direction of attention over time. This is very important in many sports, as the attentional demands change over time. Continuing to use a race as an example, at some points it is important to focus on a single person in front of you to anticipate an attack, while at other times it is important to take a broad survey of the entire field. Similarly, at some points it's important to focus on something specific inside yourself, like your heart rate or how your legs

are feeling. At other times it's important to attend to the full range of your experiences and memories of similar races to determine what the best move will be now.

### Four Types of Concentration

Psychologist Robert Nideffer proposed a useful model of concentration. He suggested that concentration has two dimensions: width and direction. Attentional width can be broad or narrow and attentional direction can be internal or external. Therefore, this model proposes for different kinds of attention:

- *Broad-external attention*, like when you are surveying the entire field in a race. This type of attention is good for assessing the total environment. When used inappropriately, it can lead you to miss things because you're being distracted or paying attention to something that's irrelevant.
- *Broad-internal attention*, like when you are comparing the current situation to similar ones in your memory. This type of attention is good for developing a game plan or strategy. When used inappropriately, it can lead you to think too much, causing "paralysis by analysis."
- *Narrow-external attention*, like when you are focused on a single person or object that is of immediate importance, like a batter watching a pitch or a cyclist watching another rider about to launch an attack. This type of attention is good for focusing on a single, primary target and blocking out distractions. When used inappropriately, they can lead you to be so focused on one thing that you miss something else that's important.
- *Narrow-internal attention*, like when you are focusing on your heart rate. This type of attention is good for focusing your thoughts on several mental skills, such as body awareness, energy management, or imagery. When used inappropriately, you can become so distracted by your own thoughts that you "choke."

### Assessing the Situation

Different sports demand different kinds of attention at different times. To help you determine the attentional demands of your sport, think about different critical situations you encounter and the type of attention they require. It will help to make a list and place each situation within the 2 X 2 table of Nideffer's model of attention. In cycling, for instance, narrow-internal attention may be used before a race to help you visualize the race or to regulate your anxiety. Broad external attention may be required while you are going through a technical section of a race in a pack. You may use narrow external attention to assess whether a rider is about to attack. Finally, you may use broad internal attention to compare the current race situation to all the other races you've been in to help you determine what to do next. In addition, attentional demands may differ between training and competition. For instance, when you are learning a new skill in training, it is often important to use narrow internal attention to focus on what your body is doing. In a competition, however, these skills should have become automatic, and thinking about them too much can deter performance (it's as if your flashlight hasn't got enough power to light up everything you want it to). In a competition, therefore, it may be better to focus on the external consequences of these skills (such as how you're increased pedaling efficiency is helping you catch the rider in front of you).

## Assessing Yourself

In addition to determining the attentional demands of your sport, it is also important to assess your own attentional strengths and weaknesses. One way to do this is to consider the critical situations you listed above, and think about which situations are most problematic for you. It may be, for example, that part of the reason you tend to get dropped in the middle of the race is because your attention is not focused on the external events, but rather on the internal events, such as how badly you're hurting right now. Assessing your concentration strengths and weaknesses can help you determine what kind of exercises to employ to help you when you need it the most. When assessing your concentration, consider these common sources of distraction:

- Ruminating over past mistakes rather than focusing on the present.
- Worrying about what might happen in the future.
- Over-analyzing body mechanics or technique during a competition.
- Letting your mind wander because you are bored and unmotivated.
- Focusing on how much you hurt rather than what you have to do next.
- Paying attention to the spectators.
- Getting distracted by cheers, boos, or other noises.
- Leading another competitor "get inside your head."

By the way, you might have noticed that these sources of distraction can either be internal or external. Another way to help you assess your concentration strengths and weaknesses is to take the following test. Rate the following questions on a scale of 0=Never, 1=Sometimes, 2=Almost Always (taken from USOC, 2002):

- \_\_\_\_\_ I often use cue words and triggers to keep me focused on my performance.
- \_\_\_\_\_ I know what I need to do to get in the right frame of mind to compete.
- \_\_\_\_\_ I can jump from one spot to another or one task to another without losing my train of thought.
- \_\_\_\_\_ If a competition or practice goes into overtime, my levels of intensity and concentration remain constant.
- \_\_\_\_\_ I am very good at anticipating and responding to an opponent's actions.
- \_\_\_\_\_ I can put aside non-sport related thoughts while training and competing.
- \_\_\_\_\_ There are times when I get so absorbed in what I am doing that I don't notice what else is going on around me.

\_\_\_\_\_ During breaks in play I can relax and recover, but when I am competing I am completely “in the moment.”

\_\_\_\_\_ I do not get flustered or confused when a lot of different things are going on at once, like several people speaking at the same time, or when I need to make a turn at a busy congested intersection.

*Scoring: 12-18 excellent, 6-11 good, 0-5 need improvement.*

### Improving Your Concentration

There are many exercises that will help you improve your ability to concentrate. I’ve categorized several exercises below. Before getting to them, however, it’s important to point out **that several of the mental skills – like setting process and performance goals, regulating your anxiety and using imagery – can help you maintain your concentration, shift attention appropriately, and refocus attention after you become distracted.** Before moving on to these other exercises, consider how you can use the skills you already have to improve your concentration.

### Exercises to Improve Your Ability to Maintain Attention

- *One pointing.* Find a quiet place and choose an object from your sport to focus on. For example, you might consider using your bike or running shoes as the object. Touch the object and feel its texture. Examine its color, shape, form, and other distinguishing characteristics. Now look at the object without touching it and focus your attention on it as fully as possible. If your thoughts wander, gently bring your attention back to the object. Try to keep your attention fully focused for five minutes. If you can’t (and you probably won’t be able to at first), start practicing with distractions present, such as having the television or radio on. This will not only help train your concentration, but will also provide you with a lot of visual information that you can use to get a more vivid mental pictures when you do imagery training.
- *Slow Performing.* If aspects of your sport can be done in slow motion, like running or cycling, try to perform the action as slowly as you can while paying attention to all the details in the movements. For instance, if you cycle, put your bike on a trainer. After a brief warm up, shift your bike into the highest gear. Now take an entire minute to turn your pedals one revolution. Do this with your eyes closed and closely attend to how your body feels. Pay attention to all the physical sensations throughout your body. You may also wish to try this outside, while having one or two people hold your bike up straight. This exercise will improve your ability to focus on how your body moves while on your bike.
- *Mindfulness.* Close your eyes, take a deep breath, and relax. Focus your attention on one word related to your sport. Repeat it over and over again, and try to keep your mind focused on that one word only. If distracting thoughts come into your head, just let them float out again, and redirect your mind to your word. Once you are able to do this for five minutes, start practicing with distractions present, such as having a television or radio on.
- *Grid exercise.* Take a 10 by 10 block grid and randomly placed the numbers 00 through 99 in each block. While timing one minute, find and put a slash through as many numbers as

possible, in sequence, starting with 00. You can decrease the practice effect by starting at different numbers, doing only odd or even numbers, or going backwards from 99 to 00. Athletes who excel in focusing their attention can score in the upper 20s to low 30s within one minute. The average person does about half that many. After you get better at this, try practicing with distractions such as loud noises or distracting friend.

### Exercises to Improve Your Ability to Shift Attention

You can learn to shift attention by practicing the following exercises (Gauron, 1984 as described in Wilson, Peper, & Schmid, 2006). These exercises can be done altogether, or done singly as separate exercises. Before beginning the exercises, sit or lie comfortably, and take a few breaths to relax.

- *Concentrate on what you hear.* Pay attention to what you hear. Identify each sound separately and label it. Next, broaden your focus and simultaneously listen to all the sounds together without labeling them.
- *Concentrate on your body.* Pay attention to your bodily sensations, such as the way you feel against the chair. Label each sensation as you notice it. Next, try to experience all the physical sensations together without labeling any particular one.
- *Concentrate on your mind.* Pay attention to your thoughts and feelings. Let each thought and feeling appear by itself. Next try to empty your mind, let go of your thoughts and feelings, and relax.
- *Assisted Zooming.* Cut a 3" x 5" hole in a piece of paper and hold it at arm's length in front of you to focus on a single object in the distance. Gradually moved the paper closer to you while taking in as much in this expanded frame of reference as you can. Practice moving the paper back and forth to shift your attention from broad to narrow.
- *Unassisted Zooming.* Open your eyes and take an object across the room in front of you. While looking ahead, try to take in as many objects in your peripheral vision as you can. Now narrow your attention to this single object in front of you. Expand your attention gradually, as if you were zooming out a telephoto lens. Practice zooming in and out, narrowing and broadening your attention.
- *Shifting during Training.* Try shifting from one thing to another during training. For example, if you cycle, get on your trainer and ride outside on a breezy day. Focus your attention on a single object in front of you, while simultaneously paying attention to anything that moves in your visual field. Anytime you see movement, such as a leaf blowing on a tree, a bird flying, or a car passing by in the street, shift your attention to that object, hold it there for several seconds, and then re-focus on your original object.

### Exercises to Improve Your Specific Attentional Skills

- *Improving Broad-External Attention.* To improve your broad-external attention, try watching a video of your sport. Have a friend select clips of important parts that you have never seen before. Without telling you in advance, have the friend pause the video and tell you to shut

your eyes. Without opening them, described in as much detail as possible what is happening and what you should be paying attention to.

- *Improving Narrow-External Attention.* To improve your narrow-external attention, try practicing your sport or do some training (like running) and focus on one object in the distance. Concentrate on this object only, as if you were zooming into it with a telephoto lens.
- *Improving Broad-Internal Attention.* To improve your broad-internal attention, try doing some training activity, like riding your bike on a trainer, while simultaneously paying attention to every bodily sensation, thought, and feeling. Try to be as open and aware as possible.
- *Improving Narrow-Internal Attention.* To improve narrow-internal attention, try doing some training activity, like riding your bike on a trainer, and during a hard effort focus on one physical sensation, such as your breathing or heart rate. Try to hold your focus to this single sensation.

In all of the exercises listed above, start performing them in an ideal environment, free of distractions. Once you become proficient, find ways to introduce distractions to make it more difficult.

#### Exercises to Improve Your Ability to Deal with Distractions

- *Simulations.* To keep from being distracted by external stimuli, try practicing in any environment that is as close to the competition environment as possible. If you decrease the novelty of the competition environment, it will be less distracting to you. Making practices resemble competitions can also help you cope with internal distractions, like competitive anxiety. Simulated competitions also involve practicing under all conceivable conditions that simulate a competition. For instance, if you are a runner, doing a hard group run in all sorts of weather conditions, on the course in which the race will take place, or while doing things that simulate unexpected crowd reactions or crowd noise can help acclimate you to these external distractions.
- *Dress rehearsals.* Training in your uniform can help reduce the number of visual distractions in a race, because you become accustomed to both the look and feel of what you will be wearing, as well as the look of what others wear better race.
- *Mental Planning and Preparation.* To keep yourself from being distracted after a mistake, immediately mentally rehearse what you should have done, and avoid judging or blaming yourself. Keep focusing on what you can do right the next time. Develop several scenarios about what could go wrong and then mentally rehearse what you would want to do to get back on track. Having a refocusing plan can also be very helpful in getting you back on track when things go wrong.

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