



the extra gear

Mental Toughness Training for Peak Sport Performance

9601 Gayton Rd. | Suite 206 | Richmond, VA 23238 | 804-754-THE X

Imagery

Introduction

Imagery is usually thought of as having a picture in your head of something that you've done or are thinking about doing. For the last 15 to 20 years, imagery has been accepted by elite athletes across sport disciplines to be an integral part of their mental skills training. In a 1990 study, 90% of U.S. Olympic Athletes reported that they used imagery and 97% of these athletes felt that it helped their performance. In a 1988 study, 99% of Canadian Olympians reported that they used imagery.

How Imagery Works

When we build a house we first create a blueprint to help us organize and execute the actual process of building. Similarly, imagery helps us by creating a "*mental blueprint*" in our minds that helps us understand the organization and execution of a sports skill. In addition studies have shown that athletes who image a sport skill actually innervate the muscles used in that skill, though to a much lesser degree than in their physical performance. For example, a study done on a downhill skier showed that while imaging a race their nerves in their leg muscles fired in the same way they would during the race. This firing even became stronger at points in the imagined race where the terrain was most difficult. Therefore, imagery also seems to work by improving "*muscle memory.*"

Is Imagery Effective?

Many people are fascinated by imagery, but because it seems mysterious, it can strike some people as just being a lot of hocus-pocus. This is not the case, however. The results of many research studies have confirmed that imagery is effective in many areas of sport performance. It is not a substitute for physical practice, but when used along with physical practice it can enhance performance more than the physical practice alone. Think of imagery as a "vitamin supplement" to physical practice.

For What Purposes do Athletes Use Imagery?

Many people are familiar with how athletes have used imagery to improve a specific sport skill. This is called mental practice. Imagery can be used for a variety of other purposes, however, including

- Mental preparation for competition (mental rehearsal)
- Finding and correcting mistakes in technique
- Rehearsing competition strategies
- Increasing self-confidence

- Improving motivation
- Focusing attention
- Regulating anxiety
- Coping with and recovery from injuries

How to Make Your Imagery More Effective

- The more *vivid* your imagery is, the more effective it will be. Although many people use the term “visualization” to describe imagery, imagery is most effective when all the senses are used. Incorporating the visual, auditory, taste, smell, and feeling of movement to an image can make imaging more effective because it makes it more vivid. For increased sport performance the visual and kinesthetic (sense of muscle movements) senses seem particularly important.
- Another factor affecting the effectiveness of imagery is *controllability*. This refers to the ability to make an image do what you want it to do. The more control you have over an image, the more effective the imagery will be.
- A third factor affecting the effectiveness of imagery is your ability to experience the *thoughts and feelings* you are having in your image. For example, if you imagine your best sport performance ever, you probably will feel some of the pride, elation and joy you experienced at the time as well as some of the thoughts you were experiencing. Imaging your thoughts and feelings as clearly as possible while you image is important; you should strive to get the best idea possible of how both your body and your head are responding to what you are imaging. The more you can be aware of what you are thinking, what you are feeling, and how your body is feeling in the image, the more effective that imagery will be.
- Another factor in imaging is *perspective*. Some people tend to have imagery from an internal perspective, that is, as if you were seeing it through your own eyes. Other people tend to have an external perspective, that is, they tend to image themselves as if they were watching themselves on television. Most sport psychology consultants agree that it can be useful to gain experience in doing imagery from both perspectives, although getting a vivid and controllable image is more important than the perspective.

Assessing Your Imagery Strengths and Weaknesses

Everyone has the ability to use imagery, but we all have different skill levels and different areas of strengths and weakness, just like with physical skills. Additionally, just like with physical skills, your imaging ability will improve with practice. The first step in creating an imagery program that will be best suited for you is to determine your imaging abilities. A simple way to do this is to imagine something in your sport that you are familiar with, like the place you work out. Take a deep breath, exhale and relax, close your eyes, and imagine this scene as clearly as possible. Try to see all the sights, hear all the sounds, and feel what it’s like to do your workout routine. Notice how you are feeling and what your thoughts are like. Take about 3 to 5 minutes to perform a couple different activities, then open your eyes and answer the following questions:

- How clearly could you see the image?
- How clearly could you hear the sounds?
- How clearly could you feel your muscles move as you performed your workout?
- How clearly did you experience your thoughts and feelings?
- How well were you able to control the imagery?

You can get a more accurate assessment of your imagery strengths and weaknesses by repeating the exercise with other scenes and see if you consistently have an easier time experiencing your images with one sense versus another and how well you can control your images. For an even more thorough assessment, use a structured imagery rating scale, like the “Sport Imagery Evaluation.”

Exercises to Improve Vividness

Everyone can benefit from exercises designed to improve the vividness and controllability of their imagery as well as to increase their awareness of what they are thinking and feeling in their images. The following exercises will prepare you to image more vividly and with more control. They are not actually imagery exercises, but they will give you the raw materials that will help you image more vividly and with more control. I will give examples of how a cyclist might use these exercises, but they work equally well for athletes of any sport.

- *Looking at an object from your sport.* Take a few minutes to look at something from your sport, like your bike, your running shoes, or a football. Look at it as closely as you can. See all the details you can see. For instance, if you are looking at your bike as you prepare to go for a ride, fill up the tires and look at the rim, the spokes, the cassette, chain, seat and chain stays, and the fork. What do you notice? Is there a particular smell you can sense from this perspective? Examine each detail as closely as possible. Next look your bike from the side. Notice the angles in the frame, how the saddle looks, the shine or dirt you see. Take your hand and run it over various parts of the bike. Notice how they feel. Next sit on your bike and look at it from this perspective. Notice how the front wheel looks from here. Observe the wrap of your handle bar tape, how it feels in your hands. How do you feel in the saddle? When you put your hands in the drops? By visually examining an object from your sport you will be exercising that part of your mind that is used when creating vivid images. You will also build up a storehouse of memories of the objects used in your sport, so that when you use imagery to enhance your performance, you will be able to incorporate that portion of your imagery into your practice as vividly as possible.
- *The vivid workout.* Now do a practice or training for your sport while simultaneously taking in all the images of what’s around you. Again, using a cyclist as an example, ride your bike and listen to the sound it makes as you turn the cranks. Is it steady or does the sound subtly change each time you are at the top of your stroke? What do you see around you? How does the wind sound in your ears? Where is the sun? How does it feel on your face? Are there birds singing? Can you hear a car coming from behind you? How does the sound change as it goes by? Now shift back and forth from your big ring to your small ring. What does that sound like? What sensations do you notice in your legs and feet as you shift? Now do the same thing while shifting to different gears on your cassette. Notice how this

sounds and feels. Finally, notice with all your senses the differences between spinning in your warm up, hammering in an interval, climbing a steep grade, and cooling down. Whatever your workout, try to examine all the details through every sensory modality as vividly as possible.

- *Training with others.* During your next training session with your training partner or team, use the ideas described in the previous two exercises and apply them to this group situation. Notice the sights, the sounds, the feelings of your muscles and your thoughts and feelings. Pay attention to the others around you. For example, if you are a cyclist, notice what it's like to have someone pass you or to pass someone else, what you see while riding in a paceline. If you train for a long time and have to refuel, pay attention to the smell and taste and texture of what you eat and drink.
- *Imagining Your Images.* After completing any of the exercises described above you will have a more vivid image of things related to your sport. Now it's time to put these now images into practice. Take 3 to 5 minutes and close your eyes and relive these experiences in your imagination. Doing these while you stretch after training or practice can be a great way to begin incorporating imagery into your physical practice. As described above, use all your senses to relive what the exercise was like – what you saw, heard, felt, tasted, and smelled.

All of these exercises have to do with making a conscious effort to become more aware of yourself and your environment. You can do this anytime, not just when you are training. In fact, your imagery ability will increase if you become more aware of what's around you and inside you at any time – while eating meals, while driving to work, etc. As a bonus, you may also get to enjoy some pleasant discoveries along the way.

Exercises to Improve Controllability

After completing the exercises described above, take 3 to 5 minutes and close your eyes and relive these experiences in your imagination. Again, doing these while you stretch after a workout can be a great way to begin incorporating imagery into your physical practice. While you imagine what actually happened during these experiences, take an extra step and imagine changing the image to be something that didn't happen during the actual experience. Here are some examples in cycling, but you can easily think of similar things to control and change in your particular sport:

- If you had any trouble performing a particular skill during your practice, imagine yourself going correcting that skill. For instance if you're a cyclist and wanted to maintain a higher cadence during your ride, imaging steadily increasing your cadence from 80rpm's to 90 to 100rpm's smoothly. Feel yourself sitting steadily on the saddle as your legs spin.
- After a group workout, try changing the image to a competition. For instance, if you are a cyclist, imagine your group training ride and change it into a race. See yourself competing successfully against others, making your way through the pack, and sprinting confidently to the finish.
- Try imaging yourself in a competition and making a mistake. This may be more difficult, as we tend to resist imaging negative things. Imagine how you might respond to the mistake – how it feels, what you do, what you say to yourself. Now imagine yourself successfully coping with the

mistake and getting back on track. Again, imagine what you would say to yourself, how you would refocus, leave the mistake behind you and how you would finish the competition strong.

Designing Your Imagery Program

Imagery can be used to achieve several goals, so it's easy to try to do too much at once. The best way to decide how to use imagery is to go back to the goals. For instance, if your goal is to become less anxious before a competition, you might use imagery to prepare for a competition, imagining using some skills to successfully control anxiety. You could also practice imagining a peaceful scene before your competition. Begin practicing imagery in an environment without distractions. Sit in a comfortable chair, close your eyes and practice a relaxation technique before beginning (this can be a short technique, such as taking a deep breath). Try practicing several times a day for 3 to 5 minutes each. When you feel that you have been successful in getting vivid and controllable images consistently, try performing the exercises with your eyes open. Next, try practicing during commercials while you watch television or during a conversation at a party when someone is boring you (just don't get caught!). You will soon be able to use imagery during practices and training. After the imagery has become second nature, you can use it in competitions. Although some people think that it's a pain, keeping a brief log about your imagery experiences can be tremendously helpful and save time in the long run by helping you target ways to improve the effectiveness of your imagery. Consider using the "Imagery Rating Scales" of the *Two-Minute Journal* or jotting down some notes about what you did, how it went, and how vivid and controllable the imagery was, along with any problems or comments you have.

Creating an Imagery Script

The best way to practice imagery is to have a detailed script that describes what you want to image. Think about what you want to accomplish with your imagery and how the scenes would unfold in your mind. Remember to incorporate as much detail as possible, using all your senses and your thoughts and feelings. Keep your script to about 5 minutes and include:

- *Your surroundings:* Where you are, what it looks like, what it sounds like, what it smells like.
- *What your body feels like:* Notice how your muscles move, how they feel, the sensations of the sun and the wind, the places your body makes contact with other objects.
- *Your thoughts and feelings:* Write down how you feel emotionally, what you say to yourself, and your changing reactions as the imagery progresses.
- *What you want to accomplish:* Write down exactly how you will perform successfully. Be realistic, but make the imagery end with success. For example, if you use imagery to deal with exertion pain, imagine feeling fatigued towards the end of a competition. Imagine your muscles hurting, feeling hot, breathing hard, and thinking that you can't go on. Then imagine how you would successfully cope with this situation, perhaps by using thought stopping and thought replacement or psyching up strategies. End the imagery with the feelings of pride and exhilaration of successfully achieving your goal.

For more information on goal-setting and other mental skills techniques to improve sport performance, contact sport psychologist Dana Blackmer, Ph.D. at Dana@TheExtraGear.com or visit The Extra Gear online at www.TheExtraGear.com.