



# See it to Believe it:

## Using Mental Imagery

### in Gymnastics.

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believe that most people associated with the sport would agree that success in gymnastics requires athletes to deal effectively with issues such as fear, anxiety, and outside distractions that have the potential to devastate their levels of motivation, self-confidence, and performance. As coaches, our task is not limited to simply providing our athletes with the physical tools necessary for success; we must also provide our athletes with the mental tools that will allow them to handle the cognitive and emotional challenges inherent in competitive gymnastics.

One such tool is mental imagery which, if used properly, can positively affect skill development, arousal, motivation, and confidence (Gliksy, et al., 1996; Jones, et al., 2002; Nicholls, et al., 2005). The goal of this article is to introduce some benefits of mental imagery, discuss several factors that should be considered when using mental imagery, and offer some suggestions as to how mental imagery may be incorporated into training and competition.

## Types of and Uses for Mental Imagery

### Skill Acquisition

One of the most well-documented benefits of mental imagery is its ability to aid in skill acquisition. Studies have shown that visualization is capable of contributing to motor skill development and may be partially substituted for physical practice with no decreases in performance (Hall, 2001). Therefore, when physical

practice is limited by injuries, travel, etc., visualization can help athletes maintain or even enhance their levels of performance.

The learning process for a giant on bars is one example of a situation in which mental imagery may be useful for skill acquisition. Using this example, athletes correctly visualizing each piece of the skill along with its accompanying form and body position requirements experience greater awareness of their movements during their physical performance and more meaningful physical and verbal feedback.

### Motivation

There are two types of goal orientations: task-mastery and ego. Individuals with a task-mastery orientation are primarily motivated by accomplishing personal goals and acquiring new skills, while individuals with an ego orientation are primarily motivated by placing in competitions and demonstrating superiority over their peers. Each athlete has a natural tendency toward one or the other, and the effectiveness of mental imagery designed to increase motivation is contingent upon the coach's awareness of each of his/her athletes' goal orientations.

Many researchers advocate the exclusive development of the task-mastery orientation; however, due to the competitive nature of athletics, a preferable option is the combination of both task-oriented and ego-oriented motivational efforts (Eliot, 2005). By understanding athletes' goal orientations, imagery scripts, such as standing on the podium being awarded a medal (ego orientation) or receiving the congratulations of their teammates after successfully completing a new skill (task-mastery orientation), can be designed that place athletes in the motivational situations to which they are most likely to respond.

### Self-confidence

Through mental imagery, athletes can feel the positive emotions that accompany successfully completing difficult skills or managing difficult circumstances resulting in a significant increase in their levels of self-confidence (Hall, 2001). An imagery script in which an athlete repeatedly falls on a particular skill during warm up, regroups, and hits the skill perfectly during competition is an example that should bolster self-confidence.

### Anxiety/Arousal

The final benefit of mental imagery that will be discussed is arousal control. Many gymnasts experience intense, potentially crippling anxiety when they are about to attempt a new skill and before/while they compete. Also, quite a few gymnasts have trouble summoning the energy that is essential for improvement during their day-to-day training. Visualization scripts can be created to help gymnasts learn how to raise their inadequate levels of arousal and to combat, manage, and even utilize their heightened states of arousal in order to enhance performance (Jones, et al., 2002).

During arousal control imagery, athletes should experience an emotional state that is not conducive to the activity in which they are participating (i.e. either too relaxed or too anxious) and then alter that emotional

state either by "psyching up" or calming down to arrive at the state of arousal suitable for the imagined activity. For example, an anxiety-inducing script may involve the gymnast arriving late to a meet or a special family member watching her performance.

## Other Factors Involved in Effective Visualization



### Relaxation

Regardless of the type of imagery utilized, there are several common aspects of effective visualization. First, studies show that imagery is more effective when preceded by relaxation exercises (Short, et al., 2001); therefore, instruct your athletes to take several deep, relaxing breaths before guiding them through a visualization scenario.

### Vividness

Second, the images used should be as vivid as possible and incorporate information from multiple senses (Murphy, 2005). That is, an athlete should not just visualize one aspect of a skill or routine but also the setting in which the skill or routine is completed, the color and type of leotard she is wearing, the location of the judges, coaches, and other athletes, the sounds of her teammates cheering, etc.

### Modality

Third, imagery modality (i.e. visual or kinesthetic) should be considered when designing an imagery script. Research in this area suggests that both the visual and kinesthetic imagery types are capable of enhancing performance under different circumstances (Glisky, et al., 1996). Visual imagery tends to be more effective for new tasks that require thought, while the kinesthetic imagery is more effective for enhancing the performance of movements that have already been learned. For example, a gymnast who is just beginning to learn how to twist may benefit more from watching herself correctly perform the skill, while a gymnast who has already mastered the basics may benefit more from "feeling" the twist.

### Perspective

Fourth, the perspective of the imagery must be taken into account. The two types of perspective are external, a third person point of view in which the athlete watches herself perform a skill or routine from the judge's chair or on a movie screen, and internal, a first person point of view in which the athlete visualizes what he/she would see through his/her own eyes and feel in her own body during the performance of a skill or routine. Research indicates that "...the more the subject is skilled and the more acquainted he or she is with the physical task, the greater probability of him/her achieving actual physical progress through internal imagery." (Pie, et al., 1996, pp. 32+) Hence, internal imagery may be more beneficial for those



athletes who have a firm grasp on the skills they are training, while external imagery may be more beneficial for those athletes who are still mastering the basics.

### Practice

Finally, practice makes perfect. Visualization is a skill, and just like any other skill, requires multiple repetitions in order to develop proficiency. When working with children, Short, et al. (2001) recommend sessions lasting three to five minutes; however, sessions up to 20 minutes may be used when working with adolescents or young adults (Driskel, et al, 1994).

## Making Visualization a Normal Part of Practice and Competition

To begin teaching your athletes to visualize, ask them to take a good look around them, close their eyes, and picture in their minds what they saw, heard, and felt. Ask questions while they are forming their images that remind them to include as many details as possible. Next, lead them through a short visualization script that utilizes a familiar setting. Ask the gymnasts to imagine themselves already at an event and about to perform a skill. Then, talk them through the skill, asking them to “see” and “feel” each piece. This should be a very short visualization

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session, but with consistent use it will allow the gymnasts to become more comfortable with mental imagery. Once the athletes become more proficient, you can begin to create more elaborate scripts that target motivation, confidence, and anxiety in addition to skill development.

For several reasons, the best time to conduct visualization exercises is just before the athletes begin warming up on an event. First, because mental imagery has been shown to stimulate many of the same neural and muscular systems that are active during physical practice (Murphy, 2005), using visualization before warming up for an event can help athletes to transition both mentally and physically from one event to another. Second, the period of physical inactivity while visualizing will not serve as a “cool down” period during the middle of a rotation. Third, by having the athletes visualize at the beginning of a rotation, they will be able to immediately apply the benefits of the imagery (i.e. motivation, self-confidence, arousal control, skill development) to physical performance.

Facilitating mental imagery with the entire group is beneficial, but the athletes should also be encouraged to use imagery on their own throughout their workouts and competitions. One great way to help them do this is to have them incorporate visualization into their pre-routine routines. For example, on vault and bars I use the term “on deck” to describe the person who is “next” and the term “on deck circle” to describe a space away from the group where the athletes go to visualize their vault or routine immediately prior to performing. These pre-routine routines provide the athletes with a structure that allows them to refocus their attention, control their anxiety and physical arousal, and immediately recreate the technique and poise present in their mentally rehearsed vaults and bar routines. Furthermore, this concept can be utilized at meets as well as practice by designating a spot at each event that will serve as the “on deck circle.”

### Conclusion

By teaching your athlete to visualize and making mental imagery a regular part of your athlete's training and competition regiment, you can provide them with a versatile, easy-to-use tool that can help them develop new skills, control their anxiety, and increase their levels of motivation and confidence. ✖

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