

# Three Psychological Skills to Cope with Performance Stress and Anxiety

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*The science behind sports and performance psychology shows us how we can improve our own performance potential. Researchers around the globe have investigated psychological factors in sport performance as related to psychological skills of coping with stress and anxiety. Stress and anxiety impacts athletes' chances of getting injured in sport and also serves as a variable in the sport rehabilitation process. Most often, however, stress and anxiety are implicated in sport performance. The outcome of a sport competition is thought to be impacted by how well or how poorly an athlete copes with stress and anxiety.*

## 1. Imaging

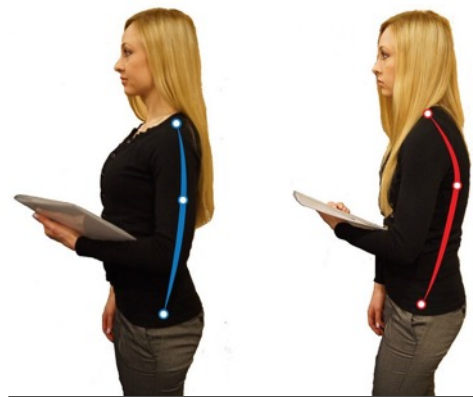
In theme with other coping mechanisms such as rehearsal and visualization, the effectiveness of imaging also centers on research that demonstrates the ability of our willpower to change the course of the neural pathways in our brain. According to one study, visually rehearsing or “imaging” motor skill, such as a free throw, was found to stimulate the same brain region, including the premotor cortex, as actually performing the skill.

To combine this finding with another common coping strategy called goal setting, the performer could counter the effects of competitive anxiety in sport. Setting smaller, short-term goals has the benefit of helping us to monitor and track progress toward achieving a long-term goal. In addition, successful attainment of any goal — a “win” — has a “winner effect”, whereby a change in brain chemistry increases testosterone level and enhances our self-confidence and motivation. Self-confidence and motivation are two of the main ingredients in combating stress and anxiety. The key here is that simply “imaging” a win or success will have the same “winner effect” in making us feel more confident. In other words, training the brain to image a positive win (like making a free throw) helps prepare us for a better performance when the time actually comes.

## 2. Power Posing

A 2010 research study on the power of posture indicated that telling an anxious Little League player in the locker room to “keep your head up high” is actually a scientifically-based performance booster. In the experimental study, participants were randomly assigned to “high-power poses” and “low-power poses” groups. Those that had “high-power poses” were found to have a greater releases of testosterone and dopamine.

Testosterone, although often misunderstood, enhances our confidence, motivation, and tolerance for risk-taking behavior and also increases our levels of dopamine. Dopamine is the feel-good hormone that stimulates the frontal cortex, which oversees our executive functioning capacity, flexible thinking, and problem solving. Executive functioning is important to helping athletes feel less anxious and under less pressure.



It may seem like age old advice but having a “high power pose,” also known as confident posture can impact an individuals performance.

As hypothesized, the study revealed a highly positive association between “high-power” poses and the cognitive, physiological, and behavioral changes of increased testosterone level, increased tendency to take risks, and increased self-confidence. Testosterone also acts on the amygdala part of the brain to keep the fear responses in check, so that we can perform more cognitively and think more clearly than emotionally.

Moreover, along with imaging, posing confers long term benefits by increasing the number of receptors in the brain for testosterone. This helps protect against potential debilitating anxiety effects. Athletes can practice posing and devise their own high-power pose(s) to conquer their fear and anxiety with increased confidence.

### 3. Automation Squeezing

The last strategy of getting your brain trained to maximize performance requires a basic knowledge of memory system. There are two types of memory: working memory and procedural memory. Working memory is used when learning a new skill and is housed in the prefrontal cortex in the left hemisphere of the brain. Procedural memory is in the cerebellum in the right hemisphere. Motor skills here have reached a point of mastery, where skills can be performed automatically.

Research evidence suggests that once a skill is automated, the left hemisphere is suppressed, or inhibited, and the activation shifts to the right hemisphere when performing a learned motor skill. This is more frequently observed among elite athletes. What this also means is that when athletes start consciously thinking about an automated skill or behavior, often under stress and pressure, it leads to inferior performance. Hence, squeezing a ball in the left hand or rhythmic squeezing of the left fist has been found to be effective in activating and restoring the optimal functioning of the right hemisphere. This facilitates skilled performance.

While it is a relatively new area of research with research limitations, it has an important practical implication in sport performance. Due to a number of pre-performance routines such as breathing and relaxation are often used in enhancing focus and concentration, hand squeezing has the potential for wide therapeutic application, as well as in sport performance.

Stress and anxiety affect all athletes around the world, and as such, the outcome of a competition often hinges on athletes coping ability to train the brain to transform the negative effects of competitive anxiety and stress into performance facilitating habits. Grounded on the cutting-edge neuroplasticity science, the three psychological skills of winner imaging, power posing, and automation squeezing have profound facilitative potential in sport performance excellence around the globe.

Our brain works in interesting ways and research has shown that squeezing a ball in the left hand may help stimulate the right side of the brain.

