

Psychology

The increased stress of competitions can cause athletes to react both physically and mentally in a manner which can negatively affect their performance abilities. They may become tense, their heart rates race, they break into a cold sweat, they worry about the outcome of the competition, they find it hard to concentrate on the task in hand.

This has led coaches to take an increasing interest in the field of sport psychology and in particular in the area of competitive anxiety. That interest has focused on techniques which athletes can use in the competitive situation to maintain control and optimise their performance. Once learned, these techniques allow the athlete to relax and to focus his/her attention in a positive manner on the task of preparing for and participating in competition. Psychology is another weapon in the athlete's armoury in gaining the winning edge.

The 4C's

Concentration, confidence, control and commitment (the 4C's) are generally considered to be the main mental qualities that are important for successful performance in most sports.

- Concentration - ability to maintain focus
- Confidence - believe in one's abilities
- Control - ability to maintain emotional control regardless of distraction
- Commitment - ability to continue working to agreed goals

The techniques of relaxation, centering and mental imagery can assist an athlete to achieve the 4C's.

Concentration

This is the mental quality to focus on the task in hand. If the athlete lacks concentration then their athletic abilities will not be effectively or efficiently applied to the task.

Research has identified the following types of attention focus:

- Broad Narrow continuum - the athlete focuses on a large or small number of stimuli
- Internal External continuum - the athlete focuses on internal stimuli (feelings) or external stimuli (ball)

The demand for concentration varies with the sport:

- Sustained concentration - distance running, cycling, tennis, squash
- Short bursts of concentration - cricket, golf, shooting, athletic field events
- Intense concentration - sprinting events, bobsleigh, skiing

Common distractions are: anxiety, mistakes, fatigue, weather, public announcements, coach, manager, opponent, negative thoughts etc.

Strategies to improve concentration are very personal. One way to maintain focus is to set process goals for each session or competition. The athlete will have an overall goal for which the athlete will identify a number of process goals which help focus on specific aspects of the task. For each of these goals the athlete can use a trigger word (a word which instantly refocuses the athlete's concentration to the goal) e.g sprinting technique requires the athlete to focus on being tall, relaxed, smooth and to drive with the elbows - trigger word could be "technique"

Athletes will develop a routine for competition which may include the night before, the morning, pre competition, competition and post competition routines. If these routines are appropriately structured then they can prove a useful aid to concentration.

Confidence

Confidence results from the comparison an athlete makes between the goal and their ability. The athlete will have self-confidence if they believe they can achieve their goal. (Comes back to a quote of mine - "You only achieve what you believe").

When an athlete has self confidence they will tend to: persevere even when things are not going to plan, show enthusiasm, be positive in their approach and take their share of the responsibility in success and fail.

To improve their self confidence, an athlete can use mental imagery to:

- visualise previous good performance to remind them of the look and feel
- imagine various scenarios and how they will cope with them

Control

Identifying when an athlete feels a particular emotion and understanding the reason for the feelings is an important stage of helping an athlete gain emotional control. An athlete's ability to maintain control of their emotions in the face of adversity and remain positive is essential to successful performance. Two emotions which are often associated with poor performance are anxiety and anger.

Anxiety comes in two forms - Physical (butterflies, sweating, nausea, needing the toilet) and Mental (worry, negative thoughts, confusion, lack of concentration). Relaxation is a technique that can be used to reduce anxiety.

When an athlete becomes angry the cause of the anger often becomes the focus of attention. This then leads to a lack of concentration on the task at hand, performance deteriorates, confidence in ability is lost which fuels the anger - a slippery slope to failure.

Commitment

Sports performance depends on the athlete being fully committed to numerous goals over many years. In competition with these goals the athlete will have many aspects of daily life to manage. The many competing interests and commitments include: work, studies, family/partner, friends, social life and other hobbies/sports

Within the athlete's sport commitment can be undermined by:

- a perceived lack of progress or improvement
- not being sufficiently involved in developing the training program
- not understanding the objectives of the training program
- injury
- lack of enjoyment
- anxiety about performance - competition
- becoming bored
- coach athlete not working as a team
- lack of commitment by other athletes

Setting goals with the athlete will raise their feelings of value, give them joint ownership of the goals and therefore become more committed to achieving them. All goals should be SMARTER.

Many people (coach, medical support team, manager, friends, etc) can contribute to an athlete's levels of commitment with appropriate levels of support and positive feedback, especially during times of injury, illness and poor performance.

Mental Imagery

Mental imagery involves the athletes imagining themselves in a specific environment or performing a specific activity. The images should have the athlete performing these items **very well** and **successfully**. They should see themselves enjoying the activity and feeling satisfied with their performance. They should attempt to enter fully into the image with all their senses. Sight, hear, feel, touch, smell and perform as they would like to perform in real life.

When an athlete is in a fully relaxed state, he/she is particularly receptive to mental imagery. The next stage is then to learn how to develop and apply mental imagery skills.

What can Mental Imagery be used for ?

Mental Imagery can be used :

- **To see success.** Many athletes "see" themselves achieving their goals on a regular basis, both performing skills at a high level and seeing the desired performance outcomes
- **To motivate.** Before or during training sessions, calling up images of your goals for that session, or of a past or future competition or competitor can serve a motivational purpose. It can vividly remind you of your objective, which can result in increased intensity in training.
- **To perfect skills.** Mental imagery is often used to facilitate the learning and refinement of skills or skill sequences. The best athletes "see" and "feel" themselves performing perfect skills, programs, routines, or plays on a very regular basis.
- **To familiarise.** Mental imagery can be effectively used to familiarize yourself with all kinds of things, such as a competition site, a race course, a complex play pattern or routine, a pre-competition plan, an event focus plan, a media interview plan, a refocusing plan, or the strategy you plan to follow
- **To set the stage for performance.** Mental imagery is often an integral part of the pre-competition plan, which helps set the mental stage for a good performance. Athletes do a complete mental run through of the key elements of their performance. This helps draw out their desired pre-competition feelings and focus. It also helps keep negative thoughts from interfering with a positive pre-game focus.
- **To refocus.** Mental imagery can be useful in helping you to re focus when the need arises. For example, if a warm-up is feeling sluggish, imagery of a previous best performance or previous best event focus can help get things back on track. You can also use imagery as a means of refocusing within the event, by imagining what you should focus on and feeling that focus.

Mental imagery should not focus on the outcome but on the actions to achieve the desired outcome.

How do I Apply Mental Imagery ?

Golfing great Jack Nicklaus used mental imagery. In describing how he images his performance, he wrote:

"I never hit a shot even in practice without having a sharp in-focus picture of it in my head. It's like a colour movie. First, I "see" the ball where I want it to finish, nice and white and sitting up high on the bright green grass. Then the scene quickly changes, and I "see" the ball going there: its path, trajectory, and shape, even its behaviour on landing. Then there's a sort of fade-out, and the next scene shows me making the kind of swing that will turn the previous images into reality only at the end of this short private Hollywood spectacular do I select a club and step up to the ball."

When should mental imagery be used ?

To become highly proficient at the constructive use of imagery, you have to use it every day, on your way to training, during training, after training, and in the evenings before sleeping. If you want to perfect and use mental imagery to your fullest advantage you can start by doing two things. In every training session, before you execute any skill or combination of skills, first do it in imagery as perfectly and precisely as possible. See, feel, and experience yourself moving through the actions in your mind as you would like them actually to unfold. In competitions, before the event starts, mentally recall the event focus plan, significant plays, skills, movements, reactions, or feelings that you want to carry into the event.

How can I stay focused?

I expect you have seen an athlete become angry at their performance (throw a tantrum, throw the racket on the floor, argue with the judge etc). The problem here is that the athlete is focusing on the mistake (the past), something that cannot be changed, and not on the future (the next point). In young athletes this can be hard to overcome not only because they are inexperienced but also because of peer pressure or the fear of losing.

In sports psychology "pattern breaking" routines are used to help prevent the athlete falling into this negative attitude. A "pattern breaker" can be a word or phrase shouted within the brain (not vocally) or something physical (pinging an elastic band on the wrist). The coach can use the "pattern breaker" in training or competition to refocus the athlete. This approach may not be suitable for a young athlete as it is specialised and will take time for them to master.

Many young athletes have their idol (role model) who they would like to emulate. You may see the athlete attempt to assume the identity and hallmarks of the role model when they perform. This is beneficial provided the role model is a suitable one. Watching the role model in action (video, television, live) will help the athlete see how their idol stays focused and how they react to their mistakes. The role model's name could become the "pattern breaker" phrase for the coach to use when their young protegee falls into the negative thoughts trap. On hearing their role model's name the athlete will shift their focus to how their role model would react and hopefully assume a positive (calm, composed and motivated) approach.

What are the Benefits ?

Mental Imagery itself can be useful in a number of circumstances including:

- developing self confidence
- developing pre-competition and competition strategies which teach athletes to cope with new situations before they actually encounter them
- helping the athlete to focus his/her attention or concentrate on a particular skill he/she is trying to learn or develop. This can take place both in or away from the training session
- the competition situation

When combined with relaxation it is useful in:

- the promotion of rest, recovery and recuperation
- the removal of stress related reactions, e.g. increased muscular tension, etc.
- the establishing of a physical and mental state which has an increased receptivity to positive mental imagery
- the establishing of a set level of physical and mental arousal prior to warming up for competition

The "Quick Set" Routine

Psychologist Jeff Simons developed a routine which would allow an athlete to achieve an appropriate mental arousal in the last 30 seconds before a competition. The "Quick Set" routine, which involves physical, emotional and focus cues, can also be used as a means of refocusing quickly following a distraction.

An example of this routine for a sprinter could be:

- Close your eyes, clear your mind and maintain deep rhythmical breathing, in through your nose and out through your mouth (physical cue)
- Imagine a previous race win, see yourself crossing the line in first place and recreate those emotional feelings of success (emotional cue)
- Return your focus to the sprint start, think of blasting off on the 'B' of the bang with the appropriate limb action (focus cue)

"You only achieve what you believe"

This is a quotation of mine that I quote to an athlete when I hear them make a negative statement about their ability. I also use it to focus the athlete's attention when assisting them to develop mental imagery skills.

Competitive Anxiety

Competition can cause athletes to react both physically (somatic) and mentally (cognitive) in a manner which can negatively affect their performance abilities. Stress, arousal and anxiety are terms used to describe this condition.

How do you measure it?

A range of psychometric tests or sport anxiety questionnaires (SAQ) have been used by sports psychologists to understand and measure this condition. In 1966 Charles Spielberger argued that it was necessary to make a distinction between momentary states and more permanent traits.

- Anxiety states (A-state) is our response to a particular situation (i.e sky diving).
- Anxiety traits (A-trait) are the characteristics of our personality, our general anxiety level

Marten developed anxiety traits (A-trait) questionnaires which were tailored specially to sport known as the Sport Competition Anxiety Test (SCAT). Marten recognised that any measure of sport anxiety must take into consideration cognitive anxiety (negative thoughts, worry) and somatic anxiety (physiological response).

The Competitive State Anxiety Inventory, or CSAI-2 takes into account the difference between A-state and A-trait and distinguishes between cognitive and somatic anxiety.

Controlling Anxiety

As we can see anxiety includes state and trait dimensions both of which can show themselves as cognitive and somatic symptoms. An athlete with high anxiety trait (A-trait) is likely to be more anxious in stressful situations. To help the athlete control competitive anxiety somatic techniques (relaxation) and cognitive techniques (mental imagery) can be used.

Anxiety - Performance relationship

Drive Theory

According to the Drive Theory (Clark Hull 1943) if an athlete is appropriately skilled then it will help them to perform well if their drive to compete is aroused - they are "psyched up".

Inverted-U hypothesis

An alternative approach to Drive Theory is known as the Inverted-U hypothesis which predicts a relationship between arousal and performance approximates to an inverted U shape. The theory is that as arousal is increased then performance improves but only up to a certain point (top of the inverted U). If the athlete's arousal is increased beyond this point then performance diminishes.

Multi-dimensional Anxiety Theory

Multi-dimensional Anxiety Theory is based on the distinction between cognitive anxiety and somatic anxiety. The theory makes a series of predictions:

- There will be a negative but linear relationship between cognitive anxiety and performance
- There will be an inverted U relationship between somatic anxiety and performance
- Somatic anxiety should decline once performance begins but cognitive anxiety may remain high if confidence is low

Catastrophe Theory

Catastrophe Theory suggest that:

- stress and anxiety will influence performance
- each athlete will respond in a unique way to competitive anxiety
- performance will be effected in a unique way which may be difficult to predict using general rules

Optimum Arousal Theory

According to the Optimum Arousal Theory (Yuri Hanin) each athlete will perform at their best if their level of arousal or competitive anxiety falls within their optimum functioning zone . The challenge for the coach is to determine the athlete's zone and identify the techniques that will place the athlete in this zone prior to competition.

Relaxation

Relaxation itself can be useful in a number of circumstances including:

- the promotion of rest, recovery and recuperation
- the removal of stress related reactions, e.g. increased muscular tension, etc.
- the establishing of a physical and mental state which has an increased receptivity to positive mental imagery
- the establishing of a set level of physical and mental arousal prior to warming up for competition

When combined with positive mental imagery it is useful in:

- developing self confidence
- developing pre-competition and competition strategies which teach athletes to cope with new situations before they actually encounter them
- helping the athlete to focus his/her attention or concentrate on a particular skill he/she is trying to learn or develop. This can take place both in or away from the training session
- the competition situation

How do I achieve relaxed muscles?

Progressive muscular relaxation involves the active contracting and relaxing of muscles. When a muscle is tightened for 4-6 seconds and then relaxed, the muscle returns to a more relaxed state. This process should be performed for the following parts of the body in turn - feet, legs, thighs, buttocks, stomach, back, neck, shoulders, arms, hands, jaw, face and eyes.

How will relaxed muscles feel ?

J.H. Schultz in the 1930's noticed that patients in a relaxed state experienced one of two sensations: the feeling of warmth or the feeling of heaviness in completely relaxed limbs. During the relaxation process concentration should be focused on one of these sensations. For the first few sessions the athlete should alternate the focus between sessions to determine which one they prefer.

Can Relaxation have a Negative Effect ?

In a competition situation an athlete will either be:

- **under-excited**; low in arousal; find it hard to "get up" for the competition; disinterested; etc.
- **over-excited**; high in arousal; over the top; nervous-anxious; scared of the competition; sick with worry; etc.
- **optimally-excited**; nervous but in control; looking forward to the competition but apprehensive; thinking positively; feeling good; etc.

If we were to use relaxation procedures with an over excited athlete, we might be able to reduce his/her arousal level to that of the optimally excited athlete. This would have a positive effect on his/her performance. However if we asked an under-excited athlete to use relaxation procedures it would only make it harder for him/her to "get-up" for the competition. The coach therefore has to know his/her athletes and how they react in competitive situations.

Relaxation Training

There are a number of relaxation techniques which have the following characteristics:

- procedures for first recognising and then releasing tension in muscles
- concentration on breathing control and regulation
- concentration on sensations such as heaviness, warmth
- mental imagery

Regardless of which technique is used, the following two conditions need to exist if the technique is to be learned:

- the athlete must believe that relaxation will help
- a quiet, dimly lit and warm room which is free from interruption

Meditation for Relaxation

A number of people involved in *sports psychology* believe that meditation can be useful in getting maximum performance from an athlete (Syer & Connolly, 1984). Engaging in meditation helps reduce stress before an event and with experience the athlete can learn to relax different muscle groups and appreciate subtle differences in muscle tension. The technique includes the following steps:

- Lie down quietly on your back in a comfortable position and close your eyes.
- Deeply relax all your muscles, beginning at your feet and progressing to your face.
- Breathe through your nose and become aware of your breathing. As you breathe out, say the word "one" silently to yourself. For example, breathe in . . . out, "one"; in . . . out, "one"; and so on. Continue for 20 minutes. You may open your eyes to check the time, but do not use an alarm. When you finish, lie quietly for several minutes at first with closed eyes and later with opened eyes.

Maintain a passive attitude, permit relaxation to occur at its own pace and expect other thoughts. When distracting thoughts occur return your concentration to your breathing. Try to practice a relaxation technique once a day.