

Somatic stress management techniques

PE REVIEW examines somatic techniques to manage stress

Biofeedback

Physiological data can be collected to show which sporting situations cause the most stress and, in turn, which strategies are the most effective for reducing stress. Collection of this data can be obtained from the monitoring of physical changes that happen when under stress. Examples of these changes are:

- increased heart rate measured by a heart rate monitor
- increased muscle tension measured using electromyography where electrodes are taped to the skin
- increased blood pressure measured by a sphygmomanometer
- increased sweating detected by a galvanic skin response (GSR) meter, which measures the increase in the electrical activity when sweating
- increased breathing rate measured by a spirometer

Monitoring these physical changes can be an effective strategy. The performer learns to recognise when these physical symptoms are taking place so they can eventually do so without using a measuring device. For example, recognising a high heart rate without the use of a device allows the performer to use a stress management technique to calm down and reduce their heart rate and therefore their stress.

However, biofeedback can be a time-consuming technique. Using equipment during a performance can distract athletes and can increase anxiety levels as they are aware that they are being monitored.

Breathing control

Breathing control is used to take the mind away from a situation that is causing anxiety. By controlling and concentrating on the rate and depth of breathing, the performer becomes less distracted and can focus on the task in hand. Breathing deeply causes a relaxation response in contrast to shallow breathing which increases tension and anxiety. Deep, slow breathing allows the performer to fully inflate their lungs with oxygen whereas shallow breathing limits the diaphragm's range of motion, so the lungs are not fully inflated. This can make you feel short of breath and consequently more anxious.

Breathing control is best done in a quiet place in a sitting or lying position with a deep, slow breath in through the nose until the abdomen expands fully followed by a long deep breath out through the mouth.

Centring

Centring is used alongside breathing control to interrupt a stressful situation and regain concentration on a task. The sports performer concentrates on the slow movement of the abdominal muscles when taking deep controlled breaths and then switches back concentration to the important external cue. By doing this, the performer maintains focus on themselves, avoiding distractions, and any negative thoughts are disregarded.

Centring also involves repeating a word or phrase to help a performer refocus on what they want to do. As they breathe out this word or phrase details how they wish to perform, for example, 'strong, focused, calm'. Games players use this technique before they attempt isolated skills such as a first serve in tennis or a conversion kick in rugby.

Progressive muscular relaxation

Progressive muscular relaxation is used to relax the body when muscles are tense. This technique involves tightly contracting groups of muscles so they are tense and then held in this state for a few seconds. The muscles are then relaxed normally and then consciously relaxed even further so the performer feels as relaxed as possible. The contracting and relaxing should be progressive, starting with the extremities of the body first, for example the muscles of the arms and legs, followed by the tensing and relaxing of the muscles towards the centre of the body, for example, the abdominal muscles. By tensing the muscles the performer will be able to relax their muscles more than if they tried to relax them straight away.

