

LEVEL THREE: PERFORM UNDER FATIGUE

Currently we have discussed in previous articles about skill acquisition, learning the textbook skills and evolving them into performance skills, while also completing them at higher intensity levels to ensure that they are mastered fully. Once the goalkeeper has mastered the skills and is able to perform them comfortably on both sides at a faster speed, they are then ready to move onto the third level of my Levelled Progression model.

LEVEL 3: PERFORM THE SKILL VERY WELL, AT SPEED AND UNDER FATIGUE [13-15yrs]

During games a goalkeeper's Speed of Thought and Speed of Play naturally decrease as the game progresses due to fatigue. This fatigue has a number of factors that are very taxing on the goalkeeper's body reducing their ability to function at optimal performance levels. Muscles grow tired after energy exertion caused by the reduction in quality ATP required for energy production. Also, a decrease in oxygen saturation, called hypoxia, occurs in both the muscles and brain and also attributes to fatigue as the body attempts to function with lower levels of oxygen.

Obviously if the goalkeeper is competing under fatigue both their decision making (Speed of Thought) and skill execution (Speed of Play) will be affected. Playing in these conditions decreases the speed at which the goalkeeper can make decisions and therefore will adversely affect the speed at which they can function mechanically as well.

A study conducted in 2012 by Pighin et al. named "Decision making under hypoxia: Oxygen depletion increases risk seeking for losses but not for gains," found that in the majority of cases where oxygen saturation decreased the risk seeking effects for generating losses in performance, greatly outweighed the risk seeking for generating gains in performance. Thus, training under severe fatigue will create a more negative affect on performance rather than improve the goalkeeper's ability as desired. Therefore, it is vitally important to ensure that the goalkeeper does not over train or overfatigue to ensure they can make the improvements they are aiming for.

When looking to train under fatigue the goalkeeper/coach must ensure the right balance is met to stop the goalkeeper training while overfatigued. This can be done by improving the goalkeeper's conditioning. Completing exercises that push the goalkeeper to their limit both physically and mentally. A typical drill may involve the goalkeeper throwing themselves to the ground and getting backup as quickly as possible while also incorporating some form of decision making like coloured cones, maths sums etc. to work on their cognitive function under fatigue.

By improving the goalkeeper's physical conditioning, it allows the goalkeeper to maintain a certain performance intensity for longer. This, therefore, delays the onset of hypoxia and/or fatigue meaning the goalkeeper's decision making is not affected for a longer period of time and ultimately the mechanics of their performance can operate longer without decline.

Another aspect of training under fatigue, and one that is vastly overlooked in GAA, is a concept called 'Decision Fatigue.' In decision making and psychology, decision fatigue refers to the deteriorating quality of decisions that are made by the goalkeeper after completing a long session involving vast amounts of decision making. It would be of no surprise to find that after any game or training session a goalkeeper may feel more mentally drained than physically.

During any game an outfield player's main focus is on themselves, the roles they have been assigned and the opposition player that they have to mark. A goalkeeper, on the other hand, must concentrate on his own game, the roles he must perform as well as focusing on all fifteen of their teammates to ensure they are carrying out their expected roles correctly and all fifteen opposition players, their movements and tendencies. The goalkeeper also looks for patterns in play, defensive gaps, offensive opportunities all the while being in constant communication with all players and management throughout the game not to mention the added pressures of being the last line of defence. With all of the aforementioned responsibilities the goalkeeper undertakes, decision fatigue can easily take hold of any goalkeeper if they have not properly prepared mentally.

To prepare your goalkeeper for Decision Fatigue, it is vitally important to work on building resilience, mental toughness and mental stamina. This can be done by using visualisation techniques whereby the goalkeeper visualises in their mind various game situations that may occur and how they would deal with them effectively. Also, by having the goalkeeper create strong goalkeeping principles for themselves it installs a sense of integrity and self-awareness into the goalkeeper which allows them to deal with their performance in a progressive manner. From a physical aspect, by creating training sessions that are overloaded with drills/exercises that are filled decision making will force the goalkeeper to train under decision fatigue with the aim of allowing the goalkeeper to increase their mental stamina.

At this stage, age 13-15 years old, the goalkeeper will begin to learn team tactics as well as Restart Routines. The coach will also begin to allow the goalkeeper to make some of their own decisions in regard to training and preparation, giving the 'keeper more of a feeling of involvement and control over themselves while also building trust between goalkeeper and coach. It will also be important to educate the goalkeeper about their off-field preparation on things like hydration, diet, alcohol consumption, school pressures, other sports, family/personal relationships, adequate rest and sleep patterns to name a few. At this stage of development the coach must encourage questions and feedback from their goalkeeper especially given at this stage of puberty they will be more introverted and maybe lacking in confidence for fear of embarrassment in front of peers but by creating a learning environment it will grow their confidence immensely.

It is inevitable that the goalkeeper will experience fatigue at some point in their careers. Whether it be during a game or in training fatigue will appear in its many forms to cause deterioration in the goalkeeper's performance. What the goalkeeper can do to counteract this is train in certain ways that will able them to delay the onset of their fatigue and also prepare their mind correctly so that they mentally prepared for the sheer volumes of decisions they will be required to make on a weekly basis.

