

'If you can't slow down....don't speed up'

Having spent a lot of time recently with coaches and athletes in field and court sports the subject of 'agility' has been a hot topic. The ability to react and manoeuvre at high speed, in multiple directions in short periods of time is an important element in all field and court sports. This ability to accelerate, decelerate and re-accelerate multi-directionally over extended periods of time places huge pressure on the body's infrastructure.

This is not a problem if the infrastructure is developed enough to create a buffer between what the game will bring to the table and what the body can answer it with. If this buffer does not exist or if the movement patterns required for the tasks are less efficient then it is probable that the body, in its quest to complete the task, may develop compensatory movements and postures. This is one of the reasons why we train – to ensure that, whatever the game demands, the athlete can provide the most efficient and economical answers permanently and consistently.

If we trace the movements and force demands of 'agility' back to the source then we will see that the ability of braking and stopping are vitally important in the process. In other words, the body must 'shock-absorb' prior to changing direction or re-accelerating. This is illustrated by the sophisticated SSC (Stretch–Shortening–Cycle) action and the more overt triple-flexion / extension sequence. All this takes place within the ongoing pattern and sequencing of force production, reduction and stabilisation puzzles that the body has to solve on a nano-second to nano-second basis – all day, every day.

If we examine the braking or stopping action in a running agility setting then it is clear that the ability to 'land' on one and two legs efficiently, consistently and resiliently is an important component of the journey. Put this in the context of what the exercise selection might look like and we can see that the creation of a progressive journey is paramount.

In simple terms the journey might look like this:

<ul style="list-style-type: none">• General body awareness development by the solving of movement puzzles – Squat, Lunge, Pull, Push, Brace, Hinge, Rotate, Bend.• General development of Locomotor, non-locomotor and manipulative skills
<ul style="list-style-type: none">• Triple flexion and extension movement puzzles – Squat and Push, and Pull, and Rotate, and Bend, etc; , Lunge and...., Brace....and; etc• Further development of Locomotor, non-locomotor and manipulative skills
<ul style="list-style-type: none">• The teaching of Landing – shock absorption• Further development of Locomotor, non-locomotor and manipulative skills
<ul style="list-style-type: none">• The teaching of horizontal and vertical jumping and landing.• Hopping, Bounding
Agility, SSG, SAQ

With appropriate progression using speed, amplitude, direction and plane as the stimulus one will readily arrive at positions on the continuum where the athlete naturally experiences some 'braking' forces. For example (adapted from Movement Dynamics 5in5 Curriculum):

Module 1, Exercise 1 - Shallow Squat

- With Reach
- With Bend
- With Rotation
- Slowly
- Quickly

Module 2, Exercise 1 - Shallow Squat to Toes

- With Reach
- With Bend
- With Rotation
- Slowly
- Quickly



The point at which 'braking' will be experienced

Within such a progressive journey the coach will have ample time to teach and coach the athlete to the most efficient movement pattern for each of the 'foundation' movements.

Problems arise when coaches 'fast-track' to using small-sided games (SSG) or drills as seen in processes like SAQ work. If these types of activities are the sole tool used in the journey then there is the chance that any movement limitations will become 'hidden' in the turmoil of the drills. The key is to see small-sided games and SAQ work as being movement puzzles that appear somewhere further along the movement continuum than the 'foundation' movements of Squat, Lunge, Push, Pull, Brace, Rotate, Hinge and Land. Start with the foundations – get them perfect at different speeds, amplitudes, directions and complexities and the transition to SSG and SAQ will be seamless.

Don't forget that this 'braking' process does not only occur in running activities. In actions for throwing and striking the body will show its aptitude for complexity that involves 'braking'. We may often wrongly view throwing and striking actions as being upper body activities when in fact the upper body does less than other parts in the movement sequence.

In these actions, we see the throw or strike being built from the ground up with forces being transferred from Legs to Hips to Trunk to Shoulder and finally to the Arms and Hands. The Javelin throw, for example, sees the athlete 'brace' or 'brake' the left-hand side (for the right-handed throw) prior to release. The Golfer will 'brace' or 'brake' the left-hand side as the arms swing the golf club through. This complexity of movement illustrates the capabilities of the human body to organise the body multi-directionally and multi-planar while presenting different force structures (force production, reduction and stabilisation) – all in nano-seconds and within a complex sequence. These attributes are the ones we cultivate when assembling the movement vocabulary in the early stages of the training journey.