

On-Feet Locomotion Development

I have always said of our teaching and coaching world that while we tell them 'how far' and 'how fast' to run it might be better if we actually taught them 'HOW' to run. With a high proportion of physical activities demanding some type of running quality surely the 'HOW' should appear in the pathway far more than it currently does.

By all means, start with some instruction. When we first learn or relearn a motor skill, all performers need some feedback and instruction. By giving instruction and feedback initially there are fewer errors in these first stages of learning. The fewer errors, the more confident the learner can be. The trap is that if all you ever do is get them to learn robotically by explicit drills their learning will be slowed.

In recent conversations, I have told some coaches that "*Variety is key. Find as many solutions to as many movement pattern puzzles as you can while eliciting the main movement aims.*" In other words, it aids learning when you drive at a required outcome using a variety of methods and activities. By adding this variability, the entire system of learning is enhanced.

While we consider all this variability it is wise to take some time to understand some of the other elements of learning that will prevail. At the centre of every skill the athlete is trying to learn are a set of characteristics that do not change no matter who is doing the movement; or when they are doing the movement. These are the most relevant parts of the movement and, in some cases, are the parts of the pattern upon which many other parts of the sequence depend. In other words, these are the basics or the 'Keystones' (or "attractors" which is the new sexy terminology you might come across).

For example, my main aim to develop correct running mechanics is to concentrate on how the foot hits the ground, in what direction, with what force and then how it leaves the ground, in what direction – *the foot moves violently downwards from above for each foot-strike and then leaves the ground with the heel moving towards the upper-Hamstring as the two thighs move past each other.* If this action is done right then the Knees follow, the Hips follow and the Trunk and Arms follow via a self-organising process. I can have this foot-contact and recovery element as the main focus when the activities change as seen in the list below. By having to concentrate on this foundation movement of 'contact' while navigating a huge range of activities that revolve around on-feet locomotion the learning process is enhanced.

Our job is to prepare the young person for 'what is yet to come' whether their journey is to all-round health and well-being or high-performance sport or a combination of both destinations. To give them the tools to be effective in a wide range of sports would appear to be a sound aim in all this. This means that we can't just give them running skills for a track (running forwards in a lane where the only decision is to react to a gun and/or to turn left). Preparing them for the ongoing decision-making they will experience in just about every other situation of locomotion they will face is the best thing we can do.

The 'track' running process is a decent enough starting point where you can develop the PAL layers of the technique (Posture, Arms and Legs). It will give a good start to the process but certainly not a wide or deep enough set of experiences to arm them with the tools for all the other circumstances that participation in field and court sports will bring.

On-feet locomotion can obviously be developed through walking and running but skipping and galloping can also act as very relevant puzzles to solve. As the journey continues to the more robust elements then jumping, hopping and leaping should also appear in the journey.

If you want to create a wide and deep movement vocabulary for on-feet locomotion then consider such things as:

- *Walking; Running; Skipping; Galloping; Jumping; Leaping; Hopping*

- *Forward; Backward; Sideways (Side-step; Cross-over)*
- *Around circles clockwise; around circles anti-clockwise*
- *Short strides; long strides*
- *Low Knees; High Knees*
- *Stop and re-start in a different direction*
- *Start the locomotion from stationary; from walking; from running at different speeds (this is the start of the Acceleration journey); from running at different speeds in different directions.*
- *Stationary start locomotion from different positions: Standing facing forwards; facing backwards; facing sideways; standing 2 feet; standing one-foot; kneeling; sitting; lying prone; lying supine; lying on side; on hands & feet prone (4-point); on hands & feet supine (4-point); 3-point; 2-point.*
- *Arms at sides; Arms ahead; Hands behind Head; Arms overhead; normal Arm action*
- *Trunk bend; Trunk rotate; Trunk bend and rotate*
- *Carry load low; carry load at waist; carry load at chest; carry load overhead; carry load and bend; carry load and rotate. Carry load and push out; carry load and push up*
- *Catch an object; pass an object*
- *Go around obstacles; go over obstacles*
- *Add relay races and 'tag' games to all of the above.*

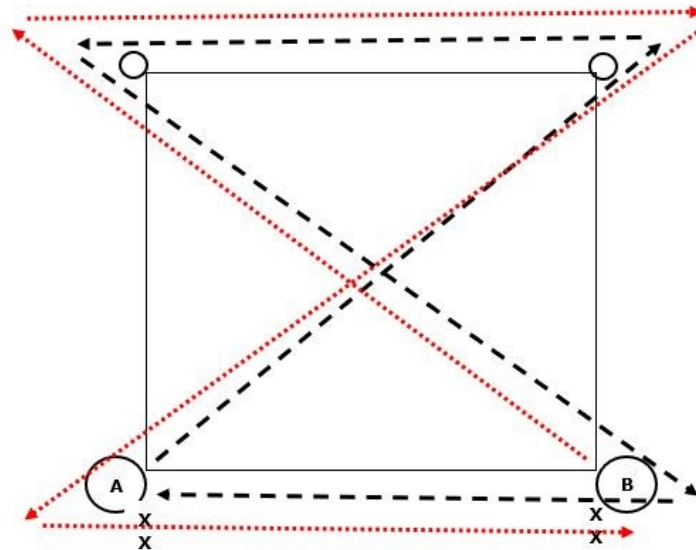
See this list as a range of ingredients that you can mix and match in all sorts of combinations, at all sorts of training-age levels. Think of static to dynamic; slow to fast; simple to complex; unloaded to loaded as a guide. Progress and regress the activity based on what the athlete can or cannot do. Fit the activity to the competence level of the individual. This can be viewed as a list of locomotion puzzles for them to (a) create (b) solve.

Each of these progressions / regressions allows the coach to elicit change in the PAL process and in particular the opportunity to focus on the chosen aim for the movement (my example – foot contact and toe-off actions).

The Journey – An Example

A simple starting point might be - Run Forwards with a normal action of arms and legs.

After adaptation to a variety of activities over time you may reach this stage - In a race in a 10m square; from a kneeling start position; Run backwards around a square of witch's hats; clockwise (opposition is in the same square running anti-clockwise); hands above head; carrying a ball; pass the ball laterally to a partner.



2 Teams of 2 per square

A (Black Line) Starts bottom Left – runs diagonal to top right – runs to left – runs diagonal to bottom right – runs to the left to tag next person in the team

B (Red Line) Starts bottom Right – runs diagonal to top left – runs to right – runs diagonal to bottom left – runs to right to tag next person in the team

Note that **major movement decisions** will have to be made when the teams cross each other in the centre of the square and along the top and bottom sides. Now we have speed and change of direction plus some decision-making.

Consider using activities from the list for each of the races.

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