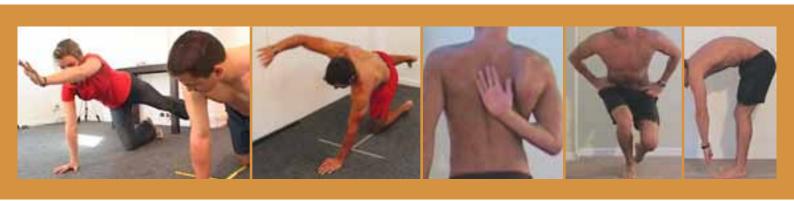
Building on Shaky Foundations

Text: Amy Bathgate - Biomechanics & Video Analysis, hpc



ntuition often tells a professional or an athlete that something basic is "missing" from their training programmes or that something is "holding them back" from reaching their full potential, but they can't quite put their fingers on it. Or an injury becomes recurring or chronic and its cause cannot be pin-pointed. It's this very intuition that brought the Functional Movement Analysis (FMA) into being. The FMA gives both professionals and athletes the opportunity to step back, and see the forest instead of the trees, so to say, and not focus on specific problems or unexplained injuries but rather to focus on the body and movements as a whole.

For example, if an athlete complains of chronic or recurring knee pain, most professionals observe, evaluate and test the knee in many positions. Then the athlete might perform a series of general movements such as balancing on one leg, turning, twisting, or maybe even lunging or squatting. But by looking at the knee first, opportunities are often missed to watch the whole body move - and because the full body movement is not looked at, perspective is often lost. The injury is evaluated as just a knee injury - whereas it should have been evaluated as an athlete experiencing symptoms in the knee but who may have multiple problems. So we reverse the sequence. Regardless of the complaint or injury, we choose to look at the whole before initiating a functional exercise or sports rehabilitation programme. When functional movements are performed, sometimes symptoms will be provoked in the problem area, and other times they will be provoked in other areas.

The Functional Movement Analysis (FMA) we use here at the hpc is a series of 10 – 12 fundamental movements, which look simple but require good flexibility and control. These movements are not simply the basis for sports movements, but also the foundation of all human movement as they relate closely to the movements infants and toddlers use to train themselves to move and turn and twist and walk and climb and crawl and reach. The FMA is simply a way to demonstrate how athletes who have elite strength, power, speed, agility, and sport skills may have fundamental flaws that do not show up every day but that are holding them back from reaching their full potential.

An athlete who is unstable to perform any of the movements correctly, shows a major limitation within one of the movement patterns, or demonstrates an obvious difference between the function of left and right side of the body, has uncovered a significant piece of information that may be the key to reducing the risk of chronic injuries, improving overall sport performance, and developing a training or rehabilitation programme that helps the athlete advance to a higher level of competition. Functional movements should not be sacrificed when the athlete seeks to perform at a higher level through advanced conditioning and skills training. Athletes, who are strong and powerful, and seemingly coordinated, sometimes have extreme difficulty getting into the most basic of positions. Most athletes migrate towards their strengths and spend a majority of their time training their strengths. But the FMA pushes each athlete



into all movement extremes, rather than simply the preferred ones, and thus demonstrates how athletes who appear flexible and under control within their given sports can have significant restrictions and asymmetries between left and right in their basic movement patterns. Their skill and speed and quickness allow them to compensate for and mask fundamental flaws in movement. These flaws rob the athlete of efficiency and may cause unnecessary stress on the body. This may either directly break down a specific area of the body or cause problems when the athlete is trying to rehabilitate a traumatic injury caused by a collision or fall.

Imagine two highly skilled, highly trained athletes recovering from knee surgery. Both are dealing with the swelling, inflammation and weakness caused by the surgery and immobilization, but one athlete also has very poor ankle mobility and a significant amount of stiffness around the hip. To this point, this athlete's knee has been compensating for the lack of mobility in the hip and ankle. But because the knee can no longer compensate, the rehabilitation process will be delayed or unsuccessful unless the weaknesses in the hip and ankle are addressed.

The word functional often creates confusion as most people expect to see drills and movements that closely resemble sport-specific movements. Most people expect a more dynamic collection of vigorous movements that look and feel like sport, and are often puzzled by the simple positions and regard them as insignificant. What they fail to realize is that functional movement for all sport is built on the foundation of the ability to simply move without restriction or limitation. Often athletes are assessed in terms of how they perform in their sports and in fitness, agility, power, strength, and endurance tests. But simply looking at a skill and performance, the ability to perform is not separate from the ability to move free of limitation or restriction. The functional movements tie all sports together because they are fundamental and representative of human movement.

The Functional Movement Analysis is not a law or an absolute. It is simply a way to demonstrate the most fundamental aspect of human performance – the ability to move freely. This forms the foundation of all sport and exercise. Built on top of an efficient foundation is the ability to move with certain degree of raw athleticism or gross performance, and only after these should we add the ability to take that raw athleticism and gross performance and turn it into a specific skill. So get back to basics and look at the whole – shaky foundations lead to shaky performance pyramids.

"It's what you learn after you know it all that counts most!"

Reference:

Gray Cook. Athletic Body in Balance. Champagne, IL: Human Kinetics (2003).