



ADAPT TO SURVIVE

The Variables of Movement

Dr ED WITTICH

In daily life, let alone sporting pursuits, we are faced with a multitude of movement and postural challenges, sometimes unexpectedly. How we cope with them dictates how successful we are at moving, and in essence, living. This is also true of rowing. The race distance may be defined from the start, but on any given day there may be head, tail or cross winds, the water temperature may be different, our opponents may race a different strategy, maybe we have tight hamstrings from training a few days ago, the water may be flat or rough. Never once are any of these external factors exactly the same. →

Just look at conditions faced by rowers in Rio last August. Variability is a keystone for effective training, general health and performance.

Variability, from a biological sense, is defined as the power possessed by living organisms to adapt themselves to modifications or changes in their environment. The ability to make small adjustments to a basic repetitive physiological pattern like a heart rate, brain waves, energy use and movement seems to be a good indicator of health and function.

Many aspiring athletes seek the ability to perform skills exactly the same way over and over, like a machine. But the pros don't do it like that. The best performers demonstrate a great ability to adapt to environments, distractions and physiological responses by selecting the most effective movement patterns needed.

We all need the weapon of variability in our movement arsenal to produce consistent performances. A fascinating study on experienced builders found they almost never hit the same nail with

a hammer in the same manner every stroke. Instead, these skilled practitioners made subtle, unconscious adjustments in order to produce the same output every time.

Giving an athlete the ability to move well in varied positions is vital even in a repetitive motion sport. Over-use injuries are common in rowing and a symptom of repeated movements in the same plane of motion.

Ido Portal is a self-proclaimed but well lauded movement specialist who has gained notoriety through his training of UFC fighter, Connor McGregor. McGregor's ability to move makes him an incredible athlete. Portal preaches variable movements with multiple planes and focuses on reactivity to environments in his training. YouTube

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clips make Portal look like a rolling, jumping, hand-standing lunatic; his logo is a monkey after all. But it is this extreme version of variability that gives his fighters their athleticism and ability to be successful.

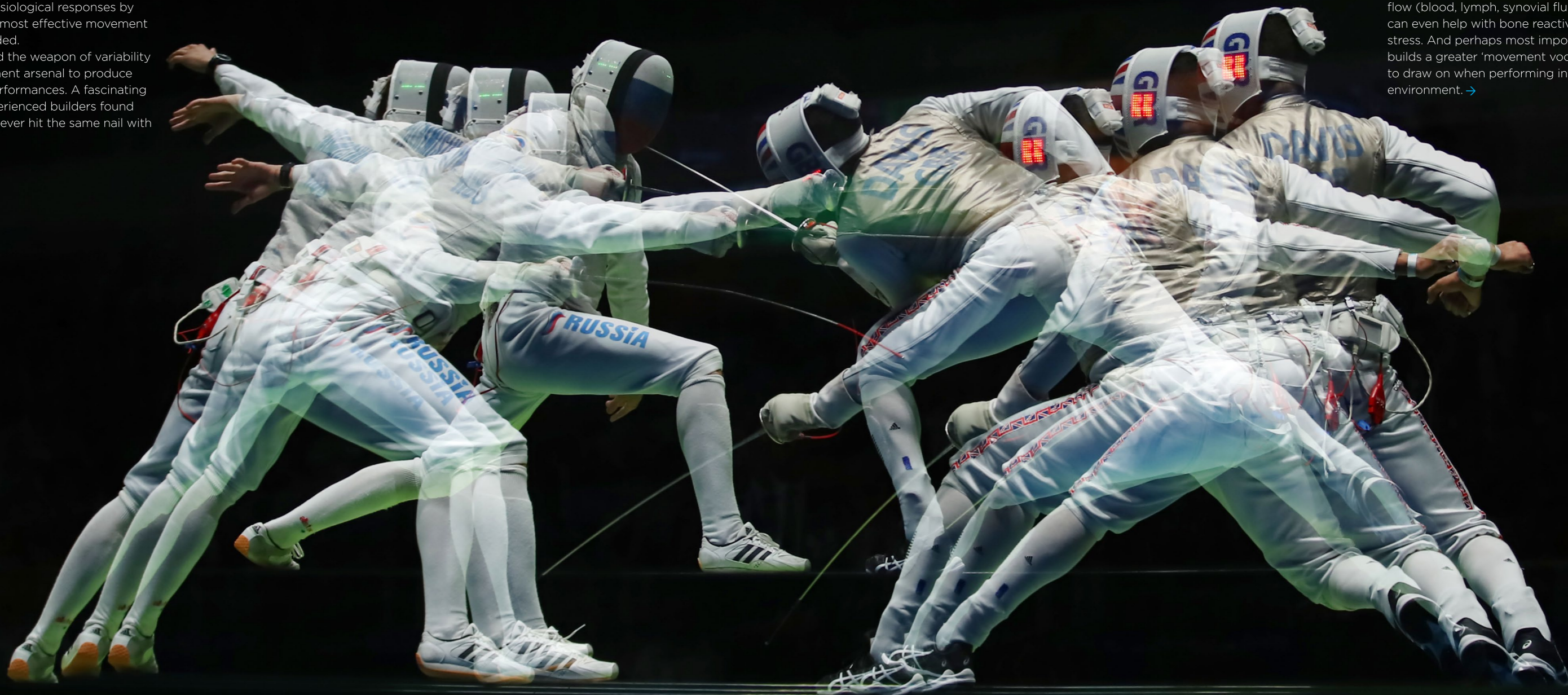
Such extreme movements are of course not required in rowing; rowing is a sagittal plane sport, which means movement occurs front to back, essentially flexion and extension, with some rotation in sweep rowing. Rowers spend a lot of time doing the same motions and training over and over again - at the risk of dulling their athleticism.

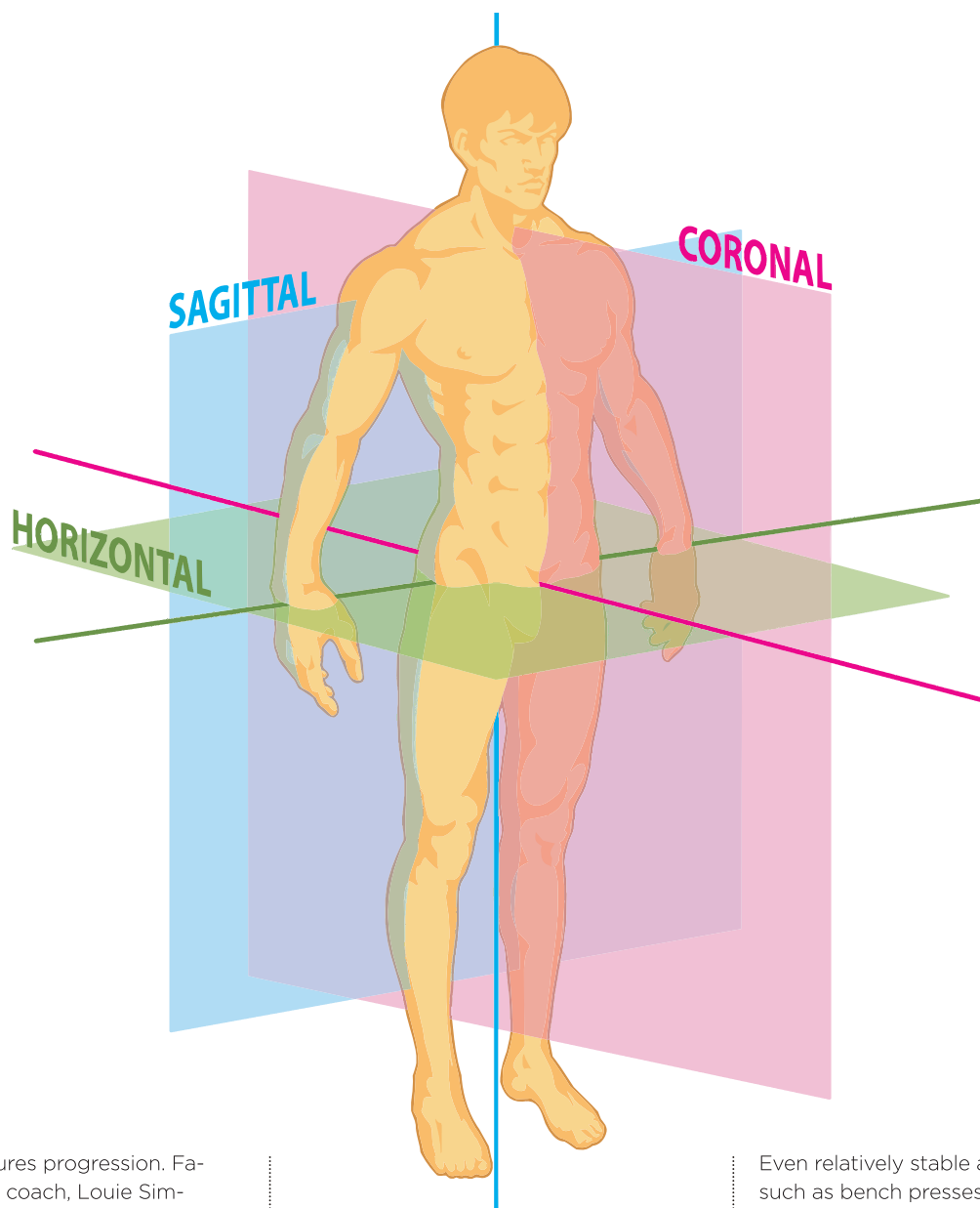
Two-times US Olympic rower and movement coach Erin Carfaro says that the best rowers are "often the athletes

with the ability to move the best" and not necessarily just in the rowing movement.

Coaches tend to focus on spinal, hip and knee hinges in training - important because we need strength and technique in these areas within the sagittal plane to be effective. However no joint in our body works in only one plane and even within the basic flexion-extension process of the rowing stroke, there are many multi-planer adjustments to make as the boat moves beneath us.

Joints and muscles are designed to work through different planes of motion; no muscle has all of its fibres arranged in the same line. You work more fibres by varying the planes with which you move. Varied movements are beneficial for neurological systems, fluid flow (blood, lymph, synovial fluid etc) can even help with bone reactivity to stress. And perhaps most importantly it builds a greater 'movement vocabulary' to draw on when performing in any environment. →





Variation also ensures progression. Famous powerlifting coach, Louie Simmonds, says; "As soon as your body thinks it has all the answers, you need to start asking different questions." Powerlifting is even more closed and controlled in terms of the environment than rowing and many of the core power movements depend on hinge-type movements. Yet Simmonds seeks to add variety to the key movements where possible. A different grip, bar, weight or speed, for example.

There are many simple and practical ways to implement this into your training. In the gym, try lunge matrixes rather than always lunging with one leg in front of the other in a straight line. Or try lunges with the front foot turned out, then lunge across your body. Using a star pattern on the ground can be helpful to give this structure. Moving through different angles will load your hips in more ranges of motion and work different muscle groups.

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LOUIE SIMMONDS

Dr Ed Wittich is an osteopath with a Masters in lower limb biomechanics. Ed consults with numerous national teams, top colleges and groups such as Nike, Rowing Canada and the Victorian Institute of Sport.

Even relatively stable and closed exercises such as bench presses can be adjusted to include more variability. Change hand grips from narrow to wide and introduce a single hand reverse grip on one side. Use dumbbells instead of a straight barbell press. By working the muscles in different ways, you have a better chance of hitting all the fibres.

You can vary the surfaces you run on, or warm-up in bare feet to change your near feedback from this part of the workout. Don't forget the core aims of your workouts, but be creative.

Increasing the range of movements will also highlight where you are weakest and what requires work. It also makes training more mentally stimulating as you are not always ticking the same boxes.

Ask your body more questions in training and, come race day, you will have more answers than your opponent. Elite or novice, we can all move better. **ROW360**